

[For the use and information of
Employees only.]

VICTORIAN RAILWAYS.

GENERAL APPENDIX

TO THE

Book of Rules and Regulations

AND TO THE

WORKING TIME TABLE

Effective as from 1st February, 1928, and until further notice.

Every Station-master, Clerk, Operator, Inspector, Worksmaster, Roadmaster, Foreman, Engine-driver, Fireman, Motorman, Driver of Rail Motor Train, Equipment Examiner, Train Examiner, Guard, Conductor (Train), Signaller, Signal Supervisor, Signal Fitter, Linesman, Signal Adjuster, Yard Foreman, Shunter, Porter, Ganger, Repairer, and Gatekeeper, and every other employe who the Head of the Branch considers should be acquainted with the instructions contained herein, must be supplied by his Superior Officer with, and have with him when on duty, and produce when required, a copy of this Appendix.

Every employe supplied with this Book must make himself thoroughly acquainted with, and will be held responsible for compliance with the whole of the following Instructions.

Alterations or additions authorised from time to time must be neatly inserted; Inspectors and other responsible officers, when visiting Stations and Depots, must examine the Books in order to see that this is done. Any neglect must be duly reported.

By Order of the Victorian Railways Commissioners.

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General Appendix to the Book of Rules and Regulations and to the Working Time Table.

DEFINITIONS.

In this Book, in Appendices I. to IX., inclusive, of the Book of Rules and Regulations, and in any Instruction that may be issued, unless there be something in the subject or context repugnant to such construction:—

- (a) "Commissioners" shall mean The Victorian Railways Commissioners.
- (b) Words importing the singular number shall be deemed to include the plural number, and words importing the plural number shall be deemed to include the singular number.
- (c) The terms "he," "his" and "him" shall be deemed to refer to either a male or female.
- (d) "Employee" shall mean any person whomsoever employed by the Commissioners who has been supplied with a copy of the Book of Rules and Regulations and General Appendix, whether employed in a permanent office or as a supernumerary.
- (e) "Station-master" shall mean the person in charge for the time being of the Station, Pier, Goods Shed, Siding, or other place.
- (f) "Driver" shall include:—
 - (i.) Engine-driver, i.e., the person for the time being in charge of a Steam or of an Electric Locomotive, and
 - (ii.) Motorman, i.e., the person for the time being in charge of the electrical operation of a Motor Car or of an Electric Train, and
 - (iii.) Rail Motor-driver, i.e., the person for the time being in charge of a Rail Motor.
- (g) "Trainmen" shall include Engine-driver, Fireman, Motorman, Rail Motor-driver, Guard, Conductor and Travelling Porter.
- (h) "Train-examiner" shall mean an employee appointed to examine all classes of vehicles on a train, except Locomotives, or the electrical gear of Electric Trains.
- (i) "Signalman" shall mean an employee in charge of the working of Signals or of an interlocking apparatus.
- (j) "Signal-box" shall mean the place where Signal Levers are fixed.
- (k) "Engine" shall mean Locomotive (with or without a tender), and, as far as it may apply, shall include Motor Car, i.e., any railway vehicle equipped with electric motors for the purpose of working a train.

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- (l) "Rail Motor" shall mean any car (with or without a vehicle attached) driven by an Internal Combustion Engine for the purpose of conveying passengers or freight on any Running Line.
- (m) "Train" includes "Rail Motor," "Motor Car" and "Light Engine," i.e., an engine without a vehicle attached.
- (n) "Goods train" shall include all trains except Passenger and Mixed trains.
- (o) "Ballast train" shall mean any train employed by the Way and Works Branch in delivering or collecting ballast or other material; and any Water train.
- (p) "Break-down Van train" shall mean any train by which the Break-down Van, or Hospital Car, Steam Crane, or Over-head Repair train is proceeding to, or returning from, the scene of any accident.
- (q) "Level Crossing" shall mean an intersection of the Railway Line with any Public Carriage Roadway.

General Instructions.

WORKING TIME-TABLE.

(Clause (b), Regulation 8.)

1. (a) The Working Time Table is issued in sections, a separate section being issued in respect of each of the following districts:—

- i. Northern and Midland.
- ii. Western and South-Western.
- iii. North-Eastern.
- iv. Eastern and South-Eastern.
- v. Suburban.

(b) A separate section containing an Index to Stations, etc., is also issued.

2. Every employe supplied with a copy of the Working Time-table Book, or section of the book, must make himself thoroughly acquainted with the particulars of the trains with which he may be concerned, and ascertain what changes there may be in their running.

3. Subject to the Rules and Regulations and to such other instructions as may be in force, employes must do their utmost to regulate the working of the trains, in accordance with the Time-tables.

4. Attention is directed to the Instructions respecting sheet Time-tables shown on pages 171-172.

WEEKLY NOTICE INSTRUCTIONS.

1. The "Weekly Notice" is circulated every Tuesday, each issue being numbered in progressive order, commencing each year with No. 1 on the first week in January; the instructions contained in each copy are numbered consecutively. Every person whose duty requires it must be supplied with a copy of the "Weekly Notice," and in every case where an employe does not receive a complete copy, the Instructions or information appertaining to the duties of such employe must be communicated

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to him by his immediate superior officer. Every person whose duty requires him to have a copy will be held responsible for obtaining one, and if it should not be received at the usual time, the Head of the Branch must be immediately advised, through the Supervising Officer in the case of the Rolling Stock, Way and Works or Signal and Telegraph Branches; in the case of the Transportation Branch, the General Superintendent (Room 7) must be notified. **Absence of such advice will be held as proof of receipt;** it is not necessary to acknowledge receipt of the "Weekly Notice."

2. Every Engine-driver, Driver of Electric Train, Driver of Rail Motor Train, and every Guard must obtain a copy of the "Weekly Notice" in accordance with these instructions, but this will not relieve the responsible Officer of responsibility for issuing the necessary written order to all employes under his supervision concerning matters contained in the Notice.

3. Unless instructions are issued to the contrary, the Station-master must see that every employe in the Transportation Branch at his Station either receives a copy of the "Weekly Notice" as soon as possible after issue or that a copy is kept in an office or other convenient place to which all engaged in the working of the traffic have ready access. He must also see that a copy is supplied as soon as possible after receipt to every Station under his control.

4. Where an Order Book is kept a copy of the "Weekly Notice" must be exhibited in such book; a copy must also be kept in the Circular Book at Depots for the information of all concerned.

5. Station-masters and other responsible officials must see that the "Weekly Notices" are preserved; the covers provided for this purpose must be used successively for each year's issue, and at the close of the year all copies must be removed from the cover, and, after being neatly fastened together, placed where they will be readily accessible for reference. A cover may be obtained by application to the Head office.

LUGGAGE, GOODS, OR OTHER ARTICLES FOUND ON THE LINE.—(Regulation 295.)

1. Luggage, goods, or other articles found on the Line by any Repairer, or by any other person, must immediately be taken to the nearest Station, and a report made containing the best information that can be obtained respecting the trains from which they may have fallen, the place where they were discovered, whether on the Up or Down side of the Line, and the time. If found by a Ganger or Repairer, a special report must also be made to the Roadmaster.

2. The Station-master must promptly report the circumstances to the Claims Agent, giving full particulars, so that, if possible, the vehicle from which they fell may be traced, and the cause ascertained. In the case of heavy or bulky articles, a duplicate copy of the report sent to the Claims Agent must be sent to the Superintendent of Goods Train Service.

GENERAL INSTRUCTIONS.**RULES AND REGULATIONS TO BE STRICTLY OBSERVED.****(Regulation 10.)**

1. It is of the utmost importance that the Rules, Regulations and Special Instructions should be properly and fully enforced. Every Regulation or Instruction is based upon an established principle of safe working, and is laid down as the means for avoiding a repetition of some known accident, and if an employe wilfully ignores any such instruction or permits it to be ignored, he courts a recurrence of the conditions that the instruction was designed to prevent. Each employe is personally answerable for his own conduct, and the excuse offered in some cases that it was not the practice to strictly comply with some phase of a Regulation will not be accepted. However unimportant a Rule, Regulation or Instruction may appear to be, every employe should clearly bear in mind that if it cannot or ought not to be enforced, it should not exist; and if in the judgment of anyone whose duty it is to give effect to a Rule, Regulation or Instruction such Rule, Regulation or Instruction cannot or ought not to be enforced, he should at once bring the circumstances under the notice of those in authority.

2. **Safety of the Line.**—The serious attention of all concerned is called to the great importance of looking well to the Safety of the Line. Every employe is reminded that his responsibility does not end with protecting the regular traffic against ordinary obstructions, but that constant vigilance is required to find out any unusual or unforeseen defect in the Line, and to guard promptly and efficiently against any danger that may arise therefrom.

Every Foreman, Ganger, Repairer, or other employe, in effecting the necessary repairs to the Line, must, as far as is reasonably practicable, arrange to avoid delaying the regular trains and be prepared at all times for extra trains.

Drivers should not be satisfied with the proper observance of the Fixed Signals, but they should in addition give their unceasing attention to the state of the Line, and to the possibility of Hand Signals being exhibited, and requiring to be acted upon, at any time.

Attention is also directed to the instructions in regard to description, disarrangement, faults and repairs of overhead structures or electrical equipment. (See pages 35-45.)

3. **Infringement of Rule or Regulation.**—(a) In the event of any serious infringement of a Rule, Regulation or other instruction—such as an irregularity in the working of Signals, Signalling Instruments, Tablets or Train Staff—in the working of trains or in shunting operations, the employe whose duty it is to report the occurrence must, as soon as practicable, communicate the circumstances to the employe or employes deemed to be answerable for the irregularity. If Trainmen are considered to be in fault, and the train has proceeded, particulars of the infringement must be at once communicated to the Station-master next in advance, and it shall be his duty to stop the train and personally inform the man or men concerned; the employes notified, as above, of an irregularity as well as the employe observing the occurrence, must promptly report the circumstances in accordance with Regulation 10.

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Particulars must also be telegraphed to the District Officers and to the Telegraph Office, Spencer-street, the telegraph message to be addressed to "Branch."

(b) It is also necessary that the District Officers and the Head Office should be promptly made aware of any train having been stopped owing to an exceptional cause between Stations. In the event of the stoppage being due to any circumstance affecting the safety of the traffic, the Driver must stop at the first Station in advance and verbally report the particulars to the Station-master; this applies also in the case of a train having been divided and re-coupled or stalling on the Section. The Station-master receiving the intimation must, after obtaining full details from the Guard and Driver and taking the necessary steps for the safety of traffic, at once telegraph the particulars as laid down under "Reporting Accidents" on pages 9-16; full reports must, however, be subsequently furnished by the Station-master and the train crew in the usual way. See also sub-clause (g), clause 1, under Train Control System, pages 246-249.

(c) If the Driver be of opinion that he may have difficulty in starting the train if stopped at the first Station to inform the Station-master, he may, provided the circumstances do not affect the safety of traffic and the Line be clear, proceed to the second Station in advance and report the circumstances to the Station-master at that Station.

DISTANT SIGNALS.

(Clause (d), Regulation 49.)

1. (a) When, at the places named in sub-clause (b) hereof, a Driver finds the Distant Signal at Danger, he must immediately reduce the speed of his train so as to be able to stop at such Signal.

(b) If, after having stopped at the Distant Signal, he see that the way in front of him is clear, he must proceed cautiously within the Distant Signal, having such control of his train as to be able to stop it short of any obstruction that may exist between such Signal and the Home Signal, and must bring his train to a stand as near the Home Signal as the circumstances of the case will allow.

The foregoing conditions apply at the places specified hereunder:—

Station.	Signal.
Maryborough	Down Distant, Ballarat Line
"	Up Distant, Avoca Line
Baxter	Down Distant. See page 696.

AMENDMENT OF REGULATION 50.

The above-mentioned Regulation has been amended since the revision of the Book of Rules and Regulations in the year 1919. All copies of the Book of Rules and Regulations printed prior to January, 1926, should have the amended form of the Regulation (shown hereunder) inserted on pages 27 and 28, in accordance with Circular C.17/25.

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Every employe possessing or receiving a Book of Rules and Regulations must compare the amended form with the corresponding Regulation in his Book and if the Regulation as shown therein does not agree with the amended form he must at once report the fact to his superior officer.

(Regulation 50, as amended by C. 17/25.)

Disc Signals.

50. (a) The Signal Indications of Disc Signals are displayed as described hereunder:—

- (i.) "STOP" Signal.—By a Red Disc thus:—

or by the exhibition of a Red or of a Purple Light.



- (ii.) "PROCEED" Signal.—By the Disc being turned off (to either side), thus:—

or by the exhibition of a Green Light.



- (b) Where two (or more) Disc Signals are fixed on the same post, they apply in the order prescribed for Semaphore Signals, i.e., the first or top Disc applies to the left; the second Disc applies next in order from the left, and so on.

Disc Signals fixed on the same post as Semaphore Signals must be read in their relative order—separately from the Semaphore Signals.

AMENDMENT OF RULE 23, APPENDIX III.

(Page 269, Book of Rules and Regulations.)

Clause (b) of the above-mentioned Rule has been amended as shown hereunder, by substituting 20 lbs. in lieu of 10 lbs. in the seventh line; employes must show the alteration in ink in the margin of the clause referred to.

Clause referred to in its amended form.—(b) Before leaving a Terminus, and immediately before giving the Driver a signal to start; after adding to, or detaching from, a train; or disconnecting on the journey; or on another engine being attached, the rear Guard must ascertain whether the Train-pipe couplings are connected and the cocks in the Train-pipe are all open throughout the train, by applying the Air Brake from his van, reducing the pressure in the Gauge by **20 lbs.** If the Brake connections throughout the train and engine are in proper order, the pressure in the Gauge will, on the cock being shut, begin to rise, and the Brakes will be released by the engine.

If the Air Brake is not in use on the whole train, or if the van is not the last vehicle, the test must be made by opening the cock in the Train-pipe at the rear of the last vehicle connected.

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AMENDMENT OF RULE 15, APPENDIX II., AND RULE 1 (FIFTH PARAGRAPH) OF APPENDIX VII., PAGES 238 AND 387, BOOK OF RULES AND REGULATIONS.

(Trains Assisted by an Engine in Front, or Two or More Engines (under Steam) Coupled Together proceeding through a Section.)

Except where instructions are issued to the contrary, when a train has more than one engine in front or when two or more Light engines (under steam) are to run coupled together, the Tablet, Staff or Ticket must be delivered to and carried by the Driver of the leading engine, and the Driver of the leading engine must intimate to the Driver of the second engine, by one short whistle, that he is in possession of the proper Ticket, Staff or Tablet for the Section, and in the case of the Ticket, that he has seen the proper Train Staff; the Driver of the second engine must acknowledge by repeating the whistle.

In the case of Trains assisted by an engine in the rear, the Tablet, Staff, or Staff Ticket must be shown to the Driver of the leading engine and delivered to the Driver of the rear engine as prescribed in the above-mentioned Rules.

OBTAINING OR ACCEPTING INTOXICANTS.

(Regulation 12.)

Clause (c) of Regulation 12 applies to Ticket Checker, Vanman or Car Cook; and clause (d) applies to Stewards or Waiters as well as Conductors; these employes must not accept intoxicating liquor from passengers or other persons.

REPORTING OF ACCIDENTS OR IRREGULARITIES.

(Regulation 134.)

1. In cases of serious accident such as those enumerated hereunder, the Station-master or person in charge or other responsible employe, must telegraph preliminary information without delay, using the Code words "Flash" and "General" or "Branch" (see clauses 2 and 3 on page 11, and clause 4 on page 13), according as the circumstances of the case require, or only an ordinary telegraph form (see clause 5, page 14), addressed to the Head of the Branch or Heads of Branches concerned, and the responsible Supervising Officers. A full report must afterwards be sent by train to the Transportation and Rolling Stock District

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Superintendents, Inspector, District Engineer, Works Foreman, Road Foreman, or Signal Supervisor, as may be necessary, and a copy to the Head of the Branch or Heads of Branches concerned:—

- (a) Any collision on a **Running Line** between trains, or between a train and a **Light Engine**, or between two or more **Light Engines**, or between a train or an **Electric Street Railway Car** and any vehicle or buffer stops.
- (b) Any **Passenger** or **Mixed train** or part of a **Passenger** or **Mixed train** or an **Electric Street Railway Car** becoming derailed.
- (c) Any case of a **Goods train** or any part of a **Goods train** or a **Light Engine** leaving the rails on a **Running Line**.
- (d) Any train becoming divided while running.
- (e) Any failure or breakdown of any part of the overhead electrical equipment.
- (f) Any accident not provided for in this enumeration that causes (1) serious delay to a **Passenger** or **Mixed train** or (2) serious disarrangement of the train service, or **Electric Street Railway** service.
- (g) Any accident to any person whomsoever, whether to a passenger, an employe, a trespasser, or any other person when attended with (1) loss of life, or (2) with injuries that are likely to prove fatal.
- (h) The failure of a **Motor Car**, **Electric Street Railway Car** or an engine attached to a **Passenger** or **Mixed train**, or of any other engine, **Rail Motor**, or **Electric Street Railway Car**, the failure of which would cause serious delay to traffic.
- (i) Any case of derailment not already specified.
- (j) An engine, train or vehicle running over any horse, beast, or other obstruction, or through the **Gates** of a **Level Crossing**, or a derailment of any tram car at a **Level Crossing**, or any damage caused to the **Gates** of a **Level Crossing** by a tram car or other vehicle.
- (k) Any **Fire** in any part of a train or on an **Electric Street Railway Car**, or at a **Station**, or involving injury to any **Bridge** or **Viaduct** on any part of the **Line**, or any **Fire** adjacent to any **Railway Line** or **Railway** premises which may interfere with the running of trains, or any **Fire** on any part of the **Railway** arising from electrical equipment.
- (l) Any damage to **Rolling Stock**, **Gates** or **Buildings**.

Train Accidents.—An immediate and concise Telegraph message addressed "Flash" (see clause 2) must be sent in respect of an accident of this class, and as soon as possible the full particulars must be telegraphed on the Special Telegraph Form (TL 109) under code word addressed "General," see clause 3, page 11. See also sub-clause (g), clause 1, under Train Control System, page 246.

Personal Accidents.—To be sent in respect of an accident of this class, and as soon as possible the full particulars must be telegraphed on the Special Telegraph Form (TL 109) under code word addressed "Branch," see clause 4, page 13.

Various Accidents (see clause 5).—To be reported on an ordinary telegraph form unless the accident or occurrence be of such character as to require a preliminary report on the Special Telegraph Form (TL 105) (see foregoing sections (a) to (f) inclusive), or the use of the Code word "Branch" (see preceding section "G"). See also sub-clause (g), clause 1, under Train Control System, page 246.

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- (m) The fracture of a rail in, or any unauthorised obstruction on, or interference with, the Permanent-way of any Running Line.
- (n) The failure of a bridge, viaduct, culvert or of any part of any of them.
- (o) The failure of a Tunnel or any part of it.
- (p) The failure of the roof of any important part of a Station.
- (q) Any serious slip in any cutting or of any embankment.
- (r) The failure of a retaining wall.
- (s) The flooding of a portion of the Permanent-way or Works.
- (t) The bursting of a boiler.
- (u) The failure of a wheel or tyre.
- (v) The failure of an axle.
- (w) The fracture of a connecting rod, coupling rod, or any other part of a locomotive engine, tender, Rail Motor, or vehicle not included in the above which causes or is likely to cause an accident to a train.
- (x) Any serious infringement of a Rule, Regulation or Instruction applicable to Train Signalling or to the observance of Fixed Signals.

Various Accidents (see clause 5).—To be reported on an ordinary telegraph form unless the accident or occurrence be of such a character as to require a preliminary report on the Special Telegraph Form (TL 106) (see foregoing sections (a) to (f) inclusive), or the use of the Code word "Branch" (see preceding section "G"). See also sub-clause (g), clause 1, under Train Control System, page 246.

2. Use of Code Word "Flash."—(a) In the cases specified in sub-clauses (a) to (f) inclusive, of clause 1, the Station-master receiving information of the mishap must, after taking the steps necessary for safety, send an immediate preliminary advice giving concise information of the occurrence to the Telegraph Office, Spencer-street, the code word "Flash" being used to indicate the important character of the message, which must have precedence over all other business. Immediately on receipt of the message the Officer-in-Charge, Spencer-street, must communicate the particulars to the Officers named under clause 3 hereof. The message "General" must, however, be dispatched as soon as possible after sending the "Flash" message.

(b) In the case of disarrangement of overhead equipment the Station-master must first communicate the particulars to the Overhead Superintendent, and to the other officers mentioned in the Special Instructions for reporting overhead disarrangements. See clause (d), page 43.

3. Use of Code Word "General."—(a) When telegraphing the preliminary report of a serious accident which requires the use of the code word "General" (see sections (a) to (f) inclusive of clause 1), the operator must send the signal "D.C." (which means that the message must take precedence over all other business), or "C.M." (which means that the message must take precedence over all ordinary business) according as the circumstances of the case require. The message must be addressed to "General," Spencer-street, if assistance be required from that Station, or, if it be required from some other Station or Stations, then to such other Station or Stations; the Special Telegraph Form (TL 105) being used. (See Specimen Form on page 23.)

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(b) When a telegram addressed to "**Flash**" or "**General**" is received at a Station other than Melbourne, the Station-master or person in charge, after arranging for prompt compliance with any request for assistance, must repeat the particulars to "**General**," Spencer-street, and, at the same time, state whether the assistance has been rendered, or what (if any) is required.

(c) When a telegram addressed "**Flash**" or "**General**" is received at Spencer-street during the time that the Head-Office is open, a copy of such telegram must be sent as under:—

If the Accident be attended with Loss of Life or Personal Injury—
To the Commissioners.

Whether the Accident be attended with Loss of Life or Personal Injury or not, to the undermentioned Officers—

Secretary's Branch—

The Secretary.

Transportation Branch—

General Superintendent of Transportation.

Assistant General Superintendent of Transportation.

Outdoor Superintendent.

Chief Time Tables Officer.

Superintendent of Goods Train Service.

Claims Agent.

Metropolitan or District Superintendent, as the case may be.

Superintendent of Melbourne Yards.

Block and Signal Inspector.

Chief Train Control Officer.

Station-master, Spencer-street or Flinders-street, as the case may be.

Ambulance Officer, Spencer-street Station.

Rolling Stock Branch—

Chief Mechanical Engineer.

Assistant Chief Mechanical Engineer.

Superintendent of Locomotive Running.

Chief Clerk.

Metropolitan or District Rolling Stock Superintendent, as the case may be.

Workshops Manager, Jolimont.

Chief Foreman, Metropolitan Loco. Depot, North Melbourne.

Chief Foreman, Metropolitan Car and Waggon Shops, North Melbourne.

Electric Running Inspector—when the accident is within the electrified area.

Brake Inspector.

Way and Works Branch—

Chief Engineer of Way and Works.

Assistant Chief Engineer of Way and Works.

Engineer of Maintenance.

District Engineer.

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Signal and Telegraph Branch—

Chief Engineer of Signals and Telegraphs.
 Assistant Chief Engineer of Signals and Telegraphs.
 District Signal Supervisor.

Electrical Engineering Branch—

Chief Electrical Engineer.	} When the accident is within an electrified area.
Assistant Chief Electrical Engineer.	
Overhead Superintendent.	

(d) If the telegram reporting the accident be received at Spencer-street when the **Head Office** is closed, particulars must be promptly communicated by telephone or telegraph or other expeditious means—

- (i.) To the Commissioners if the accident be attended with loss of life or serious personal injury to passengers, and
- (ii.) To all the Officers mentioned in sub-clause (c), whether the accident be attended with loss of life or injury or not, and if it be attended with loss of life or serious personal injury to passengers, the Station-master, Spencer-street, shall immediately send a special messenger in a cab, motor or other vehicle for each of them, or, if time will be saved thereby, such messenger must be sent from the nearest Suburban Station.

(e) The Operator in charge at Spencer-street must arrange so that every message received addressed "**Flash**" or "**General**" shall be delivered to the Commissioners and Officers concerned with the utmost possible despatch.

4. Use of Code Word "Branch."—(a) When telegraphing the report of a serious personal accident (see section (g) of clause 1, page 10), it must be done on an ordinary telegraph form, the code word "**Branch**" being used, except where such personal accident is caused by a train accident of a kind specified in sections (a) to (f) inclusive of clause 1, in which case the particulars must be included in the report made on the Special Form TL 105 telegraphed under the code word "**General**."

(b) When a telegram is received addressed "**Branch**," the Operator-in-charge at Spencer-street will be responsible for seeing that a copy is delivered to—

- (i.) The General Superintendent of Transportation, the Assistant General Superintendent of Transportation, the Outdoor Superintendent, the Superintendent of Goods Train Service, the Chief Time Tables Officer, the Claims Agent, when any member of the public is concerned), and the Metropolitan or (when his office is at Melbourne) District Superintendent, as the case may be, and the Ambulance Officer, and (when any member of the public is concerned) to the Claims Agent.
- (ii.) The Chief Mechanical Engineer, the Superintendent of Locomotive Running, and (when his office is at Melbourne) District Rolling Stock Superintendent.

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- (iii.) The Chief Engineer of Way and Works, the Assistant Chief Engineer of Way and Works, the Engineer of Maintenance, the District Engineer, and (if his office is in the Metropolitan area) the Road Foreman concerned.
 - (iv.) When the Electrical Engineering Branch is concerned, to the Chief Electrical Engineer, Assistant Chief Electrical Engineer, and Overhead Superintendent.
 - (v.) When the Signals and Telegraph Branch is concerned, to the Engineer of Signals and Telegraphs, Assistant Engineer of Signals and Telegraphs, and (when his office is in the Metropolitan area) Signal Supervisor.
- (c) The Station-master from whose Station the telegram was sent must also report the matter by separate telegram or by the most expeditious means to the District Superintendent, the District Rolling Stock Superintendent, District Engineer, and the Road Foreman concerned.
- (d) The telegram must state exactly where the accident took place, whether within Station limits, or, if at Level Crossing Gates, whether the Gates are interlocked, or if not interlocked, whether they are under the control of the Transportation Branch or the Way and Works Branch.

5. Various Accidents.—The particulars of accidents which come under this heading (see sections (g) to (v) of clause 1, pages 10-11), are to be reported by wire on an ordinary telegraph form, unless the accident be of such a character as to require a preliminary report on the Special Telegraph Form (TL 105) under the code word "**General**" (see clause 3). If reported on an ordinary telegraph form the code word "**Branch**" may, if necessary, be used (see clause 4).

6. General Directions in Regard to Reporting Accidents.—(a) In the event of an accident attended with loss of life to any employee or to any other person, or in the event of any person dying on any part of the Line, or in any Goods Shed, Warehouse, Workshop, on any Pier, Wharf, or any other part of the premises or property belonging to the Department, except any house on Departmental land used for residential purposes, the circumstances must, in addition to being reported in the ordinary course, be promptly reported to the local police. If the accident or the death occurred on the Line between Stations, the Ganger in whose Length it occurred will be responsible for seeing that information is conveyed to the local police, but if at any Station, or in any Goods Shed, Warehouse, or Workshop, or on any Pier, Wharf, etc., the person in charge of such place for the time being must see that the police are duly advised.

(b) If an inquest be necessary the Metropolitan (or District) Superintendent or a Traffic Inspector, as the case may require, will represent the Department if the occurrence took place within Station limits or at Gates under the control of the Transportation Branch; but if it took place on the Line between Stations, then the District Engineer or Roadmaster will represent the Department, unless instructions are issued to the contrary in either case.

(c) If a train be involved and the Driver is likely to be required as a witness, the Station-master must send advice regarding the accident to the District Rolling Stock Superintendent, and also notify him of the date on which the inquest will be held.

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(d) If any person be killed or injured in the vicinity of a Station, and a train is involved, the Station-master or person in charge must (whether the care or management of the train is concerned or not) verbally report the circumstances to the Trainmen at the time. It is important that this be done, so that should the Trainmen be required subsequently to give evidence they will have some knowledge of the accident.

(e) In the case of any accident not attended with a fatal result to any person (other than an employe on duty) at a Station (especially when alighting from or entering a train) or in any Goods Shed or Warehouse, or on any Pier, or Wharf, belonging to the Department, the following particulars must be furnished on Form TL 105:—

- (i.) Name, address, and (if possible) occupation of injured person;
- (ii.) Was the person trespassing?
- (iii.) Date and time of occurrence;
- (iv.) Situation of occurrence, etc.;
- (v.) Nature of injury sustained;
- (vi.) How caused, mention train (if caused by train); and give names of Driver and Guard;
- (vii.) Was the occurrence due to the action or negligence of the injured person?
- (viii.) If so, in what manner?
- (ix.) Names and addresses of two or more independent witnesses, vide Regulation 136;
- (x.) Whether removed to hospital;
- (xi.) If not removed to hospital, name of doctor in attendance, Medical opinion in either case to be obtained. See Instruction "Injuries to or Illness of Passengers," page 25.
- (xii.) Was "First Aid" rendered? If so, by whom?

(f) The particulars required in accordance with the foregoing Sections (i. to xii. inclusive) together with the written statement of every employe concerned, must be sent without delay to the Superintendent, or other responsible Supervising Officer concerned. A copy of the Form TL 105 must also be forwarded to the Superintendent of Goods Train Service, and one to the Claims Agent.

(g) If any employe discover any evidence which would lead him to suspect that a person has been run over, he must report the circumstances to the Station-master or person in charge of the nearest Station, and the Station-master or person in charge must advise the local police.

(h) In any case of non-fatal accident to any employe whilst on duty, a report regarding the injury must be furnished on the prescribed Forms (G3 and M49) which must be sent direct to the Head Office. The Form must be properly filled in. Reports of witnesses must be obtained and forwarded promptly, and, in this regard, application is to be made direct to any employe in any other Branch who may have witnessed the accident. Any employe witnessing an accident must promptly furnish a report without waiting to be asked for one. In the case of the Transportation Branch the G3 Form must be addressed to the Superintendent of Goods Train Service, but all subsequent reports must be addressed to the General Superintendent of Transportation.

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Full particulars must be furnished in the reports; in the case of an injured hand or leg (for example) it must be stated whether it is the right or left limb that is affected.

Victorian Civil Ambulance Service.—The Department grants an annual subsidy to the Victorian Civil Ambulance Service; where an ambulance is required for the conveyance of an injured employe the Victorian Civil Ambulance Service must, if available, be first called upon to undertake the work, and only in the event of that service not being available should the services of a private ambulance be requisitioned.

(i) In regard to all serious accidents, a detailed statement must, subsequent to the telegraphing of the preliminary report, be sent to the responsible Supervising Officer, and a copy to the Head of the Branch, if practicable, by the first train after the accident, but certainly **within 24 hours**. The Station-master or other responsible Transportation Branch employe concerned must similarly see, if the accident involve personal injury to any person other than an employe, that a copy of such statement is sent to the Claims Agent.

(j) Other accidents, unless they are of a serious nature or are attended by circumstances of an important character (in which case they must be reported by telegraph) must, if practicable, be reported to the responsible Supervising Officer by the first train after the accident, a copy of the report being sent to the Head of the Branch by the same train.

(k) Full particulars of every accident and reports from all concerned should be in the Head Office at the latest **within 48 hours** after the accident. Care must be taken to make reports as full, complete and definite as possible.

(l) If the Assistant Station-master be on duty when a serious accident happens, he must by the most expeditious means advise the Station-master, and the Station-master must at once come on duty and satisfy himself that the proper reports and advices have been sent to all concerned.

(m) When it is known that the Line has become blocked by accident, by flood waters, by stress of weather, or by any other cause, the Station-master must at once telegraph a report of the circumstances to the District Superintendent, the District Rolling Stock Superintendent, the District Engineer, the Road Foreman, the Works Foreman, and to every Station where the starting of other trains is liable to be affected by the delay caused by the obstruction. Passengers who take tickets for destinations affected by the block must be informed of what has happened, so that if they decide to proceed they will do so with a full knowledge of the circumstances.

(n) In all cases of serious accident a competent person must, if it is at all reasonably practicable, remain in attendance upon the Telegraph Instrument at the nearest Station from which Telegraph information can be sent, to forward and receive messages without delay, as long as may be necessary.

(o) For the Melbourne Yard and the Melbourne Goods Sheds the Superintendent of Melbourne Yards and the Melbourne Goods Superintendent respectively must report to the General Superintendent of Transportation.

ACCIDENT TO TRAIN BY WHICH EXPLOSIVES OR DANGEROUS GOODS ARE CONVEYED.

1. In the event of any accident to a train by which Explosives or Dangerous Goods are conveyed, it is most important that precautions be taken to prevent an explosion or outbreak of fire.

2. Before beginning to clear away any wreckage in which a vehicle containing Explosives is involved, all unbroken packages should, if practicable, be removed to a place of safety, and as much of the contents as possible of any broken package or packages gathered up by hand and likewise removed. This work must be carried out by as few men as possible, under careful supervision, and all persons not engaged in the work must be kept at a safe distance.

3. It should be borne in mind that some Explosives are readily fired by a blow, and all explosives by the spark produced when two pieces of metal or a piece of metal and a stone come violently together; therefore, if there be reason to believe, when clearing away wreckage, that there is any Explosive amongst it, care must be taken to avoid the possibility of producing sparks.

The utmost care must be taken to prevent any naked light being brought near to a travelling gas car in the event of its being derailed or in collision thus avoiding the risk of explosion in the event of leakage of gas.

4. The particular attention of all concerned is called to this matter, as it is specially necessary that the **UTMOST CARE** be taken when dealing with Explosives or Dangerous goods under these conditions.

5. Every such case must be reported by wire to the Superintendent of Goods Train Service, and unless delay is considered dangerous, nothing should be done until his reply with definite instructions is received.

PROCEDURE TO BE FOLLOWED IN THE EVENT OF A TRAIN ACCIDENT INVOLVING PERSONAL INJURY.

See preceding instructions respecting accidents to trains by which Explosives or Dangerous Goods are carried.

For instructions in regard to precautions to be taken to prevent any naked light being brought near to where there is, or is likely to be, an escape of gas, clauses (d) and (e), page 526; see also sub-clause (b), clause 6, page 21, in respect of electrical fires.

Note.—Instructions in respect of Break-down Van train, etc., apply also to Overhead Repair train; see definitions, pages 3-4.

1. **At Scene of Accident when not at a Station:**—(a) When a train is stopped by an accident or from any cause (unless it is efficiently protected by Fixed Signals) the Guard, if there be only one, or the

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rear Guard, if there be more than one, must immediately protect it in accordance with the Rules and Regulations. If the accident involve injury to passengers the best arrangements possible having due regard to the protection of the train, must be made:—

- (i.) To have the requirements of the injured passengers immediately attended to, and prevent them from being subjected to unnecessary enquiries.
 - (ii.) To communicate with the nearest Station-master, and procure through him, or in the quickest possible manner, such medical aid and skilled assistance, and such medical necessities (including stimulants), ambulance material, and refreshments as may be required for the relief of the sufferers.
 - (iii.) To give to the nearest Station-master by the most expeditious means, particulars of the occurrence, and requisition for the Break-down Van train and one or more Steam Cranes if required. If a Steam Crane be necessary the lifting capacity required should be stated. (See particulars on page 29).
 - (iv.) To ascertain the names and addresses, and the extent of the injuries, of all injured passengers, and to arrange for their immediate removal as soon as relief arrives.
 - (v.) To place at the disposal of any medical men or certificated "First Aid" employe as may be present, such ambulance material as is carried on the train or is otherwise obtainable.
- (b) If a senior Officer of the Transportation Branch be present, or a senior Officer of any other Branch, if no Transportation Branch Officer be present, he must act as Officer in charge at the scene of the accident, and arrange for the provisions laid down in the foregoing Sections being carried out.

2. Station Nearest to Accident.—In addition to any duties specified under "General Directions in Regard to Reporting Accidents" (see clause 6, pages 14-15), the Station-master or person in charge of the Station nearest to the scene of the accident must—

- (i.) If such Station be a Depot where a Break-down Van, etc., is located, and a request is received from the scene of the accident, or without awaiting any such request, if he consider the circumstances justify such a course, immediately order out the Break-down Van train, Steam Crane and Hospital Car (if available), and, if a number of persons be injured, take steps to obtain the services of one Doctor for every five injured persons. If time can be saved thereby, the Doctors and the "First Aid" Ambulance men, with any available Ambulance equipment, must be sent to the scene of the accident by motors, cabs, or other conveyances.
- (ii.) If the Station be one where a Break-down Van, etc., is not located, telegraph or telephone to the nearest Depot where a Break-down Van is located brief particulars of the occurrence

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and a requisition for the Break-down Van, if required, and such medical and other necessary assistance as cannot be secured locally. He must as well advise the number of Doctors whose attendance has been arranged for, so that, if necessary, additional Doctors may be sent from the Depot. If one or more Steam Cranes or the Hospital Car be necessary, he must requisition for the same with the least possible delay.

- (iii.) If there be a Break-down Van at a Station or Depot on each side of the scene of the accident, and it will be an advantage to have the work of clearing the Line carried on from both ends, then a requisition must be made for the second Break-down Van.
- (iv.) Ascertain, with the least possible delay, the names and addresses, and the extent of the injuries, of all injured passengers, and arrange for their immediate removal to the nearest Hospital, or, if they so prefer, to their homes, by the best possible means of conveyance.
- (v.) Offer to send, **free of charge**, on behalf of the injured passengers, any telegraphic messages, and to have any which they desire to send transmitted without undue delay.
- (vi.) Telegraph as soon as ascertained and in the quickest possible manner, the particulars required on the Special Telegraph Form TL105. For Specimen Form, see pages 23 and 24.
- (vii.) Co-operate with the employe in charge at the scene of the accident, and with the Station-master at the other end of the obstructed Section, and make provision for the resumption of the ordinary traffic.

3. If Accident at Station.—If the accident occur at a Station, the Station-master or person in charge must, in addition to any duties specified under "General Directions in Regard to Reporting Accidents," (see clause 6, pages 14-15), arrange for the provisions of clauses 1 and 2 hereof, or so much of such provisions as applies, being carried out with promptitude and despatch.

4. Station from which Break-down Van is to be Despatched.—(a) In addition to any duties specified under "General Directions in Regard to Reporting Accidents" (see clause 6, pages 14-15), the Station-master or person in charge of any Station from which a Break-down Van is ordered, must—

- (i.) Order out the Break-down Van Train immediately upon requisition therefor, and take prompt steps to obtain the Steam Crane should it be necessary. If the Hospital Car is available, and is required, it must be sent, together with as many employes who have qualified in "First Aid" as practicable.

Note.—The Superintendent of Melbourne Yards will act in lieu of the Station-master, Spencer-street, in regard to the ordering and the arranging of the running of the Break-down Van Train or Steam Crane from Spencer-street. The Station-master must, however, be consulted. See clause 5, page 31.

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- (ii.) In the case of a Metropolitan Depot notify the Claims Agent, the Railways Medical Officer and the Ambulance Officer by telegraph or telephone, and, if it be possible, and time will be saved thereby, send a Special Messenger or Messengers in a cab or other conveyance for each of them.
- (iii.) Notify any available Public Ambulance Wagon Depot (see Ambulance Book of Instructions).
- (iv.) Obtain the services of additional Doctors in accordance with any request that may be made by the Station-master or person in charge of the Station nearest the scene of the accident; or, if advice as to the number already available has not been received from such Station-master, on the basis of one Doctor for every five injured persons.

(b) Unless a direction is given to the contrary by the General Superintendent of Transportation, a Break-down Van Train that is required to proceed to the scene of any train accident involving personal injury must not be delayed for **more than fifteen minutes** awaiting Doctors or "First Aid" Ambulance men at the Depot Station after it is ready to depart, and if it be likely that a sufficient number of Doctors or "First Aid" Ambulance men will not be ready to travel with the Break-down Van Train, or arrangements cannot be made for them to join the train at Stations en route or to obtain them in the vicinity of the accident, a second train must be arranged for, at the same time that the Break-down Van Train is ordered out and this, with the necessary Doctors and "First Aid" Ambulance men, must, subject to the Rules and Regulations, follow the Break-down Van Train as promptly as possible.

Every intermediate Telegraph Station must be advised of the running of the second train in the same way as with the Break-down Van Train, and it must receive the same order of precedence.

In any instance in which time can be saved thereby, the Doctors and the "First Aid" Ambulance men with any available Ambulance equipment must be sent to the scene of the accident by motors, cabs, or other conveyances.

5. Station to which Injured Passengers are to be Conveyed.—(a) In addition to any duties specified under "General Directions in Regard to Reporting Accidents" (see clause 6, pages 14-16), the Station-master or person in charge of any Station to which injured passengers are to be conveyed, must—

- (i.) Make all necessary arrangements for the reception of such injured passengers, including the provision of such medical aid and comforts as may be required, and for the conveyance of the injured passengers by Ambulance or other suitable means to a Hospital or (if preferred) to their homes.
- (ii.) Prevent the injured passengers from being subjected to unnecessary enquiries on arrival, and take every precaution, obtaining the assistance of the Police if necessary, to prevent the public from crowding round them.
- (iii.) Post at the Station in various conspicuous positions accessible to the Public, the Press, and the Police, lists showing

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the names, and, as far as possible, the extent of injuries and the condition of the injured passengers, and how they are being cared for, and—

(iv.) Retain a copy of such lists for future reference.

(b) The Hospital or Hospitals concerned shall, as soon as practicable, be advised by telephone or by the most expeditious means of the number of injured passengers who will require medical or surgical attention, so that everything may be in readiness on their arrival at the Hospital or Hospitals. Application must be made for the attendance of Ambulance conveniences with Doctors and Nurses at the Station to meet the injured passengers, and care shall be taken to specify the exact time of arrival of the train, in order to insure the prior arrival of the Ambulance conveniences.

(c) In every instance in which Public Ambulance Wagons are available (apart from Hospital Ambulance Wagons, for which see Ambulance Book of Instructions), arrangements must, as soon as practicable, be made to have the required Ambulance Wagons and Attendants on hand to remove the injured passengers from the Station to the Hospitals or to their homes (as they may desire). Special messengers (in cabs, if available) shall be utilised for the purpose of obtaining Ambulance Wagons and Attendants unless the arrangements can be made more quickly by telephone.

6. General Instructions.—(a) The Station-master or person in charge of the Station nearest to the scene of the accident (if the accident be not at a Station), or at the Station where the accident has taken place, and of the Station at which the injured passengers (if any) will detain, must make prompt arrangements for the attendance of the necessary force of Police to maintain order.

(b) In the event of a fire arising out of any accident, an intimation to that effect shall, if any advantage will be gained thereby, be sent immediately to the nearest Fire Brigade Station by telephone or by the most expeditious means. In the event of an electrical fire, the special Extinguishers which are provided in the Vans of Electric Trains must be used.

(c) Every Doctor whose services are required must be so advised by telephone, or other expeditious means, and, if possible, the Station-master or person in charge must send cabs or other conveyances for the Doctors, or if conveyances be not available, he shall despatch messengers for them, and in any instance in which a conveyance is sent for any Doctor, such Doctor shall, if possible, be notified by telephone that a conveyance is being sent for him, so that he may be in readiness when it arrives.

(d) In any instance in which the services of a sufficient number of Doctors or "First Aid" Ambulance men cannot otherwise be obtained, the Station-master or person in charge of the Station nearest to the scene of the accident (if the accident be not at a Station), or at the Station where the accident has taken place, and the Station-master or

GENERAL INSTRUCTIONS.

person in charge of the Station from where the Break-down Van is obtained, must promptly request every Hospital in the vicinity, by telephone or other expeditious means, to send Doctors or Nurses; and, if possible, conveyances must be despatched for them.

(e) In any instance in which it is impossible to send a sufficient number of Doctors or "First Aid" Ambulance Men, or sufficient Ambulance equipment, from the nearest Station from which a Break-down Van is despatched, or from the Station or Stations nearest to the scene of the accident (if the accident be not at a Station), the Station-master or person in charge of the nearest Station from which a Break-down Van is despatched must, if possible, arrange with the Stations that will be passed by the Break-down Van Train or trains (as the case may be) en route to the scene of the accident for the necessary additional Doctors and "First Aid" Ambulance Men to be in attendance when the train arrives, and to accompany the Break-down Van Train or trains from such Stations, and for additional Ambulance equipment to be forwarded thence by such train or trains, and every such Station en route shall have all Ambulance equipment ready to be placed in the Break-down Van Train or trains.

(f) The Staff despatched with the Break-down Van Train and the Hospital Car must, whilst proceeding to the scene of the accident, make such preparations as may be practicable in order to avoid delay in rendering First Aid to the Injured.

(g) In any instance in which the Departmental telephones are likely to be insufficient to cope with the business, an employe shall be despatched promptly to the nearest Telephone Exchange to telephone thence such information as he may be instructed, or the Telephone Exchange shall be advised of the number of Doctors required, and the nature of the information which should be communicated to them, as well as to the Hospitals and Ambulance Organisations, etc., and requested to communicate with them direct.

(h) Any additional Telegraph Operators or other Staff which may be required, either at the scene of the accident or at the Depot Station, must be promptly obtained in the best manner practicable. The services of every available officer and employe, whether on or off duty, shall, if required, be secured; and every officer and employe called upon must readily submit to and comply with the commands and directions of whoever is in charge at the scene of the accident, at the Station nearest to the scene of the accident, or at the Depot Station (as the case may be).

(i) The best arrangements practicable must be made for the comfort and general convenience of passengers who may be injured, or who are detained, and the best information obtainable afforded, in order to relieve the natural anxieties of the public who may be waiting the arrival of their friends.

(j) No necessary expense shall be spared by responsible officers in order to provide for the care and comfort of injured passengers.

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Special Telegraph Form TL 105 referred to in clause 3 on Page 11.

[Front of Form.]

VICTORIAN RAILWAYS.

SPECIAL TELEGRAPH FORM

For Reporting Particulars or Accidents, Failures, Obstructions or Irregularities of a Serious Nature.

(See back of Form for instructions in the event of accidents to trains involving injuries to passengers.)

In replying to the several questions be careful not to repeat information already entered on the Form.**TO GENERAL**

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1. Name of Station, or Mileage, where mishap occurred. If on Bridge or Embankment give particulars of locality. If at Points, say where situated.
2. Nature of mishap, date and time of occurrence, and what train or trains are involved.
3. If Engine, Motor Car, Carriage or Truck failure specify part that failed.
4. Has any damage been caused to Engine, Motor Car, Rolling Stock, Permanent Way or Overhead Equipment, and, if so, to what extent?
5. If an Engine or vehicle be derailed, specify its distinguishing number and class; if all wheels be derailed state so, or, if not all, how many derailed and specify them and, if possible, which wheel or wheels were first derailed. If the engine or vehicle be disabled state so.
6. Is any Running Line obstructed?—If Double Line, state whether Up and Down, or both, and say when likely to be cleared.
7. What is necessary to clear Running Line?
8. (a) Is Break-down Van required?—(See "Depots for Break-down Vans," General Appendix).
(b) Do you require one from Melbourne?
(c) Have you ordered one from elsewhere?
9. Is Steam Crane, or Steam Wrecking Crane required?—If so, state lifting capacity. (See "Depots for Steam Cranes," General Appendix).
10. (a) Is a Hospital Car required from Melbourne? —(See "Depot for Hospital Cars," General Appendix).
(b) Have you ordered one from Ballarat?
(c) Is First Aid Assistance available?
(d) Are medical men required?
11. Can passenger traffic be conducted; is working by Pilotman being established and if so, between what places?
12. Name and grade of each employe concerned and number of hours on duty at time of mishap.
13. Approximate number of passengers (if any) on train or trains involved.
14. Name and address of person or persons injured, and brief description of injuries.
15. How are injured persons being cared for?
16. Describe, briefly, how mishap occurred, and furnish other necessary particulars not specified above.

Received..... Signature of Sender.....
 Words..... Sent..... Station.....

{Continued.

GENERAL INSTRUCTIONS.

(Back of Form TL 105.)

Notes.

1. The Sender must read the printed matter on this Form, fill in the necessary particulars, and immediately report them by telegraph or by the most expeditious means to the Depot or Terminal Station, addressing the telegram to "**General**" (see Index to General Appendix). If, however, any of the required particulars are not readily obtainable, the request for assistance (if needed) shall be made without delay, and the omitted details can then be telegraphed as soon as they have been obtained.

2. When telegraphing the particulars, TL 105 shall first be mentioned, then the number of the question or questions as the several particulars in respect thereof are telegraphed.

3. The Station-master or person in charge at the Depot or Terminal Station (if other than a Metropolitan Depot), after arranging for prompt compliance with any request for assistance, shall repeat the particulars of the occurrence to Spencer-street Station, and state at the same time whether the necessary assistance has been rendered, or what (if any) aid is required, and the Operator in charge at Spencer-street must then without delay forward or repeat the message to the Heads of Branches and to the other Officers concerned. (See "Reporting Accidents," General Appendix).

4. In any case in which the running of trains is concerned, Regulation 134 must be strictly observed.

5. Any additional Telegraph Operators or other Staff that may be required either at the scene of the accident or at the Depot or Terminal Station, are to be promptly obtained.

6. The services of every available Officer and employe, whether on or off duty, must, if required, be secured, and every such Officer and employe must readily submit to and comply with the commands and directions of the person in charge at the scene of the accident, or of the Station-master at the Station nearest to the scene of the accident, or the Station-master at the Depot or Terminal Station, as the case may be.

7. The Station-master or person in charge of the Depot or Terminal Station must arrange to carry out the instructions contained in the card showing "What to do First in the event of a Serious Train Accident," which is exhibited at the Station, and also the instructions in regard to Ambulance Organisation and Equipment.

8. **No necessary expense is to be spared by responsible Officers to provide for the care and comfort of injured passengers.**

9. If the Assistant Station-master be on duty when a serious accident happens, he must by the most expeditious means advise the Station-master.

See General Appendix for further particulars in regard to the "Procedure to be followed in the event of a Train accident involving personal injury at—

- (i.) The scene of the accident, when not at a Station,
- (ii.) The Station nearest to the scene of the accident,
- (iii.) The Station where the accident has occurred,
- (iv.) The Station from which the break-down Van is to be despatched, and
- (v.) The Station to which the Injured Passengers are to be conveyed."

GENERAL INSTRUCTIONS.

INJURIES TO, OR ILLNESS OF, PASSENGERS.

1. In any case of sudden illness or where any person may sustain an injury by his or her own act, such as by alighting from or attempting to join a train in motion, or from any similar cause not in any way arising from the fault of the Department, and the services of a medical man may be required, the Station-master or person in charge must be particular in such case to previously inform the medical man called in that his services are called for and on behalf of the injured passenger, and that he must look to the passenger, and not to the Railway Department, for his fee.

In case of injury or sudden illness necessitating the removal of a passenger from a train, the Station-master at the Station at which the passenger is removed should ascertain the names and addresses of the relatives of the person so removed, and telegraph the particulars to the nearest Station-master, and the latter must inform the relative or relatives accordingly.

2. When any ill or injured person requires to be conveyed in the Guard's Van as a passenger, it is necessary that such person should in every instance be accompanied by an attendant.

Invalid Chairs.—An Invalid Chair is kept in the Station-master's Office at Spencer-street Station, and another in the "B" Booking Office, Central Entrance, Flinders-street Station. The chairs are only to be used for the conveyance of invalids to or from trains, and must not be taken away from the precincts of the Station buildings; no charge is to be made for their use.

ACCIDENTS TO EMPLOYEES.

1. Employees must exercise proper care in the performance of their duties to prevent accidents or injury to themselves or others, and spare no opportunity of warning those who neglect to take proper care.

Before using tools or appliances of any kind employees should make sure that they are in a safe position to perform the service required.

2. In the Book of Rules and Regulations, care has been taken to frame Regulations in such a way as to ensure that needless risks shall be avoided, and in this Book detailed instructions relating to the working of the Line have been prepared with this object specially in view. Much can be done to reduce the risk of accident by the exercise of proper care, and a strict observance of the Regulations and other Instructions.

3. Attention is particularly directed to:—

Regulation 24, Clause (b)—As to exercising proper care in getting between vehicles for the purpose of coupling or uncoupling them; warning employees not to expose themselves to danger by riding on the steps or footboards of moving trains; (c) precautions to be taken by employees before going under vehicles or into other positions of danger, and (d) risk of shock, incurred by contact with electrical connections, dangling wires, or any electrical apparatus.

Regulations 25 and 26—As to trespassing and walking on the Line.

All overhead wires are charged and dangerous.

Before crossing the Line look in each direction.

GENERAL INSTRUCTIONS.

Regulations 95, clause (j), and 103, clause (k)—As to Hand Signalmen and Fog-signalmen standing in a position of safety when giving Hand Signals to Drivers and Guards.

Regulations 131 and 132—As to the precautions to be taken before vehicles are moved or shunted.

Regulations 283, 296, 297, and 298, which deal with the precautions to be observed by Repairers, Overhead Linesmen, and others engaged upon the Permanent-way; see also pages 46-48.

Regulations 127, 177, 224, 245, and 252 (c) also relate specially to the safety of employees.

See also pages 388-396 of this Book for instructions as to the protection of Carriage Cleaners, Train Examiners, and other employees, whilst engaged in the performance of their duties; pages 67-71 for directions to be observed in cases of electric shock.

4. Guards, Shunters, or other employees whose duty brings them in close contact with trains or vehicles in motion, should not wear a mackintosh or overcoat which is too long, or has a cape which covers the arms, as such an article of apparel restricts the free use of the limbs. A short top-coat, without a cape, is more suitable.

5. Accidents have occurred through Shunters getting their feet caught between the rails, and men engaged in running trains or shunting are recommended to wear a boot or shoe of such a description that in the event of it becoming caught, the wearer's foot can be at once withdrawn. A low shoe, or elastic-side or half Wellington boot, might be the most suitable. It is not advisable to wear boots with small heels.

6. Shunters must not tie a loop of rope to hold on by to the hand rail of any engine, and Drivers must see that a loop is not used for this purpose.

7. (a) Employees are warned to keep clear of the draw hooks when coupling up, especially if the vehicles to be coupled have short buffer guides.

(b) To remove the risk attending a stiff or defective coupling, employees noting them should at once draw the attention of the Station-master or Super-vising Officer to the particular coupling, so that the Rolling Stock Branch may be promptly advised to have such coupling adjusted or replaced.

(c) The bows which are placed at each end of some of the medium trucks must be turned down at the same time that the ridge chain or tarpaulin is taken off, in order to avoid risk of injury to employees by the bows falling.

(d) When passing between trucks standing apart, Shunters, Firemen, and others must adopt the practice of stooping below the level of the buffer. Neglect of this precaution may at any moment result fatally.

(e) Whenever a vestibule vehicle has to be coupled to another vestibule vehicle or to a vehicle of the ordinary stock, the shunter or other employee concerned, in order to avoid risk of accident, must not attempt to get between the two vehicles until they have been brought together and are at rest.

Before crossing the Line look in each direction.

8. When riding on vehicles during shunting operations, Shunters should place themselves in such a position on the vehicle that they will not be struck by Signal Discs or any fixtures located close to the Line.

Except in the performance of absolutely necessary duties, no employe must be allowed to ride on the side footplateing of any engine (whether it be in steam or otherwise), whilst it is being taken into or out of any Car Shed, Goods Shed, Engine Shed, or Workshop, or when it is approaching or passing any Coal Stage, Grain Stack, or other similar obstruction that is situate in close proximity to the Line, and against which any employe, if so riding, would be liable to come into contact. In any case where it is absolutely necessary for an employe to so ride, he must be warned by the Driver, and the engine must not be moved until the Driver is satisfied that such employe is in a perfectly safe position, and that he will not be liable to come into contact with any obstruction.

See pages 728-729 for special instructions respecting the precautions to be taken by employes accompanying a train to or from the Jolimont Workshops.

9. (a) Porters and other employes who attend to trains, and have to cross the rails from one platform to another, must be careful to see that they do not expose themselves to any danger from approaching trains.

Personal accidents to employes can be avoided by their being always mindful of the dangers incidental to railway work; employes should guard against their touching any Live wire and against undue interference with other electrical appliances, and exercise due care to avoid the risk attending any attempt to cross the Lines immediately behind a train, or by passing between the vehicles or through any compartment of a passenger car, or by passing direct on to the Line after leaving an office, room, or Signal box—in all cases employes should adopt a practice of standing clear of the Line and looking each way before stepping on to a track.

Employes who attend to trains are advised not to wear boots having rubber heels or rubberised soles, owing to the tendency to slip, on damp platforms or floors.

(b) Station employes, Shunters, Fogmen, Repairers, and other employes at work on a Running Line are warned of the special care necessary, particularly in the vicinity of Stations or Junctions where Three-position Signals are in use, and that they must not rely on their reading the Signals as an indication of the Line on which an approaching train may run.

Unlike ordinary Two-position Signals, the top or the second arm of Three-position Signals may apply to the Left or Right, and the second arm may apply to two or more Lines. In the case of Light Signals, as Signal arms are not provided, the Signal Indication is visible from the front of the Signal only (as in the case of the Driver of an approaching train); a person in the rear of the Signal is, therefore, unable to see what Signal is displayed. Employes must keep a sharp look-out for trains, irrespective of the Signals displayed, and when a train is seen to be approaching must, in reasonable time, move clear of all Lines to a

Before Crossing the Line look in each direction.

Overhead wires are all charged and always dangerous.

GENERAL INSTRUCTIONS.

position of safety, and remain in such position till the train has cleared a sufficient distance to enable them to see whether one is approaching on another Line.

Note.—See sub-clause (h), page 15, in regard to the report necessary in any case of non-fatal accident to any employee.

DEPOTS WHERE HOSPITAL CARS AND BREAK-DOWN VANS, STEAM CRANES, OVERHEAD REPAIR TRAINS, ARE LOCATED; AND WORKING OF BREAK-DOWN VAN TRAINS, WITH DESPATCH, TO OR FROM THE SCENE OF ANY ACCIDENT.

1. (a) A Hospital Car is located at Melbourne (Spencer-street) and one at Ballarat. Before ordering either Car the Station-master should decide which of the two can be most expeditiously obtained. When a message containing a request for the Hospital Car to be sent is received at Spencer-street Station or at Ballarat the message must be immediately communicated to the Station-master as well as to the Locomotive Depot Foreman.

Note.—Hospital Cars Nos. 1 and 2 must not be allowed to run over the Northcote Loop Line.

(b) Break-down Vans, equipped with tools and appliances for the expeditious removal of damaged Rolling Stock, etc., and Ambulance equipment for rendering "First Aid to the Injured," are located at the under-mentioned Stations. Station-masters should not, however, requisition direct on Newport Workshops. If it be necessary to send a crane from there, the Locomotive Officer, Melbourne, will arrange for one to be supplied:—

Station.	Station.	Station.
*Melbourne (Spencer-st.)	Ouyen	Warrnambool
*Newport (Workshops)	*Ballarat	*Seymour
*Flinders-street	Ararat	Renalla
*Bendigo	Stawell	Wodonga
Echuca	Dimboola	Traralgon
Korong Vale	Hamilton	Korumburra
Maryborough	*Geelong	*State Mine
Donald	Colac	

* At these places the number of vehicles included in the Break-down equipment is—Melbourne (Spencer-street), 6; Newport (Workshops), 2; Flinders-street (Jolimont Yard), 4; Bendigo, 3; Ballarat, 3; Geelong, 3; Seymour, 3; State Mine, 2.

(c) In order that the employees who form the Break-down Gang can be summoned at the shortest possible notice, their names and addresses must be kept exhibited in a conspicuous position in the Locomotive Depot Foreman's office, and a copy in the office of the Station-master.

(d) The Break-down Van must stand in a convenient place, where it can be obtained at any time without the delay of having to shunt vehicles to get it out.

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(e) Steam Cranes are located as shown hereunder:—

STATIONS.	LIFTING CAPACITY OF CRANES.				
	3 Tons.	5 Tons.	7 Tons.	10 Tons.	30 Tons.
Newport	1	3	..	2	1
North Melbourne Loco.	1	..	..	1
North Melbourne Car and Wagon Shops	..	1	..	..	..
Bendigo North	1	..	..	..
Ballarat North	1	..	..

NOTES (i).—See page 294 for maximum rate of speed of Steam Cranes.

(ii) A requisition should not be made for Steam Crane to re-rail a truck which is not causing any interruption to train movements or to traffic, and which could be re-railed by a Train-examiner and his assistant by means of Lifting-jacks. Prompt advice and full particulars of derailments must be sent by Officers in charge; the message must state the class of vehicle, and whether loaded or empty, and if loaded, the approximate weight of contents, how many wheels are derailed, and which wheels, and the position of derailed vehicle. This information must be promptly forwarded to the Rolling Stock Officer concerned, who will then be in a position to decide what equipment and men will be necessary to re-rail the vehicle.

(f) In the event of damage to steel structures carrying Overhead Electrical Equipment, the Overhead Superintendent, or his deputy, will requisition on the Chief Foreman, North Melbourne Locomotive Depot, for the use of the Casualty train and his 30 ton Wreckage Crane, which must be forwarded without delay to the scene of the trouble. A Leading-hand Fitter, Crane Driver, and at least three Labourers must accompany the Break-down train when called out for such cases, and, if necessary, more men to be supplied as arranged by the Overhead Superintendent. On arrival at the scene of the accident, the employe in charge of the Break-down Equipment must at once report to the Overhead Superintendent, or his deputy, and work under his instructions.

(i.) When advice of a derailment or damage to Rolling Stock in the Electrified Area is received by the Telephone Attendant at the Emergency Equipment Examiners' Cabin, he must at once advise the Emergency Equipment Examiner and Assistant, who must proceed to the Overhead Depot without waiting for further advice, and travel with the Motor Trailer to the location of the accident.

The Telephone Attendant must also advise the Sub-Foreman and Leading Hand Equipment Examiner on duty, who must obtain the fullest details and act accordingly.

GENERAL INSTRUCTIONS.

Should the first intimation of an accident not be received from the Overhead Depot, the Telephone Attendant at Emergency Equipment Examiners' Cabin must advise the Overhead Depot so that the vehicles may be in readiness for the Equipment Examiner and Assistant.

- (ii.) On arrival of the Equipment Examiner and Assistant at the Overhead Depot, the Motor Trailer is to be immediately towed by a Motor Transport vehicle to the scene of the break-down.
- (iii.) In the event of there being no Departmental Motor vehicle available when the Equipment Examiner applies for same to take him and his Assistant to the scene of an accident, a vehicle must be hired by the Motor Transport Section.
- (iv.) When the Motor Transport Section is not on duty the Senior Officer on duty at the Overhead Depot must obtain the necessary vehicle and notify the Motor Transport Officer as soon as possible thereafter.

(g) **Overhead Repair Train.**—The Overhead Repair Motor Vans are located at the Overhead Depot, Batman-avenue; see clause (f).

2. (a) If it be necessary for the Break-down Van to be worked to the scene of any accident, the Station-master or other responsible person must communicate by telegraph or in the quickest possible manner with the nearest Station where a Break-down Van is kept, and request that it be sent. If there be a Break-down Van at a Station on each side of the scene of the accident, and it will be an advantage to have the work of clearing the Line carried on from both ends, then a requisition must be made for the second Break-down Van.

(b) The Station-master must give brief particulars of the nature of the occurrence which makes it necessary to requisition for the Break-down Van, or Steam Crane, or Hospital Car.

(c) If more than one Steam Crane be necessary, it should be expressly stated in the requisition.

3. (a) In order that no time may be lost in getting the Break-down Van Train ready for despatch from Melbourne, the Operator in charge of the Telegraph Office at Spencer-street, upon the receipt of a message requesting that the Break-down Van Train be sent, must immediately communicate the contents of the message to the Chief Foreman, Metropolitan Loco. Depot, North Melbourne, and the Superintendent of Melbourne Yards, if the accident be on a Line running from Spencer-street.

If the accident be on a Line running from Flinders-street or Prince's Bridge, he must communicate with the Chief Foreman, Metropolitan Loco. Depots, North Melbourne, with the Workshops Manager, Jolimont, and with the Station-master, Flinders-street, if he has not already been advised.

(b) If a message for the Break-down Van be received at Flinders-street station, the Operator in charge there must, after arranging for its prompt delivery, at once get into telephone communication with the Operator in charge, Spencer-street, and inform him of the circumstances and of what action he has taken.

GENERAL INSTRUCTIONS.

(c) Messages containing a request for a Steam Crane to be sent must be promptly communicated to the Superintendent of Melbourne Yards, as well as to the Chief Foreman, Loco. Depots, North Melbourne.

4. Arrangements must be made for the departure of the Break-down Van Train with all possible despatch, and to this end the Station-master or person in charge and the Locomotive Depot Foreman must co-operate. The Station-master or person in charge must, at the earliest possible moment, cause prompt preliminary advice to be sent to all Stations intermediate between his Station and the scene of the accident as to the approximate time of departure of the Break-down Van Train. The message should also give such brief particulars as will enable the Station-masters at intermediate Stations to decide whether any Passenger or Mixed Train should be shunted for the Break-down Van Train to precede.

5. (a) As soon as it is definitely known what time the Break-down Van Train will be ready to leave, the time of its intended departure must be wired by "**Rush**" message to every intermediate Telegraph Station. Upon the receipt of such message the Station-master or person in charge must at once confer with the Signalman or Signalmen under his supervision and decide upon the course of action to be followed in regard to the shunting of any trains that may be necessary for the Break-down Van Train to pass. In addition the Signalman at each Box must telephone advice of the running of the Train to the Box in advance, and the time such advice is forwarded and received must be recorded in the Train Register Book.

(b) The duty of seeing that the proper telegraphic advices are sent must be performed as under:—

If the Train start from Spencer-street Goods or Passenger Yard—
by the Superintendent of Melbourne Yards.

If it start from Flinders-street, Jolimont, or Prince's Bridge Yard
—by the Station-master, Flinders-street.

If from any other Station—by the Station-master or person in charge at the Station from which the Train starts.

6. (a) The Break-down Van Train must be dealt with strictly in accordance with the Rules and Regulations, and, to prevent delays, must be signalled as an Express Passenger Train, the **Shunt Train for Following Train to Pass** signal being given whenever any Section in advance is occupied by a train which must be passed to reach the scene of accident.

(b) If the Break-down Van Train be proceeding to an obstruction which is clear of the Running Line, and in which no case of personal injury is involved, the Signalman receiving the **Shunt Train for Following Train to Pass** signal must exercise discretion as to the shunting of a Passenger or Mixed train for the Break-down Van Train to pass. He must consult with the Station-master or person in charge when necessary, and, where the Train Control System is in force, the latter must consult with the Train Control Officer.

7. When the Break-down Van Train is no longer required at the scene of the accident it must be promptly worked back to its Home Station. Goods trains outside of the Suburban area must be shunted out of the way in sufficient time to prevent the Break-down Van Train being delayed by the Signals either at the Station where the train is being shunted or at the Station in the rear.

GENERAL INSTRUCTIONS.**SUPERVISION AND PROTECTION OF RE-RAILING, REPAIRING, OR OTHER OPERATIONS AT SCENE OF ACCIDENT.**

1. ACCIDENTS INVOLVING THE DISARRANGEMENT OR DAMAGE OF THE OVERHEAD EQUIPMENT ONLY—In any such case the Overhead Superintendent or his deputy will take charge of operations, and representatives of other Branches on the scene of the accident must consult that officer and co-operate with him in all movements.

2. ACCIDENTS INVOLVING DERAILMENTS, ETC., WHERE THE OVERHEAD EQUIPMENT IS NOT DAMAGED OR DISARRANGED—

- (i.) In any such case, the Senior Rolling Stock Officer, or the Workshops Manager, Jolimont, or his deputy, will take charge of operations.

In the event of a derailment, overhead defect, or any accident in which the equipment or Rolling Stock of the TRAMWAY BOARD is involved, the Railway Department's officer or employee in charge must, on arrival at the locality, ascertain if any representatives of the TRAMWAY BOARD are present, and, if so, must confer with the Board's official or employee in charge as to the procedure to be adopted in handling the situation; all present will then co-operate in the work. Similar action will be taken by the Board's official or employee in charge on arrival.

- (ii.) Where the use of a crane is necessary, the authority of the Overhead Superintendent, or his deputy, must be obtained before the crane is operated in the electrified zone.

- (iii.) Where there is a risk of fouling the overhead equipment, work must not be commenced until the Overhead Superintendent, or his deputy, has indicated that the overhead electrical equipment has been made dead and "Earthed," and that the work may proceed.

- (iv.) In the case of a derailed motor coach or motor coaches, before any work in connexion with the re-railing is commenced, the Pantograph of the derailed coach or coaches must be lowered, and the coach or coaches cut out electrically from the other coaches by removing the jumpers, etc. The jumpers and Pantographs, respectively, must not be replaced or raised until an Equipment Examiner has examined the coach or coaches which were derailed, and has ascertained and certified that all coaches are in good order.

3. ACCIDENTS INVOLVING DERAILMENTS, ETC., WHERE THE OVERHEAD EQUIPMENT IS ALSO DISARRANGED OR DAMAGED—(a) In any such case, the Overhead Superintendent, or his deputy, will take charge of operations until such time as the overhead equipment is safe for the work of re-railing, etc., to proceed, when he will so inform the Senior Rolling Stock Officer, or Workshops Manager, Jolimont, or his deputy, who will then take charge.

(b) In all cases of derailment, accident, etc., in an electrified area, the Rolling Stock Officer, or employee in charge, must, as soon as he arrives

at the scene of derailment, accident, etc., ascertain whether the Overhead Superintendent, or his deputy, is present on the scene, and if he be not present ascertain whether he has been notified of the mishap, and, if necessary, take steps to see that he is notified at once. Telephone numbers are—Power Auto. 20; Railways Auto. 426; Central 11264.

4. (a) On arrival at the scene of the accident, the respective officers and employes are to confer with the officer in charge of operations so that proper co-operation may be obtained.

These officers and employes, after consultation with the officer in charge of operations, must personally supervise and instruct the employes under their control regarding each movement.

(b) The Transportation officer in charge will supervise the protection at the scene of the operations, as well as make the necessary arrangements for working the traffic; after deciding with the officer in charge of operations the method of working the traffic, no variation must be made until the officer in charge of operations has been consulted in order that no misunderstanding may arise.

The Transportation officer in charge must instruct a responsible Officer of his Branch to remain at the scene of operations so that he can arrange any movement required by the officer in charge of operations without unnecessary delay.

(c) When the work of re-railing, repairs, etc., has been completed, the responsible officers or employes of the respective Branches must report to the officer in charge of operations, who will then inform the Overhead Superintendent, or his deputy, that he may take steps to have current switched "On."

The officer in charge of operations will then advise the Transportation officer in charge concerning the safety, or otherwise, of the Line, the Rolling Stock, and all other gear.

The Transportation officer in charge, after being notified by the Overhead Superintendent, or his deputy, that the current has been switched "On," will then take the necessary steps for the resumption of traffic.

When, in consequence of accident or overhead defect, any portion of the electrical equipment has been made "dead," current must not be again switched "On" without the authority of the Overhead-Superintendent or his deputy.

5. Protection of Operations at Scene of Accident.—When a Break-down Gang with a Crane is at work on a Running Line or in a Siding at the scene of any accident, and the jib of the Crane or any of the operations are in any way likely to obstruct the opposite Running Line, the Foreman, or other person in charge of the Gang, must, before obstructing the Running Line, obtain the permission of the Station-master or other Transportation official in charge, who, before giving such permission, must make the necessary arrangements to protect the obstruction by means of Fixed Signals; or in accordance with Regulation 271 where Fixed Signals are not provided. When necessary the obstruction must be protected in both directions.

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OFFICIALS OF THE ROLLING STOCK BRANCH REQUIRED TO ATTEND AT ACCIDENTS TO, OR DERAILMENTS OF, LOCOMOTIVES OR OTHER ROLLING STOCK WITHIN THE ELECTRIFIED AREA.

1. Accidents or derailments within the Electrified Area will be attended to by the Staff at North Melbourne Loco. Depot, or by the Staff at the Jolimont Workshops respectively during the hours and in the sections specified hereunder:—

Location and Description of Accident.	Staff to Attend.
(a) All accidents to, or derailments of Electric Stock. (b) Accidents to, or derailments of all Steam Rolling Stock (excluding Locomotives) East of and including Flinders-street Station, and on the St. Kilda and Port Melbourne Lines.	{ By Jolimont Staff, during shop hours (week days, 7.30 a.m. to 5.0 p.m.; Saturdays, 7.30 a.m. to 12 noon). Sub-foreman, at least one Equipment Examiner, six Running Gear Repairers and Assistants, supervised by Workshops Manager or Sub-foreman.
(c) All accidents to, or derailments of Locomotives.	{ By the North Melbourne Loco. Staff, Senior Leading Hand Fitter, Fitter and Assistant, two Running Gear Repairers, and, according to circumstances, additional Fitters and Assistants as required, supervised by Metro. R.S. Supt., Foreman, or Senior Leading Hand Fitter.
(d) Accidents to, or derailments of Steam Rolling Stock West of Flinders-street Station (St. Kilda and Port Melbourne Lines excepted).	{

2. (a) During any time that the Jolimont Workshops are closed, the North Melbourne Loco. Depot Staff shall attend all accidents and derailments, but in every such case in which electric car stock is affected, the Sub-foreman in charge of Equipment Examiners at Jolimont must be notified, if on duty, and must attend the scene and supervise operations.

(b) There will be a Sub-foreman on duty at Jolimont from 7.30 a.m. till 11.30 p.m. on week days and Saturdays.

(c) On Sundays, and when there is no Sub-foreman on duty at Jolimont, North Melbourne Loco. Depot will make all necessary arrangements and supervise operations.

Equipment Examiners on duty on Sundays must attend all derailments to Electric Stock; these men must be on duty as specified hereunder:—

11.30 p.m. on Saturdays to 10 p.m. Sunday	{ Equipment Examiner and his mate.
9 a.m. to 5 p.m. on Sundays	{ ..Leading Hand Equipment Examiner.

GENERAL INSTRUCTIONS.

3. (a) In dealing with accidents, derailments, etc., East of and including Flinders-street Station, and on the St. Kilda and Port Melbourne Lines, the Jolimont Casualty Train must be used. The Workshops Manager, Jolimont, must requisition on the Chief Foreman, North Melbourne Loco. Depot, for the supply of suitable Engine.

The Jolimont Casualty Train should have a Van at each end to save shunting, etc.

(b) In any case where it is necessary, the Workshops Manager, Jolimont, must requisition for extra equipment or staff from the North Melbourne Loco. Depot, or the Car and Wagon Shops, North Melbourne, and such staff must be supplied.

(c) If a Steam Crane is required, the Officer in charge of operations must decide which type is required, bearing in mind the fact that the small type of Crane cannot deal with Motor Coach Stock.

(d) If the accident derailment, etc., to any Electrical Car Stock occur on the West side of Flinders-street, or in any other case where it is deemed necessary, the Workshops Manager, Jolimont, may arrange with the Chief Foreman, North Melbourne Loco. Depot, for the supply of the North Melbourne Casualty Train, and in any such case, the Sub-foreman at Jolimont shall proceed at once to the scene in order to take charge of operations.

GENERAL DESCRIPTION OF, AND INSTRUCTIONS IN REGARD TO DISARRANGEMENT, SECTIONING, REPAIRS AND FAULTS OR IRREGULARITIES ON, OVERHEAD ELECTRICAL EQUIPMENT.

1. Station-masters and other responsible Officers, Foremen and Gangers must direct the attention of employes under their supervision to these instructions and, within electrified areas, see that every such employe has a proper knowledge of the precautions necessary for safety.

For Treatment in the event of Electrical Shock, see pages 67-70.

2. Description.—(a) Electrical energy is supplied from the Newport Power Station, at 20,000 volts, through underground cables to the various Substations, and the overhead conductors are supplied with current at 1,500 volts from the Substations, through underground cables, to the overhead wires.

The overhead conductors over the Running Lines consist of a stranded copper catenary wire, which, by means of droppers located at intervals of 15 feet, supports a solid copper Contact Wire; on Sidings the catenary wire consists of a steel stranded wire. The catenary wire is carried on insulators supported by brackets from steel supporting structures. The Contact Wire is held in the horizontal position by means of a steady rod attachment, which consists of a 1-inch steel tube clipped at one end to the Contact Wire, and attached at the other end through insulators to the steel supporting structure.

Each structure is designated by a distinguishing number, which also represents its approximate distance, in hundreds of feet, from a zero point near Princes Bridge, Melbourne; for example, structure No. 39 is 3,900 feet distant from zero.

GENERAL INSTRUCTIONS.

Current for the operation of the Electric trains is collected from the Contact Wire by means of the Pantograph mounted on the Motor Cars. The catenary also carries current, which is fed to the Contact wire through the flexible connections, and, to a limited extent, through the droppers, which connect the catenary and Contact Wires.

It must, therefore, be borne in mind that not only the Contact Wire is charged, but that the catenary, droppers, flexible connections, pull-off arms, and all other attachments to the catenary or Contact Wires are also alive, at 1,500 volts, and are, therefore, extremely dangerous.

Note.—When a wire is charged with electricity, it is usually described as alive, or as a "Live wire"; and when the current is switched off a wire, it is referred to as dead, or as a "Dead wire."

Figure 1 (page 55) shows the ordinary arrangement of the different parts of the overhead equipment.

(b) HEIGHT OF CONTACT WIRE.—The normal height of the Contact Wire above rail level is 16 feet 6 inches; the height of the Overhead Wires, however, varies in the changing conditions of the temperature, or where for special reasons authority is given for the wires to be lower than 16 feet 6 inches.

Except where otherwise provided, the minimum height of the Contact Wire over Sidings and Terminal Platform Roads is seventeen feet six inches (17' 6"). This height cannot, however, be provided in the vicinity of over-line bridges, including footbridges; at these places the Contact Wire under the bridge, and for 300 feet on each side of the bridge, must be assumed to be only 14 feet 6 inches from the rail level.

At Level Crossings the minimum height of the Contact Wire above rail level is 18 feet. The maximum height is 19 feet 6 inches.

(c) TENSIONING POINTS AND TENSION STRUCTURES.—The lengths of the catenary and Contact Wires over the Running Lines are approximately 3,000 feet, and tensioning points are normally arranged at this distance apart. (See Figure 2.) In special cases, however, the distance between tensioning points is less than 3,000 feet.

At tensioning points there are two tension structures, placed about 180 feet apart; each length of Contact Wire passes under the first of these tension structures, and is terminated at the second. The Contact Wires, therefore, overlap between the two tension structures—a distance of 180 feet, each length terminating at opposite ends of the span.

The overlapping wires are 15 inches apart horizontally, and for a distance of 15 feet on each side of the centre point between the tension structures, the Pantograph Collector makes contact with both overlapping Contact Wires. From the centre of this tensioning span each Contact Wire rises gradually to its automatic tensioning attachment, and the catenary wires are terminated on the tension structures at points vertically above the Contact Wires which they support.

Figure 2, page 55, is a diagram of overhead arrangements at a tensioning point where Section Switches are in use—the Section Switches are not shown on this diagram; the diagram shows the overlapping of the Contact Wires in the span between the tension structures.

GENERAL INSTRUCTIONS.

At tensioning points where Section Switches are provided, the overlapping wires are connected, by cable, through the Section Switches. At certain tensioning points the overlapping wires over each track are made continuous by means of connecting jumper cables.

Note—It is important that this overlapping of the Contact Wires should be especially noted, as in the event of one of these wires being, for any purpose, made dead, care must be taken to avoid making any irregular connection between the Live wire and the Dead wire; instructions in regard to precautions necessary to prevent trains entering upon the span where the wires overlap, follow. See sub-clause (b), clause 3, hereof.

3. Sectioning Arrangements of the Overhead.—(a) The overhead equipment is divided into separate sections, extending from one Substation to another Substation, or from a Substation to the terminal of the Line electrified. These sections are sub-divided into sub-sections, which extend between sectioning points. The overhead equipment of Sidings leading from sub-sections are called branch sections; where necessary, branch sections are divided into sub-branch sections. Each section, sub-section, branch section, and sub-branch sections and the respective Section Switches have a distinguishing number.

The distinguishing numbers of the sections, sub-sections, branch sections, sub-branch sections, and of the Section Switches which control them, are shown in the diagrams of the Overhead and in the Special Instructions for the operation of Section Switches, etc., at Stations, Signal-boxes, and at other places where Section Switches are provided.

(b) As each end of a Contact Wire overlaps the Contact Wire of the adjoining section or sub-section, it is especially necessary to take steps to prevent an Electric train from entering upon any portion of the Line between the two tension structures of any section or sub-section where, for any purpose, its Contact Wire has been made dead, otherwise, the Pantograph would form a connection by bridging across the space from the live wire to the dead wire, thus charging the dead wire; this may expose persons to electric shock and serious (probably fatal) injury. See diagrams, pages 55 and 56.

Similar conditions and danger exist at the points at which overhead equipment of Sidings (branch sections) are connected with the overhead equipment of the Running Line; figure 4, page 56, shows the type of Section Insulator generally in use at these points. It will be seen that the respective Contact Wires of the Running Line and Sidings, though insulated from each other, are so arranged that a Pantograph, when passing under the Section Insulator, would make contact with both Wires and form a bridge across the centre of the Insulator.

(c) Station-masters and other responsible Officers, Yard Foremen, Signalmen, Shunters, and others concerned, must take the necessary precautions to prevent any train with Pantograph from fouling the sectioning point of Sidings during the time the branch section is switched out.

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4. Section Switches.—

(a) The Section Switches are fixed on the Overhead structures and operated by means of a handle which is connected by rodging to the switch. Two types of Switches are in use, viz. :—

(i.) Two-way Switches, and (ii.) Three-way Switches; the latter type, which are also termed "Earthing Switches," are always provided for Repair Sidings and for public loading sidings.

(b) **TWO-WAY SWITCH.**—(i.) The handle of this Switch is contained in a box which is provided with a locking door, pin, and padlock. When the door is closed and the pin and padlock are in position, the handle controlling the Switch cannot be operated. The Switch is closed when the handle is in the upward position, and open when the handle is in the downward position.

(ii.) When it is necessary to operate the Section Switch, the padlock must be unlocked and the pin removed, and the door may then be opened. To open the Switch, the handle must be pulled down sharply, and care must be taken that the Switch is not left partly open; when the Switch has been opened, the door of the locking box must be closed. To close the door, the Switch handle must be pushed up sharply, to ensure that the Switch will go well home, otherwise the door cannot be closed.

(iii.) At some places these Switches are controlled from the Signal-box, the Switch being connected by rodging to a lever in the interlocking frame; the normal position of the Switch corresponds to that of the operating lever, which must be secured by padlock, whether in the normal or in the pulled-over position.

(c) **EARTH TYPE OF SECTION SWITCHES.**—These Switches are of a Three-way type, that is, the Switch can be placed in any one of three separate positions, viz. :—

- (i.) "IN," i.e., Switch closed (handle in Upward position), wires dangerous to touch.
- (ii.) "OUT," i.e., Switch open (handle in Centre position), wires unsafe to touch.
- (iii.) "EARTHED," i.e., wires connected to the Rail (handle in Downward position).

(d) There are two types of Earth Switches. On one type in use at Spencer-street and Flinders-street—Token Switches—the Switch handle is not secured by padlock when at the "In" position; a pin, which is attached to a short chain, must be passed through the hole in the Switch rod; this pin must be withdrawn when necessary to move the Switch handle from the "In" position, and these Switches are worked as follow:—

- (i.) When the Switch handle is moved from "In" to "Out," the handle becomes secured at the "Out" position by means of an Automatic Lock.
- (ii.) To place the Switch handle from "Out" to the "Earthed" position a Plunger is provided, and by pulling this Plunger half way, the Switch handle may be moved downwards to the "Earthed" position, where it again becomes secured by the Automatic Lock.

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- (iii.) To remove the Switch handle from the "Earthed" position the padlock must be removed and the Plunger must be drawn fully forward, the Switch handle may then be placed at the "Out" or the "In" position. When the Switch is restored to its normal position, the stop pin must be inserted to prevent the Switch rod from slipping down; the Switch Box must then be secured by padlock, and the key must be at once returned to its regular place of safe keeping.

- (e) On the other type of Earth Switch, the pin securing the rod is locked at the "In" position, and in lieu of the Plunger a Stop is provided at the "Out" position; the method of operating this type of Switch is as follows:—
 - (i.) When the Switch handle is to be moved from the "In" to the "Out" position, the pin must be unlocked and removed and the handle pulled to the "Out" position.
 - (ii.) To place the Switch handle from the "Out" to the "Earthed" position, move it in a lateral direction to clear "Stop" before pulling the lever.
 - (iii.) To remove the Switch handle from the "Earthed" position to the "Out" or "In" position, the pin must be unlocked and removed. When the Switch is restored to its normal position, i.e., "In," the pin must be inserted and again padlocked to secure the handle in that position.

NOTE.—Employees having occasion to operate "Earth Type" Switches must pull the Switch handle from the "In" position to the "Out" position, allowing the handle to rest on the Plunger Stop, and, after a pause, the Plunger should be pulled out, or the handle moved in a Lateral direction, and the Switch handle again moved Downward to the "Earthed" position.

It is essential that this stop be made at the "Out" position. If the handle is drawn from the "In" position right through to the "Earthed" position before resting the handle at the "Out" position, damage may be caused through an Arc maintaining at the Switch contacts, but by making the Centre stop, the Arc, which may occur, is broken.

5. Sectioning Instructions.—

(a) Special instructions are issued by the Chief Electrical Engineer showing—

- (i.) The distinguishing numbers of Sections, Sub-sections, and Branch Sections and the respective Switches;
- (ii.) The employe responsible for operating the Switches at each place; and
- (iii.) Directions respecting the telephones available for use. Employees must make themselves conversant with the Overhead Equipment and Switching arrangements in their locality, and with the Sections and sub-sections controlled by the respective Switches.

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(b) Duplicate keys of the padlocks of the Section Switches will be supplied to the employees who are responsible for the operation of the Section Switches; these keys must be kept in a place of security known to all concerned. If the Station-master be the person appointed to operate the Switches, the Signaller (if there be a Signal-box at the Station) must also be competent to operate the Switches and have ready access to the keys. If the Signaller be the employee appointed to operate the Switches the Station-master and Assistant Station-master must (if the Signal-box be at a Station) be competent to operate the Switches and have ready access to the keys. This will not apply to the Station-master at Spencer-street or Flinders-street; at these places the Assistants to the Superintendent of Melbourne Yards, the Yard Foreman, and the Leading Shunters must be competent to operate the Section Switches and have access to the keys.

(c) At Stations and Signal-boxes where Section Switches are provided, it is the duty of the Station-master or other appointed employee of the Transportation Branch to operate such Switches as may be required to regulate traffic in the event of any disarrangement or fault on the Overhead Equipment. When this course is necessary, the Control Engineer at the Power House, Newport, or the Sub-station Attendant at the Sub-station will give definite instructions specifying the distinguishing numbers of the Section Switches that are required to be opened or closed, and, at the same time, clearly state whether traffic may be conducted on the track or tracks to which such Switch or Switches apply.

When necessary to operate a Section Switch for any purpose not connected with train running, such as for the purpose of testing Switches or Overhead Equipment, the Switches must be operated by a member of the Overhead Superintendent's Staff.

(d) Before any employee responsible for operating a Section Switch opens such Switch, he must, except in a case of urgency, inform the Signaller of what is about to be done, and whether traffic may be conducted; in every case of urgency in which such employee is directed to open the Switch immediately, he must notify the Signaller as soon as possible after the opening of the Switch.

(e) All messages transmitted in connection with the operating of Section Switches must be registered and timed in the Telephone Message Book immediately such messages are sent and received.

(f) When the authorised Transportation employee receives a request from the Control Engineer or Substation Attendant to reverse any Section Switch from its normal "Open" or "Closed" position, he must insert the particulars of such request in the Telephone Book, and when repeating the message back to the sender the Signaller must read from his entry in the Telephone Book, and when the repeated message is accepted as correct the Signaller must make the entry—"Repeated back and accepted as correct," and the time, under the particulars in the Telephone Book.

If circumstances should require that the Section Switch be kept, for a period, in the reversed position, the Signaller must enter the particulars from the Telephone Book into the Train Register Book, and if the Signaller be relieved from duty before the Switch is restored to its

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normal position, he must direct the attention of the man relieving him to the particulars in the Telephone Book, and the latter, after checking these particulars with those shown in the Train Register Book, must counter-sign the entries in the Train Register Book before taking charge of the Box.

In all cases the Running Lines, Local Road, or Sidings affected by the reversing of the Switch or Switches must be included in the Train Register Book entry, which must in every case be initialled by each Signalman on duty.

(g) **PUBLIC LOADING SIDINGS.**—At all wired Public Loading Sidings, Warning Boards are fixed in a conspicuous position directing attention to the danger of touching Overhead Equipment.

Where, for any reason, a Switch applicable to a Public Siding has been opened, it must not be again closed without the permission of the Officer-in-Charge of the Siding.

Attention is directed to clause 2 of the instructions supplementary to Regulation 128, page 192 of this book.

No person, other than an authorised member of the Overhead Superintendent's Staff, is allowed to perform any work in the vicinity of the Overhead Electrical Equipment unless specially authorised.

(h) The Metropolitan or District Superintendent, the Block and Signal Inspector and the Station-masters at Spencer-street and Flinders-street must be promptly notified of the reversing of any Section Switch that may affect the running of Electric Trains, and the Superintendent of Melbourne Yards must be notified of the reversal of any Section Switch in the Spencer-street or Flinders-street Yards: this clause will not, however, apply in respect of Branch Section Switches, the opening and earthing of which is authorised for ordinary Repair Work, Car Cleaning, etc., but the special Instruction respecting such work must be observed.

(i) The Block and Signal Inspector must see that all employes responsible for operating Section Switches possess a proper knowledge of their duties, and that suitable arrangements are made for the custody of the keys of Section Switches.

8. (a) Where the key of the Switch of any Section, Sub-section, Branch section, or Sub-branch section is ordinarily in the custody of the Signalman, he must not allow any such key to pass out of his possession except when handed to a member of the Overhead Superintendent's Staff, or to some other specially authorised employe; and during the absence of the key, the Signalman must not allow any Electric train to enter on any portion of the overhead equipment to which the Switch applies.

(b) If any overhead repair work should necessitate the taking out of commission of any sub-section, branch section or sub-branch section the employe in charge of such repair work must, before commencing the work, definitely inform the Signalman in charge of the Box that controls the entrance of trains to the sub-section, branch section, or sub-branch section affected by the repair work, and specify the distinguishing numbers, thus—(14/6/3—Fourteen over six over three), or (14/6/3/1—Fourteen over six over three over one) as the case may be. The Signalman in charge must enter such particulars in his Train Register Book, and the employe in charge of the overhead repair work must initial such entry; the Signalman in

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charge must then take the necessary steps to prevent any train from fouling any portion of the overhead equipment affected by the repair work. When the repair work is completed, the Signalman, after receiving an assurance from the employe in charge of such work that the overhead repair work has been completed, and that the sub-section, branch section, or sub-branch section is again available for Electric trains, must enter such particulars in the Train Register Book, and under this entry the Signalman and the employe in charge of the repair work must again sign their names—a note of the time must also be inserted.

If the keys of the switch for any sub-section, branch section, or sub-branch section affected by the repair work are in the custody of the Signalman, the employe in charge of such work must take possession of, and retain them, until the repair work is completed, when he must return them to the Signalman.

(c) At Spencer-street or Flinders-street a sub-section, branch section, or sub-branch section must not be opened or Earthed for any overhead repair work without the consent of the Yard Foreman, and in addition to carrying out the provisions of sub-clause (b) the employe in charge of repair work must obtain from the Yard Foreman or Signalman the keys of the Switches for the Road or Roads affected; and he must retain these keys in his possession until the work is completed and the Roads are again available for Electric trains, when he must return them to the Yard Foreman or Signalman from whom they were received.

7. Faults and Irregularities to be Promptly Reported.—(a) The following are specified as some of the faults or irregularities likely to arise in the overhead construction:—

- (i.) Wires hanging loose, that is, wires which are broken or appear to be out of position.
- * (ii.) Any article hanging on the overhead conductors.
- (iii.) Steady rod attachments disconnected from the wire, or disconnected from the structure, and hanging on the wire.
- (iv.) Excessive flashing at any particular point or at switchgear.
- (v.) Bridge fittings or guards displaced
- (vi.) Water flowing on the overhead conductors from verandahs, bridges, etc.
- (vii.) Broken Insulators or brackets carrying the same.
- (viii.) Loose parts in Section Insulators.
- (ix.) Displaced or broken structures.

Serious trouble is likely to arise from birds' nests in structures or fittings, and forming a bridge between the connections, and producing a "short circuit." Permanent way employes and others should always report the existence of these nests to the Overhead Depot; unauthorised employes must not attempt to remove the nests.

In addition to the foregoing, accidents, such as derailment of vehicles, collisions, slips in embankments or cuttings, failure of tunnels, bridges or culverts, will probably involve the overhead construction, and reports on accidents of this nature should include particulars of the effect on the overhead construction. See also clause (d), page 458, re security of tarpaulins on high loads.

* Unauthorised employes must not attempt to remove foreign bodies, such as rope, string, birds' nests, etc., from overhead wires.

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(b) Any employe who observes any damage or irregularity connected with the overhead construction must, if the circumstances require it, take immediate steps to stop any train which may be approaching, and, as quickly as possible, report the occurrence, or ensure its being reported, to the nearest Station-master, Signaller, or Substation Attendant stating the exact locality, the distinguishing number of the nearest overhead structure, and whether the Up or Down Line, or both, are affected; the time the trouble was observed, and its nature and consequences so far as can be ascertained must be also given. The employe observing or reporting the irregularity must in all cases wait and perform such services as the Station-master, Signaller, or Substation Attendant or as the occasion may require.

(c) If a Driver should observe or have reason to believe that any portion of the overhead construction or of its connections has become disarranged and fallen on, or is hanging near, the Running Line, he must stop and keep his engine or train clear of the disarranged structure or wires until he has ascertained that the train can proceed with safety. If there be reason to believe that an adjoining Line is obstructed or unsafe, steps must also be taken to stop any train from approaching on that Line. Cars must be taken to avoid coming in contact with the disarranged wires, and arrangements must be made as quickly as possible to have the current switched off.

(d) The Station-master or Signaller receiving the report of any fault or irregularity in the overhead construction must at once report the particulars to the officers mentioned hereunder and in the order named:—

Overhead Superintendent	..	..	Central 11264, Ry. Auto-phone, 426, 524
			(Power-phone, 20)
Control Engineer, Newport	..	..	.. .. Ry. Auto-phone, 406
Metropolitan Superintendent	..	..	.. .. " " 149
(Train Running Room)			
Block and Signal Inspector	..	..	.. .. " " 291

and to other officials mentioned in the Special Instructions for reporting overhead disarrangements.

The Special Instructions specifying the officials to be notified in cases of accidents in the electrified area must be exhibited at all Stations and Signal-boxes within that area, and also in the Yard Offices and the Cabins and Rooms used by Shunters at Spencer-street, Flinders-street, and Newport. Supervising Officers must see that the notices are constantly exhibited and amended according to directions.

(e) When any Section Switch has been opened, the Station-master and Signaller must take the necessary steps to prevent trains from fouling the Contact Wire of the Dead section; see clause 8 hereof.

8. (a) When, from any cause, it is necessary to operate a Section Switch for the purpose of making Dead any overhead sub-section of a Running Line, the Station-master, Signaller, or other employe responsible for the operation of the Section Switch, must at once take the necessary steps to prevent any train from making contact with the Dead section at the overlapping points; where a Fixed signal protecting the Dead section is not provided, the following precautions must be adopted:—

(i.) A Hand-Signaller must be appointed who must go back along the Line exhibiting a Hand Danger Signal to stop

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any approaching train, and fix Detonators on the Line as follows:—

- 1 Detonator at 400 yards from the tensioning point affected.
 - 1 Detonator at 800 yards from the tension structures; and
 - 3 Detonators at 1200 yards from the tension structures, and then return and exhibit a Danger Signal to stop any approaching train at least 100 yards outside the nearest tension structure of the tensioning point affected. In the event of a steam locomotive-hauled or a Rail Motor train approaching, the Hand-Signalman must not allow such train to proceed unless he is authorised to do so by the person in charge of the sectioning arrangements, who, before giving such permission, must satisfy himself that the train can proceed with safety.
- (ii.) Should the Hand-Signalman, when going back to place the Detonators on the Line, arrive at or near to a Station or Signal-box, he must, in addition to placing 3 Detonators at the nearest end of the Station or at the Signal-box, inform the Station-master or Signalman of the circumstances, and then return as above directed. The Station-master or Signalman, as the case may be, must stop any approaching train, and instruct the Driver to proceed cautiously towards the Hand-Signalman.
- At a Station where there is no Signal-box (or, where there is a Signal-box and the Signalman is not in attendance), the Detonators must be placed at least 200 yards outside the Station in the direction of an approaching train.
- (iii.) Where there is a Home Signal (or an Automatic Signal, and such Signal can be kept at the Stop position) to stop the train at the point specified, i.e., about 100 yards clear of the first structure of the tensioning point affected, a Hand-Signalman need not be appointed, but in such cases the Home Signal must be kept at the Stop position, or, in the case of an Automatic Signal, steps must be taken to prevent any train from passing the Signal until all is right.
- (iv.) A Red Flag by day and a Red Light by night, exhibited in the direction of approaching trains, must be fixed on the first structure of the tensioning point affected until the Overhead Superintendent has intimated that the Line is clear and safe for the passage of Electric trains.
- (v.) Signalmen must make use of sleeves to secure levers controlling entrance to any sub-section or branch-section that has been made dead. Regulation 75 (b) and 79 (c).

(b) See also the Instructions under heading of Signalling in connection with Repairs to Overhead Equipment, pages 110-111.

9. (a) Unless specially authorised, no person must go on to the roof of any car on either an electric or steam-hauled train, nor on the roof of any

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detached car or truck, or on a high load of a Goods train; and every care must be taken by employes to avoid being in any position where they are liable to make contact with the overhead conductors.

(b) Enginemen are specially warned of the necessity for care when taking water and in the handling of fire irons to and from the tender, and whenever possible to avoid standing on the tender when in the vicinity of overhead wires, etc. They should also bear in mind the danger of fouling the electrical equipment, Signal Bridges, Tunnels, Over-line Bridges, etc., when on the tender of a moving engine.

(c) Employes carrying out work of any kind on any of the structures, including Signal structures, Signal-boxes, Station roofs or over-line bridges, must exercise due care to avoid touching the overhead conductors with any part of their bodies, clothing, or with any article they may be carrying; under no circumstances must metal tapes or metal reinforced tapes be used in positions where they are likely to fall or be blown across the overhead conductors. Attention is also called to the danger of throwing or allowing paint, water, or any liquid, or materials such as rope, wire, etc., with which they are in contact, to fall on the overhead conductors. See clause 11.

TERMINAL STOP MARKS FOR ELECTRIC TRAINS.



10. (a) At locations where the Electrical Equipment terminates, Stop Boards of the standard type shown on margin hereof will be erected 50 feet inside the Terminal Clamp or point where the Pantograph would leave the wire.

(b) During shunting operations, either on Main Lines or in Sidings where buffer stops are not provided, Drivers, Guards, and Shunters, when shunting Electric trains, must exercise care that the leading Pantograph does not over-run the Overhead Wire Terminating Clamp, or the Overhead Wiring, and thus allow the Pantograph to become fully extended; in the event of train being set back with Pantograph in that position, serious damage will result to Overhead Equipment and Pantograph.

(c) The Driver of an Electric train shunting towards an Overhead Terminal on a Main Line or Siding must in all cases drive from the front cab; he must have the train well under control, and bring it to a stand at least 10 feet from the Stop Board.

(d) In the event of a Pantograph on a Motor Coach or Electric Locomotive over-running the wire, the Pantograph must be immediately lowered, and the Driver must at once

make a thorough examination to see if it is in proper order and condition.

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An Electric train must be set back by using the other Pantographs; an Electric locomotive must be hauled back by another train or engine, if necessary. If the Pantograph which had over-run the wire is in good order, it may then be raised.

Safety Precautions for Employees Required to Work on or In the Vicinity of Overhead Electrical Equipment.

11. (a) No work must be undertaken on any structure carrying overhead electrical equipment, or on any structure, or in any place likely to be in dangerous proximity to overhead electrical equipment, unless the employe in charge of such work has been specially instructed and is certified as qualified to distinguish between safe and unsafe conditions.

(b) If the employe in charge of the work should have reason to believe that it would be unsafe to carry out such work while the equipment is "alive," a "Permit to Work," Form G. 113a (see specimen of Form at end of these Instructions), duly filled in and signed by the Overhead Superintendent or his representative, must be obtained. The issue of the "Permit to Work" will ensure that safe conditions for work in respect to danger from Electric shock, are provided, at the place and for the period shown thereon, and the employe in charge must not allow the work to be commenced until he is in possession of such "Permit to Work."

(c) On production of the written application, Form G. 113 (see specimen Form at end of these Instructions), signed by such officials as the Heads of Branches may depute from time to time by notification to the Chief Electrical Engineer, a "Permit to Work," Form G. 113a, will be issued by the Overhead Superintendent or his representative at an assigned time and place, which is to be arranged between the official making the application and the Overhead Superintendent prior to the application for "Permit to Work" being lodged; the Permit must be handed to the employe in charge of the work for which the Permit is being granted after the overhead conductors have been made Dead and Earthed, either by the Overhead Superintendent or his representative.

The employe in charge of the work must show the Permit to the men (if any) under his control before commencing the work, and in the event of his leaving the work for any reason, he must hand the Permit to the senior employe in the gang so that it will be available for inspection at the point of work.

The instructions printed on the "Permit to Work," particularly those in respect of the return of same, must be strictly adhered to.

(d) BREAKDOWNS, ACCIDENTS, ETC.—"Permit to Work" Forms are only to be used in connection with ordinary work of construction and maintenance. In the event of an accident involving derailment or damage to the Overhead Equipment, or where emergency repair work may involve danger of contact with the Overhead equipment, the instructions laid down on pages 32-33 must be complied with.

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Specimen of Forms G. 113 and G. 113a, referred to in clause 11:—

(G.113.)	VICTORIAN RAILWAYS.
(Butt)	
No.... Date....	APPLICATION FOR PERMIT TO WORK ON OR NEAR OVERHEAD ELECTRICAL EQUIPMENT.
Grade	No..... Date.....
Name	Will the Overhead Superintendent please issue a Permit to Work to:—
To work at.....	Grade..... Name.....
From...m../19..	To work at.....
To .....m../19..	from.....m../19.. to .....m../19..
Nature of work....	Nature of work
.....	Signature of Officer requiring Permit
.....	Branch.....
.....	NOTE.—The times and conditions stated on the Permit to Work must be strictly adhered to.
.....	It must be distinctly understood that the official to whom the Permit is issued must return it on or before the expiration of the time shown to the official named, and at the place specified on the face of the Permit.
.....	
.....	
(G.113a.)	VICTORIAN RAILWAYS.
(Butt)	
No.... Date....	No..... Date.....
Received by:—	EARTHING OVERHEAD ELECTRICAL EQUIPMENT OF PERMANENT WAY.
Grade	Section No..... Locality.....
Signature	PERMIT TO WORK.
Return to:—	between
Grade .....	..... and
Signature	From...m../19.. Until...m../19..
Return to:—	Issued to.....
Grade	Issued by (Grade)..... Sig.....
Signature	Return to (Name)..... Place.....
	(SEE OTHER SIDE)

(BACK OF FORM G.113a.)

This Permit is issued by a representative of the Overhead Superintendent, who is qualified to distinguish between "Safe" and "Unsafe" conditions, and who has taken the necessary steps to protect the persons engaged in the work for which it is issued, within the limits set out on the face hereof.

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The times shown on this "Permit to Work" must be strictly adhered to, and the Permit returned to the person and at the place specified not later than the time shown, whether the work is completed or not.

Before returning this "Permit to Work" the person who received it must make sure that all Men and Gear are clear of the overhead equipment, apparatus, fittings, etc.

The possession of this Permit is a guarantee that the line is "Dead" and "Earthed" until the Permit is returned. In the event of the Permit being lost, the employe in charge of the work must give a written notification to the representative of the Overhead Superintendent to the effect that the Permit is lost, but that all men and gear are clear of the overhead equipment, apparatus, fittings, etc.

12. Lines or Portions of Lines Electrified.— The overhead equipment, etc., of the Lines or portions of Lines specified hereunder is permanently charged with electric current at 1500 volts, and are available for Electric trains.

Note.—(i.) When additional Lines or portions of a Line are electrically charged, a printed notice will be given, but only when the Line or portion of Line is charged for the first time; the Line or portion of Line referred to in such notice must be considered to be permanently charged, and employes are hereby warned that, although current may be subsequently switched off, momentarily or for an extended period, it may be switched on again any moment.

(ii.) The fact of any portion of overhead equipment being omitted from the list shown hereunder, or from any future instruction, does not necessarily imply that it is not electrically charged; unauthorised employes must, therefore, at all places and at all times exercise due care to avoid contact or interference with overhead equipment, whether current is supposed to be off or on.

Running Lines
equipped with Overhead
Conductors.

All Running Lines (Goods Lines excepted) between Flinders-street or Spencer-street, and—

Williamstown Pier, Newport Workshops (Nos. 1 and 2 Passenger Yards), Williamstown Race-course, and Altona Line

St. Albans (to Stop Board at Down end) ..

Broadmeadows (to Stop Board at Down end)

Flemington Race-course ..

* Cross-over Roads equipped with Overhead Conductors.

South Kensington, Footscray (Up and Down end of Station), Yarraville "B," Newport (Down end), North Williamstown

West Footscray (Down end), Sunshine (all), St. Albans (Down end)

Kensington, Newmarket, Essendon (all), Broadmeadows (Up and Down ends)

Newmarket Junction, Cattle Sidings (Up end), Ascot Vale-road, Show Grounds (Up end)

* Cross-overs at Terminal Stations are not included in this list.

GENERAL INSTRUCTIONS.

Running Lines equipped with Overhead Conductors.	* Cross-over Roads equipped with Overhead Conductors.
All Running Lines (Goods Lines excepted) between Flinders-street and— <i>con- tinued.</i>	
Fawkner	Macaulay (Down end), Royal Park, South Brunswick (Down end), Coburg (Up end)
Clifton Hill (via Royal Park)	North Carlton, North Fitzroy (Clifton Hill end), Clifton Hill (Up and Down end)
Clifton Hill (via Prince's- Bridge)	North Richmond (see page 852), Clifton Hill (Up and Down end)
Reservoir (via Royal Park)	Northcote Loop, Northcote (Down end), Bell (Up end), Reservoir (Up end)
Reservoir (via Clifton Hill) (To Stop Board Down end of Reservoir)	Clifton Hill (Up and Down end), North- cote Loop, Northcote (Down end), Bell (Up end)
Hurst Bridge (Mont Park Line excepted) ..	Alphington (Up end)
Lilydale, Ferntree Gully, Darling, Kew, and Ash- burton	Burnley (Up end), Hawthorn, Camber- well (three—one at Up and two at Down end), Canterbury, Surrey Hills, Box Hill (Up and Down end), Black- burn, Mitcham, Ringwood (Up and Down end)
(Riversdale to East Kew is not equipped)	
Dandenong	South Yarra (Through Lines), Arma- dale (on Local Lines and on Through Lines), Caulfield (all), Carnegie, Oak- leigh (Up and Down end), Spring Vale (Down end), Sandown Park (Up and Down ends), Dandenong (Up end) (See Dandenong Lines), Glenhuntly (Up and Down end), Bentleigh, Moorabbin (Up and Down end), Cheltenham (Down end), Mentone (both ends), Mordialloc (both ends), Aspendale (both ends), Chelsea, Carrum, Frank- ston (both ends)
Frankston	
Sandringham	South Yarra, Windsor, Elsternwick (both ends), North Brighton (see page 888), Middle Brighton (Dendy-street), Brighton Beach, Sandringham
St. Kilda	Box "A" (Flinders-street), Albert Park (see page 894), St. Kilda
Port Melbourne, including Passenger Lines to and from Prince's Pier ..	Box "A" (Flinders-street), Port Mel- bourne Station (Up and Down end)

* Cross-overs at Terminal Stations are not included in this list.

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Local Running Roads and Sidings Equipped with Overhead Conductors.

Stations.	Local Roads	Sidings.
Flinders-street (including Prince's-bridge)	All Local Running Roads (Nos. 1 to 16), and including all turnouts leading to or from the North or South Viaduct Lines, St. Kilda and Port Melbourne Lines, and all turnouts leading to or from the Local Roads to the Collingwood Line or Jolimont Junction, or Jolimont Workshops or Flinders-street Car Sidings	Car Sidings, &c.—All Car Sidings, Turnouts and Docks on East or West sides of Flinders-street except the Dead-end extension of Down Country Lines at Jolimont Junction Jolimont Workshops Sidings.—All sidings on East and West side of the Shops, the Stores Siding and portion of Oil Siding and Sub-station Maintenance Shed Road
Spencer-street— Passenger Yard ..	All Running Lines, cross-overs and turnouts except cross-overs from No. 5 to Nos. 4 and 6 East Yard	Shop Roads. — All Shop Roads, except Nos. 1 to 5 (inclusive) and 15 to 18 (inclusive) Car Storage Sidings, Nos. 1 to 4 inclusive; Bank Sidings "Z," Nos. 11 to 18 and including turnouts to Up Centre Line, Up East Line, or Siding "C"; Sidings "B" and "BB" to turnout towards Sidings "A"; Sidings "C" and "CC," including Crossing from "C" and "BB"; Bank Siding "Y" No. 2, from turnout on Siding "C" to Buffer Stops Franklin-street Lay-by Sidings, from turnout on Country and Race Lines to Buffer Stops, and including Crossing for Lay-by Sidings to Country and Race Lines
Goods Yard ..	Through Goods Lines from Viaduct Junction to Goods Sidings "D" and Little Gravitation Sidings	West Yard—Nos. 3 and 4, and Crossings leading to Running Roads, Nos. 1 and 2 Sidings "D" and tracks leading to Through Goods Lines; Little Gravitation Sidings Nos. 18, 19, 20, 21, and portion of No. 17

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**Local Running Roads and Sidings Equipped with Overhead
Conductors—continued.**

Stations.	Local Roads.	Sidings.
WILLIAMSTOWN LINE—		
Footscray .. .. .	.. .. .	Car Siding connected with Up Williamstown Line at Down end of Station
Newport .. .. .	.. .. .	No. 6 Road of Sidings "D" adjoining Down Williams-town Line
Williamstown ..	Nos. 1 and 2 Roads	
Williamstown Pier	No. 1 Road only ..	Dead end extension of No. 1 Road
Newport Work-shops—		
No. 1 Passenger Yard	Nos. 1 and 2 Roads	
No. 2 Passenger Yard	Nos. 1, 2 and 3 Roads	
Williamstown Race-course	All Local Roads, except cross-overs at Down end of Nos. 1 and 2 and 3 and 4 roads	All Sidings
ST. ALBANS LINE—		
West Footscray ..	.. .. .	No. 1 Siding
Sunshine ..	Nos. 1 2, and 3 Roads ..	Nos. 1 and 2 of Sidings "A"
St. Albans		
BROADMEADOWS LINE—		
Essendon	Nos. 1, 2, 3 and 4 Roads ..	No. 5 Road to Up Lines or to Car Sidings; Car Siding Up end, Siding "A" excepted; old Coal Stage Road, extension of Nos. 4 and 5 Roads; Long Siding "B" Down end adjoining Up Broadmeadows Line
Broadmeadows ..	.. .. .	Siding "A" Up end of Station; Siding "B" (Down end adjoining Up Line) to Stop Board only
FLEMINGTON RACE-COURSE LINE—		
Cattle Sidings ..	.. .. .	Independent Road, between Down Line and Cattle Sidings
Show Grounds ..	Loop Line to Racecourse Platform extension at Up end and forming the Crane Siding excepted	Siding "A", from Up and Down Line; Refuge Siding between Epsom-road, Ascot Vale-road, Up side of Running Line

GENERAL INSTRUCTIONS.

Local Running Roads and Sidings Equipped with Overhead Conductors—continued.

Stations.	Local Roads.	Sidings.
FLEMINGTON RACE-COURSE LINE—continued.		
Racecourse ..	All Local Roads, except cross-overs at Down end of Yard	All Poultry Siding at Up end of No. 5 Road
FAWKNER LINE—Coburg ..	Nos. 1 and 2 Roads ..	No. 3 Road
PRINCE'S-BRIDGE TO ROYAL PARK, RESERVOIR AND HURST BRIDGE—		
Victoria Park ..	.. ..	Car Siding adjoining Up Line
Clifton Hill ..	Nos. 1, 2, and 3 Roads	
Reservoir ..	Nos. 1 and 2 Roads ..	Sidings "A" and "B"
Ivanhoe ..	Nos. 1 and 2 Roads ..	
Heidelberg ..	Nos. 1 and 2 ..	Nos. 3 and 4 Roads
McLeod ..	Nos. 1 and 2 Roads	
Greensborough ..	Nos. 1 and 2 Roads ..	No. 3 Road
Eltham ..	Nos. 1 and 2 and Back platform Roads	No. 3 Road
Diamond Creek ..	Nos. 1 and 2 Roads ..	No. 3 Road to Stop Board
Hurst Bridge ..	No. 1 Road ..	Nos. 2, 3 and 4 Roads; Saw-mill Siding and Cool Store Siding to Stop Boards
LILYDALE AND FERN TREE GULLY LINES—		
Burnley ..	.. ..	Siding "B" as far as Foot-bridge Up side of Station.
Camberwell ..	Nos. 1, 2, and 3 Roads ..	No. 4 Road to Structure 177 Down end of Yard; Siding "A"
Box Hill ..	Nos. 1, 2, and 3 Roads ..	Siding "B"
Ringwood ..	Nos. 1, 2, and 3 Roads ..	Siding "D", adjoining Fern Tree Gully Line
Croydon ..	Nos. 1 and 2 Roads ..	Siding "A"; Siding No. 3
Mooroolbark ..	Nos. 1 and 2 Roads (except dead extensions of No. 2 Road)	
Lilydale ..	Nos. 1, 2, and Back platform Road	Sidings "G" and "H"
Heyington ..	Nos. 1 and 2 Roads ..	
Tooronga ..	Nos. 1 and 2 Roads ..	
Glen Iris ..	Nos. 1 and 2 Roads ..	

GENERAL INSTRUCTIONS.

**Local Running Roads and Sidings Equipped with Overhead
Conductors—continued.**

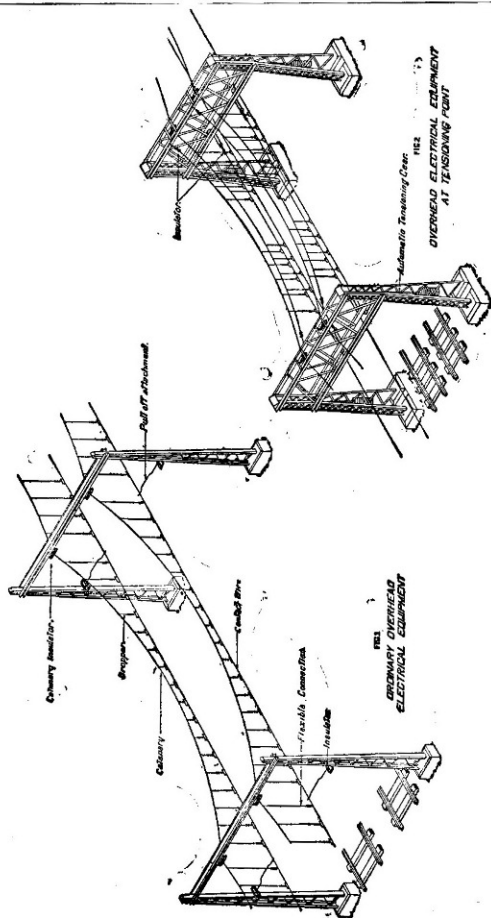
Stations.	Local Roads.	Sidings.
LILYDALE AND FERN TREE GULLY LINE—continued.		
Darling ..	Nos. 1 and 2 Roads ..	Extension of No. 1 Road to Stop Board
Riversdale ..	Nos. 1 and 2 Roads	
Bayswater ..	Nos. 1 and 2 Roads	
Lower Fern Tree Gully	Nos. 1 and 2 Roads ..	Siding 3 and dead-end extension of No. 2 Road
Upper Fern Tree Gully	Nos. 1 and 2 Roads ..	Extension of Main Line (No. 1 Road) to dead-end on "Cattle Transfer Siding," Extension of No. 4 Road to dead-end on "Loop Siding," No. 3 Siding and Down end of No. 4 Road Quarry Siding, from Cross-over with Main Line at Upend of Station to Turnout of Dandenong Council Siding. Dandenong Council Siding, from Turnout in Quarry Siding to "Electric Train Terminating Board"
		Cross-over, from Main Line to Quarry Siding
DANDENONG LINE—		
Toorak ..	.. ..	All Sidings except bottom end of Crane Road
Malvern ..	.. ..	All Sidings
Caulfield ..	All Local Running Roads ..	All Sidings except Siding "A" and Works Siding
Murrumbena ..	.. £ ..	Public Siding
Oakleigh ..	Nos. 1, 2, 3, and 4 Roads ..	Sidings "B" and "C", and all Roads known as Sidings "A" and Cross-overs therein and connexions with Main Line, Works Yard Siding, Oakleigh Timber Siding, Luxford and Co.'s Siding, Storage Siding, and Eco Motor Co.'s Siding

GENERAL INSTRUCTIONS.

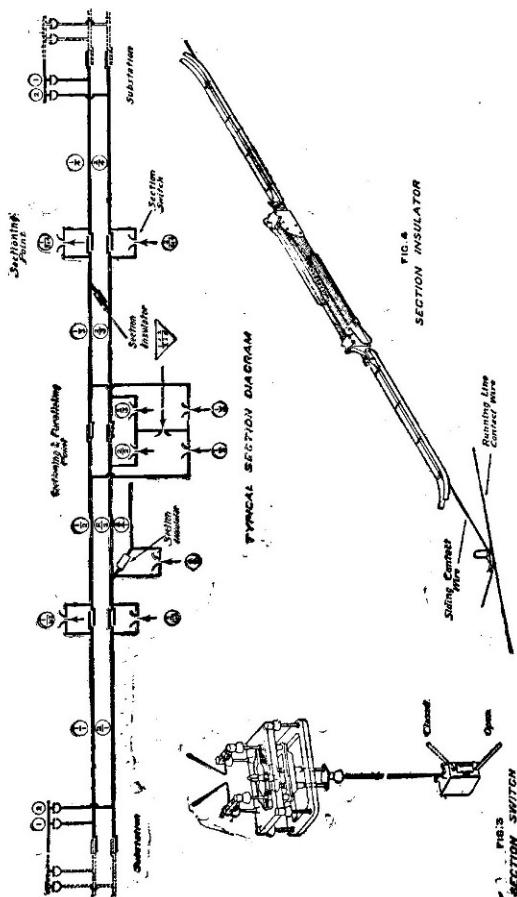
**Local Running Roads and Sidings Equipped with Overhead
Conductors—continued.**

Stations.	Local Roads.				Sidings.
DANDENONG LINE— <i>continued.</i>					
Sandown Park ..	No. 1 (Down Line) and Back platform track				All Sidings on Down side of Station connected with Back platform Road
Dandenong ..	Nos. 1, 2, and 3 Roads ..				Sidings "D" and "E"
FRANKSTON LINE—					
Glenhuntly ..	..	..	..	..	All Sidings
Moorabbin ..	..	..	..	..	Siding "A" Up end of Station
Mentone ..	..	..	..	..	One track in Sidings "A" the track nearest the rear of Down platform; Siding "R"
Mordialloc ..	..	Nos. 1, 2, and 3 Roads ..			All Sidings (except Loco Shed and Coal Stage Roads, Public Siding, and Up end extension of No. 1 Siding)
Aspendale ..	..	..	..	..	Siding "A"
Carrum ..	..	..	..	..	One track in Sidings "A", viz., the track adjoining Siding "B"; Sidings "B" and "C"
Frankston ..	..	Nos. 1, 2, and 3 Roads ..			Sidings 4 and 5, except dead-end extensions at Down end of these roads; Siding "A"
SANDRINGHAM LINE—					
Windsor ..	..	..	..	..	All Sidings except bottom end of No. 1
Elsternwick ..	..	..	..	..	All Sidings
North Brighton ..	..	..	..	..	Public Siding
Middle Brighton ..	..	..	..	..	Public Siding
Brighton Beach ..	..	All platform Roads ..			Three Sidings West of Back platform Road
Sandringham ..	..	Nos. 1 and 2 ..			All Sidings
ST. KILDA LINE—					
St. Kilda ..	..	Nos. 1 and 2 ..			No. 3 Siding
PORT MELBOURNE LINE—					
Port Melbourne Station	Nos. 1, 2, and Bay Excursion Road				
Prince's Pier ..	Nos. 4 and 5 Roads				

GENERAL INSTRUCTIONS.



GENERAL INSTRUCTIONS.



GENERAL INSTRUCTIONS.**PROMPTITUDE IN DEALING WITH ACCIDENTS AND OTHER EMERGENCIES.**

1. The attention of every Station-master is specially directed to the importance of being at all times prepared to deal with various emergencies incidental to railway work, and especially those which are most likely to arise at his own Station, or on the section of Line for the working of which he is directly responsible; and he is reminded that not only is it necessary that he should himself give such attention to the whole subject as will give him confidence in dealing with emergencies when they arise, but he should also take steps to satisfy himself that any member of his Staff, who is in charge of the Station during his absence has an intelligent appreciation of the character of the duties which, in certain eventualities, would devolve upon him, and particularly as to the course of action which should properly be taken in the following circumstances:—

- (a) Procedure to be followed in the event of a train accident involving personal injury, or in a case of electric shock. See pages 17, 18, and 67-70.
- (b) Working the Traffic of a Double Line over a Single Line of rails. (See Regulations 250 to 262 inclusive, and clause 6 hereof.
- (c) Relieving a disabled train or engine from the front by engine or Break-down train running on the wrong Line. (See Regulation 243.)
- (d) Working or relieving a disabled Electric train. (See clause (g) Regulation 247, and Supplementary Instructions, pages 487-492 of this Book.)
- (e) Drawing or pushing an engine, train, or portion of a train on the wrong Line back to the next Signal-box or Station in the rear. (See Regulation 244.)
- (f) Working a Single Line by Pilotman, owing to failure of the Electric Tablet or Staff apparatus. (See Rule 27, Appendix vii., Book of Rules and Regulations.)
- (g) Working a Single Line by Pilotman on one side of an obstruction, and by Tablet or Staff on the other. (See Rules 18 and 33, Appendix (ii) and Rule 16A, Appendix (vii), Book of Rules and Regulations.)
- (h) The precautions and steps to be taken in the case of a disarrangement on overhead electrical equipment, or when for other reason it may be necessary to have current switched off. (See Regulations 24, clause (d); 113; 214 (c); 279; and Instructions on pages 35-46 of this book.)
- (i) Detraining passengers at an obstruction. (See clause (f) of Regulation 247.) No specific instructions are, or can be, laid down for guidance in cases of this kind, beyond the general principles for working by Pilotman on the single Line in each direction back to the nearest Cross-over road, after transferring passengers from train to train, as provided for in Regulations 250 to 262, and in the Rules and Instructions for working Single Lines.

GENERAL INSTRUCTIONS.

- (j) Attention is also directed to the instructions respecting outbreaks of Fire, Fire Appliances, and precautions for prevention of fire, and the necessity for employes at Stations being instructed in the use of appliances, and their respective duties in case of an outbreak of fire. (See pages 84-94.)

2. (a) Each Station-master, with his assistant, and other members of the Staff who may be required to act, must work out on the principles laid down in the Rules, Regulations, and other Instructions referred to, the details of the action he and they would be required to take were any of these emergencies to occur at, or near, his Station. He should thoroughly rehearse in his own mind, and with his Staff, the exact course to be followed in the various forms in which an accident or casualty may be likely to present itself, so that, if need should arise, they may be quite familiar with the details of the exceptional arrangements to be made, **and may act with that promptitude and adherence to established Rules and Regulations and Instructions which it is so necessary should be observed**, bearing in mind, however, that it is preferable to set about the adoption of the special working with such deliberation as will ensure the best arrangements being made, rather than to err from want of sufficient presence of mind. The lists containing the names of Doctors and other information prescribed by the Ambulance Instructions must be posted in a prominent position in the Station-master's office. The necessary Forms for emergency working, and the Pilotman's badge, must be kept together in a conspicuous place in the Office or Signal-box, and it is the Station-master's duty to satisfy himself from time to time that they are in order and ready for immediate use. Attention is also called to Regulations 243, 244, and 253, with respect to fastening loose Runaway Catch Points (where such Catch Points are provided in the Running Line) before giving authority for Wrong Line Movements or commencing to work the traffic of a Double Line over a Single Line.

(b) As exceptional circumstances may at any time arise necessitating the prompt adoption of measures for which it is impossible to lay down specific rules beforehand, the Staff generally are expected to prepare themselves, as far as possible, for dealing with unforeseen emergencies, and especially to maintain a thorough understanding with the Stations on each side of them, so that they may be in as good a position as possible for acting together to the best advantage. A break-down may occur at any time and without warning, and it is those members of the staff whose minds are most exercised on the subject who can best act to advantage when a break-down does occur.

3. Should a mishap involve the derailment of an engine or vehicles, and any of the Running Lines be thereby fouled, the Break-down Van train, if required, must be wired for at once, the nearest Depot being applied to (see page 31). When doing so, it must be stated which Line (if a Double Line) is blocked, and such other information given as may be useful. (See Specimen Special Telegraph Form, TL 105, pages 23-24), and Pilotman arrangements must be put into force with the least possible delay.

4. Where the use of tools that are locally available either at the Station, or on the engine, or in the Van, will be attended with advantage, proper use should be made of such tools; care must, however, be taken

GENERAL INSTRUCTIONS.

to avoid contact with overhead electrical conductors (see page 36 and clause 9, pages 44-45). It may not be always necessary to await the arrival of the Breakdown Van before taking action.

5. In no case should the Running Roads be made use of for traffic purposes, after a vehicle has been off the Line, until the Road Foreman or Ganger, or other competent employe, has certified that it is fit for use; nor should a vehicle which has been off the rails be allowed to run in a train until it has been examined and certified to as fit to do so. (See clause 6, page 72, in this regard.) The interlocking connections and Hand Points should also be carefully examined in order to see if they have been interfered with in any way through the accident.

6. (a) Each Station-master must make himself acquainted with the facilities for working the traffic of a Double Line over a Single Line, not only at his own Station, but at the Stations on each side of him; and he must keep exhibited in a conspicuous place at the Station, accessible to all the Transportation Staff, a list showing the Depot for the nearest Break-down gang, and Overhead Depot Repair Car, and the names and addresses of the employes required from the Rolling Stock, Way and Works, and Electrical Engineering Branches.

(b) Overhead Failures.—It must be borne in mind that Single Line working may become necessary, owing to a failure of, or during repairs to, the overhead electrical equipment on one Line; and the mode of procedure in regard to communicating with the Substation, the Section Switches which would require to be operated and the cross-over roads to be used, should be, from time to time, rehearsed, particularly in the event of any change in the staff, in order that every member will be familiar with the distinguishing numbers of the overhead sections, sub-sections, branch-sections, and the locality of the Substation and Section Switches.

Attention is directed to the description of and instructions respecting disarrangement, repairs and faults on, overhead equipment, and particularly to the precautions necessary to prevent any train from bridging the Contact Wire of a dead section. See clause 3, page 37.

7. Should an accident happen of a character to cause a total stoppage of traffic by the usual route for any considerable time, prompt arrangements should be made for diverting the trains by any other route that may be practicable, care being taken in such cases that all needful precautions are adopted, and clear advices sent to all persons concerned.

8. If the Assistant Station-master be on duty at a Station nearest to the scene of any serious accident, or at a Station where a serious accident has happened, or at a Station from where the Break-down Van will be sent, he must as promptly as possible advise the Station-master of the circumstances, and the Station-master must at once come on duty, ascertain what has already been done, take whatever other action is necessary to comply with these instructions, and, in the event of the Line being obstructed, or the running of trains disorganised, arrange for the working of traffic, or so much of it as is possible, to be restored, if such has not already been done.

GENERAL INSTRUCTIONS.

PROVISION OF AMBULANCE EQUIPMENT.

1. Emergency Tools for Brake-Vans.—(a) Every Brake-van is fitted with a case which contains a saw, a tomahawk, and a bar. These are for use in cases of emergency, and when required the glass front must be broken in order to obtain them. Guards must report every instance in which the tools have been used, and both Guards and Station-masters must report any instance which may come under their notice where a tool case is found to be broken or any of the tools missing.

(b) Should any person be caught between the footboard of a vehicle and the platform, and it is necessary to use the saw to cut away a portion of the footboard, the saw should be used sideways, and the footboard cut at a slant, if the space between the footboard and the edge of the platform is too narrow to permit of a straight cut.

(c) Spare tools and glass fronts are kept at the Metropolitan Depots, and at the undermentioned Country Depots, where Car Builders are stationed:—

Ballarat
Benalla
Bendigo

Maryborough
Stawell
Traralgon

The Car Builders will require to replace any missing tools or broken glass fronts that may be in any Van reaching the respective Depots, and if this cannot be done at the Station where it has been discovered that the tools are missing or the glass broken, the Station-master must, by wire, notify the Car Builder at the nearest of the Depot Stations shown above that the Van will require to pass through.

2. (a) The Van of every Country Passenger and Mixed Train, whether ordinary or special (Sunday trains included), must be provided with an Ambulance Chest or Box, and a Stretcher numbered the same as the Chest or Box. An Ambulance Box and Stretcher must also be carried by every Ballast or Plant train.

(b) Every Break-down Van is provided with an Ambulance Chest, a number of Stretchers, and other Ambulance equipment, and every Workmen's sleeping car is provided with an Ambulance Box.

(c) Ambulance equipment must be provided at every place where an extra gang of men belonging to the Way and Works Branch is employed.

3. Responsibility for Seeing that Equipment is Provided.—(a) The responsibility for seeing that the Vans of the trains referred to in clause 2 are provided with Ambulance equipment is as under:—

- (i.) Ordinary Country Passenger and Mixed Trains (Sunday trains included), and Metropolitan Race and Show trains—the Station-master at the Station from which any such train starts.
- (ii.) Special Passenger trains not included in Section (i.) above—the Station-master at the Depot which provides any such train. If it is impracticable for the Station-master himself to attend to the duty, he must appoint a member of his staff to attend to it so that any neglect can be definitely located.

GENERAL INSTRUCTIONS.

- (iii.) Ballast trains, and places where extra gangs of men belonging to the Way and Works Branch are employed—the Road Foreman, Ganger, or other person in charge, who must requisition on the Ambulance Officer for the equipment, and see that it is duly returned when no longer required.
- (iv.) The Guard will be held responsible for promptly reporting any instance in which his van is not provided with proper Ambulance equipment.

(b) When the equipment for a special train is not available locally, arrangements must be made to obtain it from the Ambulance Officer, Spencer-street Station. When the service is completed for which the equipment was required, it must be returned to the Ambulance Officer duly waybilled.

(c) Boxes and Stretchers for the purpose of equipping Special Passenger trains are allotted to the following Stations:—

Ararat	Geelong	Spencer-street
Bairnsdale	Hamilton	Stawell
Ballarat	Horsham	Toolamba
Benalla	Korumburra	Traralgon
Bendigo	Lilydale	Upper Fern Tree
Castlemaine	Maryborough	Gully
Colac	Ouyen	Warracknabeal
Deniliquin	Prince's Bridge	Warrnambool
Dimboola	Serviceton	Wodonga
Echuca	Seymour	Wonthaggi
Flinders-street	Shepparton	

They are to be used for equipping the Van of any Special Country Passenger train that starts from any of the places mentioned. Ordinary Station Chests and Boxes or Stretchers should not be used for equipping the vans of special trains. Ambulance equipment must always be placed in the Guard's end of the Van, and the Guard must see that it is not blocked in by parcels, etc.

(d) The Ambulance equipment on special passenger trains which return empty must not be taken into Melbourne or Flinders-street Yards, or Yards at any Country centre, but must be removed at the terminus of the passenger special on the Down journey and waybilled to the Home Station.

Station-masters and Officers-in-Charge must see that the Ambulance equipment is removed from Vans of off trains at night, and also before trains are shunted into yard during day time.

4. Ambulance Chests and Boxes. — (a) Every Ambulance Chest and Box contains a printed list of the contents and the employe responsible therefor must enter in a note-book provided in such Chest or Box, (a) the date, (b) the hour, (c) the name of the person being attended, (d) nature of injury, (e) materials used; each entry must be initialed by the employe attending to the injured person and a report of the circumstances must also be made through his superior officer to the Ambulance Officer.

It is essential that the contents of Ambulance boxes and chests should be kept clean and contain the full equipment shown on the contents card.

GENERAL INSTRUCTIONS.

(b) Every Chest and Box set apart for use on a train is secured with a metal Seal and the Guard of any train on which there is an unsealed Ambulance Box or Chest will be held responsible for any article that may be missing unless it can be shown that it has been legitimately used. The Guard must examine the seal when he takes charge of his Van.

(c) In every instance in which the seal is broken the responsible employe shall immediately requisition on the Ambulance Officer by telegraph for an emergency Chest or Box, and when this comes to hand the Box or Chest with the broken seal must be temporarily re-sealed and way-billed to the Ambulance Officer. If, at the same time, it be necessary to replenish any of the articles, a requisition on the proper form must accompany the Box, and after it has been returned, the emergency Chest or Box must be sent up to the Ambulance Officer, duly waybilled.

White seals have been provided at Ballarat, Bendigo, Geelong, Flinders-street, Ararat, Castlemaine, Seymour, and Maryborough, for sealing Ambulance Boxes prior to their being sent up for replenishing purposes, etc. The initials of the employe sealing the Box must be shown clearly on the seal.

(d) Apart from the Ambulance equipment that has been allotted to certain Stations for the purpose of equipping any Special Passenger train which starts from any such place, Ambulance Chests or Boxes are provided for local use at various Stations and Offices. When not in use they must be kept sealed with Red Paper Seals, a supply of which is kept by the Station-master or Officer-in-Charge; a list of such places is contained in the Book of Ambulance Instructions.

Station-masters and Officers in charge must see that Ambulance Boxes are kept clean, free from dust, and wiped over with a damp cloth frequently. They must be so placed that they are always available, and not stowed away under benches.

(e) Ambulance Boxes have been allotted to all Workmen's Cars. Each such Box is correspondingly numbered with the Car and must not be transferred from one Car to another.

(f) When a Car is transferred from one District Officer to another, the Box must be removed from the Car and consigned to its new location, care being taken to see that it is properly secured and temporarily sealed before despatch; the officer consigning the Box must notify by wire the Officer to whom the Box is consigned.

(g) If a Car be condemned or sent to Melbourne for repairs, the Box must be removed therefrom, and after the contents have been carefully checked, consigned in the regular way by the District Engineer, or Signal Supervisor, as the case may be, to the Ambulance Officer, Spencer-street, due care being taken to see that the Box is properly secured and sealed before its despatch. The official consigning the Box must at once notify the Ambulance Officer by wire; the Ambulance Officer will retain the Box until advised of the future location of the Car.

(h) The employe in charge of each Car is responsible for the Ambulance Box and its contents, and when occasion arises to use the Box the seal must be broken by such employe in charge of the Car, who will be responsible for the contents until the Box is re-sealed.

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A list of the articles removed from an Ambulance Box and particulars of the circumstances calling for their use must be recorded in the note-book, and signed by the employe using them. The Foreman, or employe in charge of the Car, must re-seal the Box with Red Paper Seals, a supply of which he must always have readily available.

(i) The District Engineer or Signal Supervisor, as the case may be, must be promptly notified in writing of every case where any portion of the contents of the Ambulance Box is used, and state what steps have been taken to replenish the Box; all such reports received by the District Engineer or Signal Supervisor must be forwarded to the Ambulance Officer.

(j) Every facility must be given the Ambulance Officer to examine the Boxes in Cars and at Depots.

5. Ambulance Stretchers.—(a) In addition to the Van of every Passenger and Mixed train and every Ballast train being provided with a Stretcher, a Stretcher is provided at every Station where there is a man in charge; at the more important Caretaker Stations, and, also, in the Van of every Suburban train, including Suburban special trains.

Stretchers are also provided in every Break-down Van. Guards must promptly report every instance in which their vans are not provided with Stretchers.

(b) Care must be taken to avoid damage to Stretchers; the head-rest bars must be raised when a Stretcher is opened. In every instance in which a Stretcher is damaged, the Station-master or person in charge of the Station or Depot concerned must requisition on the Ambulance Officer for an emergency Stretcher, and on receipt thereof must forward the damaged Stretcher to the Ambulance Officer for replacement or repair, and must notify the Ambulance Officer of such action. If the Stretcher at a Caretaker Station be damaged, the Caretaker must inform the supervising Station-master.

(c) The canvas of Stretchers must be cleaned in the following manner:—

- (i.) If practicable, the canvas must be detached from the wooden or iron bearers, and thoroughly washed in boiling water.
- (ii.) If it be not practicable to remove the canvas from the bearers, the canvas must first be well brushed, and then washed over with a solution of phenyle by means of a scrubbing or other hard brush;

and every Station-master or person in charge of a Station or Depot at which a Stretcher is provided, must see that the canvas of such Stretcher is cleaned whenever necessary, and also that the Stretchers in the vans of trains and in Break-down Vans located at such Station or Depot are similarly cleaned. At the Metropolitan Stations, and at Ballarat, Bendigo, and Maryborough, the cleaning will be attended to by the Carriage Cleaners in the Rolling Stock Branch. At all other places, it must be attended to by the Transportation Branch employes.

(d) Every Stretcher in a Guard's Van or in a Break-down Van, must be slung from the roof by means of the hooks and straps provided for the purpose, and in the case where telescopic-handled or folding

GENERAL INSTRUCTIONS.

stretchers are provided at a Station, they must be kept in a vertical position on the stretchers provided for that purpose and, where space will allow, in a convenient place in the Station-master's office, so that they will be always available and under daily observation.

(e) The Station-master or person in charge of any Station or Depot to which any injured person has been removed by means of a Stretcher belonging to another Station or Depot or to the Van of a train, will be held responsible for the prompt return of such Stretcher; if the Stretcher be unduly delayed, the Station-master at its home Station must report the delay to the General Superintendent and to the Ambulance Officer. For the purpose of identification, every Stretcher bears a label indicating the Station or Depot or train to which it belongs.

6. When any Ambulance Box or Chest or Stretcher is forwarded from one Station to another, or to the Ambulance Depot, a properly addressed label must be tied to the handle, and the parcels ticket affixed to the label. Labels or Tickets must not be pasted over the equipment.

7. Ashford Litters.—An Ashford Litter is provided at each of the following Stations or Depots:—

Spencer-street,	Bendigo North	Ballarat North
Flinders-street,	Workshops,	Workshops,
Melbourne Goods Sheds,	Maryborough,	Geelong,
Newport Workshops,	Ballarat,	Warrnambool,
Bendigo,		

and an Ashford Litter belonging to the Sale Hospital, which is kept at the local Station, may be utilised in case of necessity.

8. Hospital Car.—(a) A Hospital Car is located at the Locomotive Depot, North Melbourne, and one at the Locomotive Depot, Ballarat East. Each car is equipped with Ambulance Stretcher Beds and Operating Table, a supply of filtered water, heating and lighting apparatus and other Ambulance equipment, including Stretchers, Blankets, Bandages, Splints, Drugs, and Instruments.

(b) The members of the Permanent Ambulance Corps at

Spencer-street,	Newport Workshops,
Flinders-street,	North Melbourne Loco. Shed
Princes Bridge	Car and Wagon Shops, North
Ballarat	Melbourne
Ballarat East Loco.	Jolimont Repair Shops,

shall be instructed in the methods of using the apparatus for lighting and heating, which are indicated by printed directions exhibited in the Car. A list showing the complete equipment contained in the Hospital Car is posted in a conspicuous position therein.

9. Fire Extinguishers in Brake-Vans.—(a) The Van of every train is equipped with a Fire Extinguisher, which bears a number corresponding to the Van to which it is allotted, and it must be regarded as a part of the equipment of that Van. The responsibility for seeing that the Extinguishers are duly examined and the practice in regard to their examination is as under:—

(i.) Country Passenger and Mixed trains starting from Metropolitan Stations.—If, when the Van is docked, by a Rolling Stock Branch employe, appointed for the purpose, the

GENERAL INSTRUCTIONS.

Fire Extinguisher show any sign of being defective, or if the spare charge which should accompany it be missing, he must, prior to the departure of the train, arrange to have the Extinguisher recharged, or, if any article be missing, for such article to be replaced. The work of re-charging must be done by an employe of the Rolling Stock Branch, who will require to obtain his supplies for the purpose from the Ambulance Officer.

- (ii.) Passenger and Mixed trains starting from a Country Station. — If, when the train is docked by the Station-master, or by an employe appointed for the purpose by the Station-master, the Fire Extinguisher be found defective, it must be re-charged.
- (iii.) Suburban (Steam) Passenger Trains. — The Fire Extinguisher must be examined by the Guard when he takes charge of his train. At Metropolitan Terminal Stations the front Van of every train must be examined, immediately it arrives, by the employe in charge of the platform at the front end. The Extinguishers in the Vans of trains that stand at suburban Stations over night must be examined daily before such trains are taken out of running. In every case of defect the Station-master must be advised, so that the Fire Extinguisher may be re-charged. See clause (b) hereof.
- (iv.) Electric Passenger Trains. — The periodical inspection and recharging of Fire Extinguishers on Electric passenger trains will be done by a Fireman of the Metropolitan Fire Brigade, who will be responsible for seeing that they are maintained in the proper condition; he must hand over any Extinguishers found defective to the Workshops Manager, Jolimont Workshops, who will replace them by an equal number of Extinguishers certified to by the Fireman as being in good condition. Any repairs required to the Fire Extinguishers will be carried out by the Workshops Manager.

A copy of any reports furnished by the Fireman to the Metropolitan Fire Brigade must be handed to the Jolimont Workshops Manager at the time.

The Motorman and the Guard (or other appointed employe of the Transportation Branch), when preparing the train for service, will be responsible for seeing that all the Fire Extinguishers are in the proper position on the train; if a Fire Extinguisher be missing or defective, the circumstances must be at once reported to the Fitter-in-Charge.

When reporting off duty, each Motorman must report on his Trouble Card any case in which a Fire Extinguisher has been used, or found to be defective, and the Workshops Manager, Jolimont, will be responsible for seeing that the missing or defective Fire Extinguishers are replaced or repaired.

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(v.) Goods Trains, Melbourne Yard.—The Fire Extinguisher must be examined by the Guard before the departure of his train. If any defect be found it must be brought under the notice of the Yard Foreman, who must arrange to have it attended to before the departure of the train. Yard Foremen, as they go about the yard, are enjoined to examine the Extinguishers in the Vans for the purpose of ascertaining whether they are in good order.

(vi.) Goods Trains, Country Depots.—The Yard Foreman or Shunter in charge must examine the Extinguishers in the Vans daily, and promptly bring under notice any defect; this will not, however, relieve the Guard of his responsibility for examining the Extinguisher when taking charge of his train.

(b) In addition to the Extinguishers being examined, as provided in the foregoing, Guards should, from time to time, examine them and satisfy themselves that they are in good order. With a Country train, if the Extinguisher be found defective on the journey, the Guard must bring the defect under the notice of the Station-master or other responsible employe, and steps must be taken to have it re-charged, or, if time does not permit of this being done, to advise the Station-master at the Station in advance, at which it can be re-charged; the Station-master so advised must take the necessary action.

In addition to examining Fire Extinguishers in the Vans of trains, the Guard or other person appointed for this duty must also examine the notice respecting the directions for using the Fire Extinguisher, and any other notice in the Van, and see that they are in a proper condition. Should any of the notices be obliterated or dilapidated, the matter must be immediately reported.

(c) Spare charges for Extinguishers are kept on hand in the Melbourne Yard, and at all Stations where trains terminate. The employes concerned (Transportation or Rolling Stock Branch) will be held responsible for keeping the stock up to the allotment. A requisition must be forwarded to the Ambulance Officer, Spencer-street Station, when additional stock or a further supply of charges is required; Form "G" must be used for this purpose, and a statement must accompany the requisition explaining why it is made. In every case in which an Extinguisher is re-charged, the circumstances must be reported to the Ambulance Officer.

(d) Every Van is provided with a spare Charge, which must be placed in the metal container fixed near the Fire Extinguisher in the Van.

Full instructions for re-charging the Extinguishers accompany the card-board boxes containing the charges, and they also appear on a plate which is attached to the box or bracket which supports the Extinguisher in the Van.

(e) When a Guard furnishes a report regarding a defective Extinguisher or an Extinguisher that required to be re-charged, he must do so on the form provided for the purpose.

(f) Fire Extinguishers which become dirty owing to priming, must be cleaned when the cleaning of the Van is being attended to. Under no

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circumstances should the vent in the Extinguisher be blocked. Each Extinguisher has a pricker attached to the nozzle, and this should be frequently used to keep the vent clear.

(g) **Cards of Instruction.**—The Cards of Instruction (AO/10 and AO/11), showing what to do first in the event of a serious train accident, must be posted in a conspicuous position in the Office where, in case of necessity, they will be immediately accessible for reference. One of each of the Cards must be exhibited in every Signal-box, and at the larger Stations, in the Rooms used by the Guards, Shunters, and other employes.

(h) **Instructions to be Amended when Necessary.**—The Ambulance instructions must be amended from time to time as may be necessary, and the posted lists containing the names and addresses of doctors or other persons whose services may be required, and telephone numbers, etc., must be kept up to date. The Station-master must make a point of checking the lists at regular intervals.

(i) A weekly check of all Fire Extinguishers must be made at all Yards, Depots or Stations at which trains are ordinarily located, and a return showing the result of such check (on Form TNM 176a) must be forwarded on each Monday to the Ambulance Officer, Spencer-street.

DIRECTIONS TO BE OBSERVED IN CASES OF ELECTRIC SHOCK.

In many cases in which a person receiving Electric Shock is apparently dead, animation may be restored if proper efforts for resuscitation are adopted, promptly, in accordance with the following directions:—

1. FIRST STEP.—(a) Immediately release the victim from the Live Wires or other Live conductors.

- (i.) **Protect Yourself.**—Insulate yourself from the Earth; stand on some non-conductor, such as — dry wood, dry folded paper, rubber, linoleum, dry grass, dry bricks, dry cloth, dry hay or straw—these substances resist the flow of the electric current.
- (ii.) Avoid personal contact with the Live conductors, or with the victim or any articles, etc., that he may be holding—even personal contact with loose parts of his clothing is dangerous.

Protect your hands from contact with the victim or the Live Conductors by using dry articles of clothing—a rubber tobacco pouch, or a cap or folded newspaper would serve to protect the hands; if no means of insulating the hands be available, pull the victim away by means of a loop of dry rope, or a crook'd stick—not an umbrella.

(b) Whilst proceeding to release the victim make every effort, by calling out, to have the electric current cut off, and for a doctor to be summoned.

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2. SECOND STEP.—(a) As soon as victim is clear of the Live conductors, feel, rapidly, with your finger in his mouth and throat, and remove any substance such as tobacco, artificial teeth, etc.

(b) Don't stop to loosen his clothing at this stage; every moment of delay is serious. Commence artificial respiration at once, and as follows:—

3. THIRD STEP.—Quickly apply the Schafer (see 3A), the Silvester (see 3B), or the Laborde (see 3C) method of artificial respiration, whichever is the most suitable according to the condition of the victim.

- (i) If the victim show any sign of congestion, such as the face being livid, adopt the **Silvester Method** first.
- (ii) If the victim's arm or a rib be broken, or his chest or back be burnt or otherwise injured, or if the victim be under seven (7) years of age, the **Laborde Method**, only, should be applied.

3A. Schafer Method of Artificial Respiration—

(a) Lay the victim on his belly, with his arms extended forward as straight as possible and his head turned to either side, so that nose and mouth will be free for breathing. (See Fig. 1.)

(b) Kneel astride, or at one side of the victim, and facing his head, place the palms of your hands on the lowest ribs, one at each side, the thumbs parallel to each other, as in Figures 1 and 2.

(c) Keep your arms quite straight; lean your body forward, slowly applying firm, but not violent pressure (Figure 1), straight downwards. This drives the air out, and the movement should take three seconds.

(d) Draw back your body quickly, and relax the pressure, but do not remove your hands. This produces inspiration, and should take two seconds.

(e) Alternate movements (c) and (d) twelve times per minute.

(f) As soon as artificial respiration has been started, and whilst it is being continued, an assistant, if one be available, should loosen any tight clothing about the victim's neck, chest, and waist.

(g) Continue the artificial respiration (if necessary two hours or longer), without interruption, until natural breathing has been restored.

Do NOT give the victim any fluid, until he is fully conscious.

EXCITE RESPIRATION.—(i.) Whilst artificial respiration is being performed, other useful steps may be employed such as applying smelling salts, or snuff, to the nostrils.

(ii.) When natural breathing has been restored, promote circulation and warmth.

(iii.) Watch the victim for some time to see that natural breathing continues. If the breathing cease or become weak, perform artificial respiration again.



FIG. 1.



FIG. 2.

Whilst performing artificial respiration, watch the victim's face for signs of congestion—such as the face becoming livid, and if any such indication appear, immediately change the treatment to the SILVESTER METHOD of artificial respiration as shown hereunder.

3B. Silvester Method of Artificial Respiration—

(a) Adjust the victim's position—Immediately, place the victim on his back on a flat surface, and if possible, inclined from the feet upwards; raise and support his shoulders on a small firm cushion or folded garment placed under the shoulder-blades.

(b) Release all tight clothing from about the neck and chest and bare the front of the body as far as the pit of the stomach; unfasten the braces and top button of trousers in men, and the corsets in women.

(c) Maintain a free entrance of air into the wind-pipe—an assistant must draw forward the victim's tongue as far as possible, and secure it in that position—in the absence of forceps, a tie (or other) clip may serve this purpose; unless this be done there is great danger of obstruction of the wind-pipe. (Compare Figs 3 and 4.)



FIG. 3.

"A"—Gullet.
"B"—Windpipe.



FIG. 4.

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(d) Imitate the Movements of Breathing—

- (i.) **TO INDUCE INSPIRATION.**—Kneel at a convenient distance behind the victim's head, and, grasping his forearms just below the elbows, draw the arms upwards, outwards, and towards you, with a sweeping movement, making the elbows touch the ground; the cavity of the chest is thus enlarged and air is drawn into the lungs. (See Fig. 5.)
- (ii.) **TO INDUCE EXPIRATION.**—Bring the victim's arms slowly forward, downwards, and inwards, press the elbows firmly on the chest on each side of the breast-bone; by this means air is expelled from the lungs. (See Fig. 6.)

Repeat these movements alternately, deliberately, and perseveringly about fifteen times per minute, for ten minutes, then revert to the Schafer treatment, which may be continued, unless congestion is again observed, upon which the Silvester Method should be resumed for another ten minutes.



FIG. 5. INSPIRATION.



FIG. 6. EXPIRATION.

3c. Laborde Method. — (a) The victim is placed on his back or side; the mouth cleared; the tongue seized—using a handkerchief or something to prevent its slipping from the fingers—and the lower jaw depressed.

(b) The tongue must be pulled forward and held for two seconds in that position, then allowed to recede into the mouth; these movements should be repeated about fifteen times per minute.

TREATMENT OF BURNS.

In all cases, burns caused by contact with a Live Conductor should be immediately covered; lint or clean linen, soaked with Picric Acid solution, should be applied to the burnt surface and covered with cotton wool and a light bandage.

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DERAILMENTS.

(For general Instructions respecting the practice to be followed in reporting damaged or derailed vehicles, see clause 1, page 469.)

1. In order that definite information may be recorded in all cases of serious derailment, the senior officials available of the Transportation, Rolling Stock, Way and Works and Signal and Telegraphs Branches must at once proceed to the place where the derailment occurred, and together carefully note the following and any other particulars which they consider affect more or less the possible cause or causes of the derailment:—

- (i.) All marks of derailment on rails and sleepers, especially where—
 - (a) The wheel or wheels first mounted the rails, and
 - (b) Where the wheel or wheels first left the rails.
- (ii.) The gauge and level of the track back at least thirty (30) feet from the point of derailment, and as much further back as may be considered necessary, at intervals of six (6) feet, the same measurements to be taken, if necessary, with engine or vehicles on the road in order to test its stability.
- (iii.) Which wheels of which vehicle first left the rails, and to carefully examine them and the vehicle generally for any defects. The condition of the buffers and couplings must be specially observed on all derailed vehicles, and also on all those vehicles to which they may have been attached. The heights of the buffer centres should be determined, and the position and condition of all drag hooks, buffer pins, and safety chains, etc., should be observed.
- (iv.) A rough sketch to be made of the position of the derailed vehicle, or vehicles; and a full report of the particulars mentioned above and hereunder must be promptly furnished by each such official to his superior officer.

2. In addition to noting the above particulars, the apparent cause of the derailment should be ascertained before any operations are commenced which might tend to obliterate marks or other indications, and thereby render it difficult to afterwards ascertain the cause.

Before removing any undamaged vehicle from those which have been derailed, the couplings must be examined for marks which may indicate the cause of the derailment, and a note made as to their condition and the reason for such condition.

The contents of derailed vehicles must be examined and the weights of same taken, and observations made as to the general distribution and safe stowing of loads.

3. Special search and enquiries must also be made, and if anything be discovered which might have been an obstruction on the Line, or if any damaged material be found, whether belonging to the Permanent-way, or to the derailed train, or engine, it should, as far as possible, be

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collected, marked for identification (after the actual position of such obstruction or damaged materials has been noted), and stored in a safe place for subsequent inspection by the authorised officers.

4. When a derailment occurs in an interlocked yard, the interlocking connections should be carefully examined in order to see if they have been interfered with in any way through the accident. Hand Points should be also inspected and tested.

5. In the case of any derailment in a Station Yard the Station-master or other person in charge must also note and furnish the particulars specified above. In addition to reporting the derailment of or damage to any vehicle to his superior officer in the ordinary course, every derailment must be reported to the Road Foreman, and (where necessary) the Signal Adjuster must be called; the occurrence must be also reported by telegraph, the Code Address, "General" or "Branch," as the circumstances may require, being used. See pages 9-13.

The reports should state the precise cause of the occurrence, if known.

6. After the derailment of any vehicle, it must not be again used until a Train Examiner has certified that it is fit to travel, but in urgent cases when a truck contains perishable loading, the Driver may, after gauging the wheels, and satisfying himself that the vehicle is fit to run, take it on to its destination, but he must examine it at every station at which the train may stop, to see whether it is travelling safely. The Train-Examiner must, however, be verbally notified by the Driver at the end of the journey, and the circumstances and condition of the truck must be reported by the Guard to the Station-master or other responsible officer in charge of the Station or Depot where the vehicle is left.

7. In no case should the Running Roads be made use of for traffic purposes, after a vehicle has been off the Line, until the Road-master, Road Foreman, Ganger, or other responsible official of the Way and Works Branch has certified that the Line is fit for use; this certificate to be forwarded in the usual course with the other reports.

RE-RAILING RAMP8.

Re-railing Ramps are located as under:—

In charge of the Locomotive Depot Foreman or the Driver or
Fitter in Charge at:—

Spencer Street
Flinders Street
Port Melbourne
Bendigo
Maryborough
Donald
Woomelang
Ballarat

Ararat
Stawell
Murtoa
Dimboola
Geelong
Colac
Camperdown

Seymour
Benalla
Moe
Traralgon
Bairnsdale
Korumburra
Upper Ferntree Gully

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In charge of the Station-master at:—

Woodend	Warrnambool	Sale
Castlemaine	Hamilton	Stratford
Echuca	Branxholme	Nyora
Inglewood	Wangaratta	Newport
Korong Vale	Wodonga	Williamstown Pier
St. Arnaud	Yea	Lilydale
Ouyen	Shepparton	Caulfield
Mildura	Numurkah	Oakleigh
Daylesford	Warragul	St. Kilda
Horsham		

In charge of the Superintendent of Melbourne Yards, Spencer-street.

A pair of special pattern Re-railing Ramps has been provided at the New Yard, between the North Melbourne Truck Shops and the Washout Sidings, and is kept at the New Yard Shunters' Cabin, under the charge of the Yard Foreman.

Re-railing Ramps should be kept in a convenient position well known to the Station or Yard staff, and preferably near to where most of the shunting operations take place.

DISTRICT ENQUIRY BOARDS REGARDING ACCIDENTS.

1. District Joint Branch Enquiries into accidents shall only be held as set out hereunder:—

- (a) When ordered by the General Superintendent of Transportation.
- (b) When the District Officers are unable to fix responsibility or ascertain the cause by ordinary investigation or correspondence, in which case a request should be made for a Joint Branch Enquiry, and such Enquiry may be arranged through the General Superintendent of Transportation.

2. (a) A Joint Branch Enquiry Board shall be composed of either three or five members, according to the number of Branches concerned in the accident, and shall consist of the District Officers, viz., Metropolitan or District Superintendent, or Superintendent of Melbourne Yards, as the case may be; the District Rolling Stock Superintendent, District Engineer, with a representative, when necessary, to be nominated by the Chief Electrical Engineer, and Chief Engineer of Signals and Telegraphs, but in every case a representative of the Transportation Branch shall be a Member of the Board.

(b) This Board shall make personal examination on the ground and take testimony of employees, eye witnesses, or other parties, so as to include all evidence afforded by the physical condition at the place of the accident, and, by expert knowledge and experience, shall persist in its investigation until the causes are determined, or, failing this, until all sources of available information are exhausted.

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(c) If the representative of any Branch concerned be below the rank of Superintendent or Engineer, he should not be an Officer having immediate jurisdiction over territory in which the accident occurred; for instance, a Roadmaster should not be selected to serve as a Member of Board convened to investigate a derailment that occurred in his own district, nor should a Signal and Telegraph Supervisor be selected in the event of there being reason to think that an accident or irregularity has been caused by defective Signalling mechanism under his supervision.

(d) After the scene of accident has been viewed by the entire Board, and the investigation is complete, and all the circumstances have been ascertained, and the responsibility placed, and recommendations (if any) decided upon, the Chairman will telegraph the substance of the finding to the General Superintendent of Transportation.

(e) Should a Board fail to reach a definite and satisfactory conclusion, a second Board of Enquiry, consisting of higher officials of the same Department, shall, if considered desirable by the Heads of Branches, be convened forthwith.

(f) Every accident has an originating cause, and the Board of Enquiry shall determine the cause—both immediate and remote; the Board shall also fix responsibility, regardless of interests or individuals affected, and without any concealment of liability or shielding of parties at fault.

(g) In case of personal responsibility, it should be fixed by name and grade or title, in a plain statement of the facts. Defective equipment appliances, structure or track contributing to an accident should be specifically described, with character and nature or cause of defect. If defect in manufacture, the name of the manufacturer and identifying data should be given.

(h) Any recommendations offered for prevention of similar accidents must be practicable, and decided upon after careful consideration.

(i) The evidence, findings, and recommendations of the Board to be reduced to writing, signed by all Members of the Board, and forwarded on Form "G27" to the General Superintendent of Transportation.

(j) Everything of material importance which is stated in the findings should be supported by testimony; due allowance must, of course, be made for preponderance of evidence.

(k) A Joint Branch Enquiry, when ordered, must be held with the least possible delay after an accident occurs, and, unless there are special circumstances that delay the investigation, it should be completed by the Board, signed by all Members, and reach the office of the General Superintendent of Transportation not later than ten (10) days after the accident has occurred.

3. If the attendance of an expert Officer is considered advisable by the Board, such Officer shall attend and assist at the Enquiry when requested to do so by the Chairman of the Board.

4. A complete sketch of the track, vehicles, or other appliances should, if practicable, be forwarded with the Report, and in the event of photographs being used, they should be properly marked for identification.

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5. In all cases of minor accidents or mishaps, such as derailments in yards, etc., breaches of Regulations or Instructions, in which a Joint Branch Enquiry is not ordered, it will be the duty of the District Superintendent to promptly cause an investigation to be made personally or by correspondence, and complete such correspondence not later than ten (10) days after the irregularity or mishap has occurred, forwarding full particulars with his finding and recommendation to the General Superintendent.

District Officers to give every assistance in carrying out this Instruction.

6. Employees concerned should be advised of any disciplinary action it is intended to take as early as practicable after the completion of an Enquiry or Investigation.

TELEGRAPH OPERATORS AND LAST UP OR DOWN PASSENGER OR MIXED TRAINS.

Unless otherwise specially arranged, Operators at Stations that are Engine Depots must remain on duty until the last Passenger or Mixed train passing the Depot has arrived at its destination, or has passed the next Depot Station in advance.

CONVEYANCE BY RAIL OF ANY PERSON SUFFERING FROM ANY INFECTIOUS OR CONTAGIOUS DISEASE, OR THE CORPSE OF ANY PERSON WHO HAS DIED FROM ANY SUCH DISEASE; AND THE DISINFECTING OF CARRIAGES, Etc.

1. **Infectious or Contagious Diseases.**—Acute Poliomyelitis (Infantile Paralysis), Cerebro-Spinal Meningitis (Spotted Fever), Cholera, Diphtheria, Leprosy, Measles, Mumps, Plague, Scarlet Fever, Small Pox, Typhoid, Typhus, Whooping Cough, Yellow Fever.

Diphtheritic Croup is synonymous with Diphtheria, and Scarletina is synonymous with Scarlet Fever.

2. **General By-Law No. 17.**—"The Commissioners may refuse to carry any person who has any infectious or contagious disease. No person who has any such disease shall, without the authority of the Commissioners, resort to or come upon any premises of the Commissioners, or travel, or attempt to travel, on any railway. No person who has charge of any person who has any such disease shall, without the like authority, aid or assist the person having any such disease to travel, or attempt to travel, on the railway. Any person guilty of a breach of this By-law may be removed from any such premises or from any carriage, or other vehicle of the Commissioners, and shall forfeit any fare which he may have paid, and, in addition, shall be liable to a penalty not exceeding Twenty pounds."

In any case where a person suffering from any of the diseases specified in Clause 1 or any other infectious or contagious disease has been conveyed by rail, the compartment or vehicle occupied by such person must, without delay, be thoroughly disinfected by using the Alformant Lamp. (See following Instruction.) All concerned must be particular

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in seeing that no other passenger is allowed to travel in any compartment or van vacated by any such person, until the disinfection of the compartment or vehicle has taken place.

3. Kind of Vehicle or Compartment to be Reserved. (a) In all cases a second-class compartment (but not a compartment in a corridor car), with partitions up to the roof, or a special van, must be used. If a second-class compartment be used, it may be made as comfortable as desired by the occupants by the use of mattresses or other bedding, or, if a van be used, a bed may be put up or an ambulance stretcher utilised. A "Reserved" card must be exhibited, on which must be endorsed in a conspicuous manner: "CAR TO BE FUMIGATED." The Chief Time Tables Officer must be advised in all cases when compartments are so reserved.

(b) The charge for a second-class compartment or a Van is sevenpence (7d.) per mile for the single journey; minimum, twelve shillings (12s.). This will entitle the sufferer and one (1) attendant to travel. Excess fare ticket to be issued for the total charges. All other passengers accompanying the sufferer in the compartment or van must pay ordinary fare. Such passengers, including the attendant, must travel throughout the whole journey in the compartment or van so reserved, and must not be allowed to travel in an ordinary carriage with other passengers.

4. (a) When a compartment or Van is set apart for the conveyance of a person or persons suffering from any infectious or contagious disease, the Station-master concerned must immediately notify by wire the Chief Foreman of the Metropolitan Car and Wagon Shops, North Melbourne (stating the number and class of carriage or van, and the number of the compartment if a car be used), who will require to arrange for a competent man provided with the necessary articles to thoroughly disinfect such compartment or van; the Station to which the patient travels, and the terminal Station of the car to be similarly wired, the nature of the disease being stated. The contents of any such telegrams received by Station-masters at Rolling Stock depots after 5 p.m. must be made known to the Leading Hand Car Cleaner on duty. Special attention must be given to this by Station-masters at Spencer-street and Flinders-street.

(b) When any compartment or vehicle which has been so occupied is vacated at a roadside Station, the Station-master must wire the number and class of car or van to the terminal Station of the car, giving the number or relative position of compartment from up end of car, in order that a mistake may not be made. A notice should also be posted on the window of the compartment or Van, thus: "CLOSED TO THE PUBLIC," and the doors must be locked. The Guard and Conductor to be made aware of any action taken in this regard, and suitably instructed.

(c) Any carriage or Van which has been used for the conveyance of a person suffering from any infectious or contagious disease must be at once taken out of running, and so kept until a period of eight hours shall have elapsed after disinfection.

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5. When a patient is being sent to a hospital, the Station-master at the Station where the journey is commenced should insist upon a telegram being despatched to the hospital by the friends of the patient, stating the nature of the disease, and asking for an ambulance to be in attendance at the destination Station.

6. Corpses (other than those for the Fawkner or Spring Vale Cemeteries and to be conveyed the entire journey by the Mortuary train) must not be accepted for conveyance by rail unless it is certified on the consignment note or other evidence required by the Commissioners is produced to the effect that the corpse is encased in a lead or galvanized iron casket, securely soldered and enclosed in an outer shell of wood.

7. Except as shown under clause (b) hereof, no corpse should be conveyed in the Brake-van of any train, and when a Hearse-truck cannot be obtained, a second cover must be placed over the truck (if an open truck be used), in which the corpse is carried, or a covered truck may be used at the option of the consignor. Before arrangements are made for forwarding a corpse, the Station-master must ascertain whether it can be conveyed to the destination Station without delay, more particularly when a transfer is necessary, i.e., from the Eastern Lines to the Western Lines, or vice-versa.

Brake-Van No. 14 "C.E." is fitted with two coffin chambers for the carriage of corpses, with a view to avoiding the provision of extra vehicles for this purpose.

- (i.) To obtain the maximum benefit from this vehicle, it is to be run regularly as the North-East Van on the 6.30 a.m. Down on Mondays, Wednesdays, and Fridays, and returned from Wodonga on No. 42 Tuesdays, Thursdays and Saturdays; when opportunity offers, however, to secure this Van for long journeys, such as interstate runs, for the carriage of a corpse, it may be withdrawn temporarily from the regular running referred to above, but it must be restored thereto promptly on return.
- (ii.) Should the Station-master, Wodonga, require to use the Van for, say, an extra division of the Up Express, the Station-master, Spencer-street, is to be specially informed by wire so that the vehicle may be set apart there for its next proper outward run.
- (iii.) **This Van is to be so turned that on Down trains from Melbourne the vestibuled end will adjoin the cars.**
- (iv.) When accepting an order for a corpse, the Station-master at Spencer-street, or other consigning Station, must determine whether or not the coffin chamber will be used, and if the destination involve a transfer, advise the junction Station in good time, and in definite terms. **so that a vehicle can be obtained for the continuation of the journey.** The usual train load wire must include particulars of corpse consignments, indicating whether loaded in special Van or coffin chamber, and the number of the chamber; the wire must be sent to junction and destination Stations, and similar particulars must be endorsed on waybill.

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- (v.) The discs provided on each side of the coffin chambers must always be correctly placed, to indicate whether each chamber is loaded or not; Guards, when taking over a train to which this Van is attached, must satisfy themselves as to whether the chambers are loaded, and for what Station.

When a corpse is loaded, the destination must be chalked on the blank portion of the disc.

8. When an extra Brake-van is set apart for the carriage of a corpse it must be disinfected by sprinkling the floor with carbolic disinfectant, either just prior to or at the time the coffin is loaded. To enable this to be done the following Stations will be supplied with a suitable disinfecting powder:—Spencer-street, Castlemaine, Bendigo, Echuca, Korong Vale, Maryborough, Mildura, Daylesford, Ballarat, Ararat, Murtoa, Horsham, Geelong, Warrnambool, Hamilton, Seymour, Benalla, Wangaratta, Wodonga, Shepparton, Flinders-street, Warragul, Traralgon, Bairnsdale, Koroomburra, and Port Albert.

In any case where a corpse is loaded at a Station not specified in the above list, the disinfectant must be sprinkled on the floor of the Van by the Station supplying the vehicle if it be one of those enumerated above; if not, the loading Station must advise the Station-master at the nearest disinfecting Station through which the loaded vehicle will pass, and the latter must arrange for the Van to be disinfected there, as above.

9. The floor of Brake-vans or trucks used for the conveyance of corpses must, before being again used for ordinary traffic, be thoroughly scrubbed. This work is to be done at the Station where the Van or truck is detached, or by the Rolling Stock Branch where the car cleaning work is performed by that Branch, otherwise by the Transportation Branch.

USE OF THE ALFORMANT LAMP FOR DISINFECTING CARRIAGES AND VANS.

1. An Alformant Lamp is in charge of the Workshops Manager, Jolimont; the Chief Foreman of the Car and Wagon Shops, North Melbourne; the Loco. Foreman, Ballarat; the Loco. Foreman, Bendigo; the Loco. Foreman, Geelong; the Loco. Foreman, Maryborough; the Loco. Foreman, Seymour; and the Station-master, Wodonga. When a Lamp is required at any Station other than a Metropolitan Station, application must be made by telegram, giving particulars of the space to be disinfected, such as one compartment "Y" car, one compartment "B.V." car, etc., so that the requisite number of tablets may be forwarded. Application to be made as under:—

To Ballarat.—By any Station on the North-Western and Branch Lines beyond Ballarat, and Waubra, Skipton, Cressy, and Daylesford Lines.

To Bendigo.—By any Station North of Bendigo.

To Maryborough.—By any Station on the Mildura, Murrayville, Yelta, Merringur, or Avoca and Inglewood Lines.

To Geelong.—By any Station on the Queenscliff Line, and on South Western Line beyond Geelong, and branches.

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- To Seymour.**—By any Station on the Goulburn Valley Line and branches, and on the North-Eastern Line to Bowser inclusive, and branches.
- To Wodonga.**—By any Station between Springhurst and Wodonga; also any Station on the Wahgunyah and Shelley Lines.
- To Workshops Manager, Jolimont.**—By any Station on the Eastern and South-Eastern Lines and branches, Healesville Line and branches, Stony Point and Mornington Lines, Hurstbridge Line, and all Suburban Stations.
- To North Melbourne Car and Wagon Shops.**—By all other Stations.

2. The following is the method for using the lamp and tablets:—The font of the lamp must first be filled with methylated spirits, after which the Paraform Tablets must be placed in the receptacle at the top of the lamp. The wick cover must be removed by unscrewing to the left and the lamp placed in a bucket or some such utensil to keep it from falling over, and for the sake of convenience, it should stand just inside the door of the compartment or vehicle to be fumigated. All means of ventilation must be stopped up to prevent the ingress or egress of the air, and after this has been done the wick must be lighted and the door closed. For thorough disinfection, particularly where there are carpets and upholstered seats, etc., ten Paraform Tablets should be burned for every thousand cubic feet of space; but, approximately, it may be taken that three Paraform Tablets are sufficient for one ordinary compartment, and the process of fumigation should occupy three-quarters of an hour. For disinfecting a "Z" Van, ten (10) tablets are necessary, and they should be allowed to burn for one and a quarter (1¼) hours. Before the lamp is lighted, care should be taken to wipe off any of the methylated spirits which may be about the outside of the font. Whilst the fumigation is going on, the vehicle should be placed where it will not be disturbed.

3. The vehicle must be kept locked and out of use for fully eight hours after fumigation. Generally when the lamp is sent out it is ready for use, but should the spirits, by accident or otherwise, leak out in transit, the font must be refilled with methylated spirits. No other inflammable liquid is suitable. The person who lights the lamp will have time to escape before the fumes rise, as the tablets do not commence to burn immediately; the smoke, however, has no bad effect, and can be inhaled with safety. In any case where it is necessary to put the vehicle into running without delay after the tablets have burnt out, the door should be opened and closed for the purpose of withdrawing the lamp with the greatest possible haste, so that the smoke may remain pent up, but, as already stated, the compartment must be kept locked for the full eight hours. Where, however, the car can be kept at a Station for the whole period of disinfection, it will be better to leave the lamp inside for eight hours, in addition to the time taken by the tablets to completely burn out.

4. After the disinfection is finished, the Alformant Lamp must be returned (waybilled) by the first available train to the Station from which it was obtained. At the same time a report must be forwarded to the Chief Time Tables Officer stating the circumstances.

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TRESPASSING ON THE RAILWAY AND OTHER OFFENCES AGAINST THE BY-LAWS.

1. When reporting to the Head of a Branch any case of trespass upon the Line, the following particulars must be given:—

- (a) Christian Name* and Surname of Offender.
- (b) Address.
- (c) Occupation.
- (d) Has address been verified?
- (e) Date and place of offence.
- (f) Are trespass notices exhibited at spot?
- (g) Were any trains due at the time? If so, name them, and, if not, explain in what way the trespasser exposed himself or herself to danger.
- (h) Give particulars of refusal to quit, if any.
- (i) Particulars of any previous irregularities by persons trespassing at same spot.
- (j) If offenders are young, state age, as offenders under 16 years of age are to be summoned to appear before the Children's Court.
- (k) General observations on the facts of the case.

2. When an offence, other than trespassing, is committed against the By-laws, particulars must be furnished in accordance with clauses (a), (b), (c), (d), (e), (j), and (k). When an offence is observed by one employe only, he must, if possible, immediately call another employe as witness. Signatures to all reports should be as plain as possible, so that they can be easily read. Full Christian name must be signed. In cases where passengers alight from trains whilst in motion, or when any other breach of the By-Laws or Regulations occurs, and the person offending declines to give his or her name and address, a Porter must be told off to accompany such person, and endeavour to obtain the required information, or call on the first constable met with to obtain it from the offender, at the same time explaining for what purpose the information is required. Any passenger acting as above must be informed of the course that will be pursued.

Passengers must not be subjected to annoyance and discomfort through persons under the influence of liquor being permitted to pass through the barriers and travel by trains.

The staff are enjoined to exercise the utmost vigilance with a view to preventing such persons from entering railway premises.

Whenever the conduct of any person warrants his being compelled by a Barrier Porter or other employe to proceed to the Station-master's office to obtain such person's address, full particulars in connection with the incident must be reported to the Head Office.

3. The prevention of trespassing upon or other improper use of the Railway by the Public is a matter to which the employes of each Branch must give attention, and children, particularly, should be kept from Turntables and other equipment. Any person trespassing over, along, or on to any part of the Line or premises not ordinarily open to the public must be warned,

* In every case the full Christian name or names must be obtained.

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and required to withdraw. Should children be in the habit of trespassing upon the railway premises after having been warned, the circumstances must be reported to the Claims Agent.

(Under the provisions of the Dairy Produce Act, Dairy Produce Inspectors are authorised to enter Station premises and to inspect cans of cream in transit; any Inspector belonging to the Department of Agriculture, who produces evidence of his appointment and authority under the Dairy Produce Act, must be allowed to inspect cream on railway premises.)

4. Obstructions on Lines, Stone Throwing, Etc.—In any case where an obstruction has been placed upon the Line, or where any other offence, such as stone throwing, requiring police investigation has been committed, the local police officers must be immediately informed of the circumstances.

DEPARTMENTAL RESIDENCES.

1. (a) No new building shall be erected upon departmental land, nor shall any existing building on such land be altered or added to without the written authority of the Chief Engineer of Way and Works.

(b) The Ganger (who is the agent of the Estate Officer) must be supplied by an outgoing tenant with the keys of any departmental residence vacated.

(c) Before taking possession, an incoming tenant of a departmental residence must examine the house and report to the Station-master or Ganger any instance in which it is not in a reasonably clean condition.

(d) Every departmental residence must be inspected quarterly by the Works Foreman for the Section.

(e) Unless specially authorised, a private shed erected on Railway land must not be used for residential purposes; Officers in charge and Gangers must promptly report every case in which offices or sheds are so used; the reports must be sent to the Estate Officer, Spencer-street.

2. Live Stock, Structures, and Trees at Departmental Residences.—(a) The outbuildings of departmental residences must not be used for housing or sheltering any domestic live stock, and any stable, shed, or run for the accommodation of any such live stock must be provided by the tenant at his own expense, and must be erected in accordance with local Municipal Regulations, but in any case shall not be erected within 60 feet of a departmental residence, nor within 6 feet or any departmental outbuilding or fence.

(b) Written permission must, however, be first obtained for the occupancy, for private purposes, of any part of the Railway property or premises.

(c) Pigs must not be kept at any departmental residence connected with Station premises, and domestic stock must not be depastured within the Railway fence without such permission.

(d) No tree or shrub, that may grow to a height exceeding 7 feet, shall be planted within 40 feet of a departmental residence.

3. Fowl Tick on Departmental Premises.—(a) Employees who occupy departmental residences, and keep poultry on the premises, must keep such poultry in confinement, and must keep the fowl-houses

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and yards scrupulously clean. In the event of the premises becoming infected with fowl tick, the tenant is responsible for the payment of the cost of eradication of the pest.

(b) The tenant of a departmental residence on entering into occupation should at once ascertain whether fowls have been kept on the premises, and without delay examine the fowl-houses, yards, fencing, and adjacent buildings and trees. If there be any trace of tick on the premises, a report must at once be forwarded to the Supervising Officer, stating what buildings, fencing, or trees are infected.

4. Outbreaks of Disease.—Occupants of departmental residences must immediately inform the Station-master or Ganger of any case of diphtheria, typhoid, or other infectious disease that occurs on railway premises, and must keep clean every drain, silt-pit, and spouting connected therewith. In any instance in which a silt-pit is close to a dwelling, the silt must not be thrown over the surface, but must be removed to a place where no nuisance will be caused.

5. Prevention of Fire.—See clause 16, page 91.

FIREWOOD, SAWN TIMBER, COAL, FODDER, AND OTHER STACKS.

The following standard clearances, etc., must be observed in respect of firewood, sawn timber, charcoal, coal, fodder, and other stacks:—

1. Twenty-five (25) feet must be the minimum distance of firewood, sawn timber, charcoal, coal, and other similar stacks, and fifty (50) feet the minimum distance of fodder stacks from any Goods Shed, building, Timber Platform, or from any steam boiler or furnace, etc., where fire is used.

Consignors and lessees must be warned to take proper precautions to avoid any risk of fire, especially at places where an engine is employed.

2. Unless otherwise authorised, on Broad Gauge Lines a space of at least four (4) feet nine (9) inches, and on Narrow Gauge Lines a space of not less than five (5) feet six (6) inches where the Line is straight, or seven (7) feet where the Line is on a curve, must be reserved between any stack or saw-bench and the nearest rail. The clearances laid down in this clause, both for Broad or Narrow Gauge Lines, must be maintained in Station yards in respect of Goods or material of any description that would, if placed closer to the nearest rail than the distances mentioned, interfere with the proper performance of the duties of the employees engaged in shunting.

Attention is directed to clause 2, page 728, respecting the clearances at the Western doors of the Jolimont Workshops, and warning employees accompanying a train to or from the Workshops.

3. Debris must not be allowed to accumulate on leased land, but must be cleaned up by the Lessee. In the case of firewood, sawn timber, charcoal, and coal once a week and less often at smaller places, and, in the case of fodder stacks, every day where a large business is done, and as often as may be necessary at smaller places.

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4. (a) The maximum load allowed to be stacked on outside Goods Platforms, other than earth-filled Platforms, must not exceed five (5) cwt. per square foot, except where otherwise provided; this load is represented by the heights shown below for the respective commodities:—

Potatoes	12 feet	Wool	12 feet
Timber	10	Wheat	12
Iron	1¼	Oats	15
Lime	12	Barley	14
Bricks	4	Bran	20
Hay (pressed) .. .	10	Cement	5
Chaff	20	Manure (artificial) ..	5
Wire Netting .. .	10		

(b) FIREWOOD.—The height of firewood stacks placed contiguous to the Railway Line must be limited to 10 feet, so as to prevent damage to the floors of trucks when wood is thrown in.

Firewood awaiting despatch or delivery must not be stacked on a timber-decked platform if other space can be found for it.

5. **Storage of Telegraph Poles.**— Subject to the approval of the Metropolitan or District Superintendent, permission may be granted to the Postal Department to store, temporarily, telegraph poles at any Station (other than those where the Commonwealth already leases or proposes to lease a site) open for goods traffic outside a distance of 10 miles from Melbourne.

ENGINES AND BOILERS IN USE ON RAILWAY LAND.

1. Responsibility for the inspection and supervision of engines and boilers that are in use on Railway premises but are not the property of the Railway Commissioners, and also for the supervision of the persons in charge of such engines and boilers, is vested in the Mines Department, Melbourne; the responsibility for registering and supplying the necessary particulars to the Mines Department rests with the owner of such engine or boiler.

2. Each steam engine must be equipped with an efficient Spark Arrester. If a water supply be laid on, provision must be made for a sufficient length of hose, with couplings, adjacent to the plant for use in case of Fire; where water is not laid on, a sufficient supply of water must be held in a receptacle, and a bucket, which must be always available for use, must be provided. At the end of each day's work, the Lessee must clean out the fire-box and extinguish all fires; the fire-box doors and dampers must be maintained in good working condition.

3. Employes concerned must, however, see that the minimum distances and the clearances laid down on page 82 are maintained, and that the Rules, Regulations, and other instructions of this Department are observed.

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WATER LEAKAGES AND SEWERAGE OBSTRUCTIONS.

To avoid delay, every case of water leakage or sewerage obstruction should be reported direct as under:—

Country Districts.—To the Works Foreman for the District.

Metropolitan District.—To the Inspector of Iron Work, Telephone No. 389, Railway Exchange.

After office hours, notification of defects in sewerage pipes and small water pipes in the Metropolitan District must be telegraphed to the Plumbing Overseer (R. Cock, 15 Yarra-street, South Yarra), and any defects in water mains to the undermentioned Pipe Jointers, in accordance with the following roster:—

To Pipe Joiner E. T. McGee. Telephone: F.5979.—During months of January, March, May, July, September, November.

To Pipe Joiner I. Gibson. Telephone: Brunswick 2044.—During February, April, June, August, October, December.

During office hours, call No. 399 Railway Exchange, for Water Burst Attendant.

OUTBREAKS OF FIRE, FIRE APPLIANCES AND PRECAUTIONS FOR PREVENTION OF FIRE.

Note.—Special Instructions are issued by the Chief Electrical Engineer, in respect of precautions for prevention of Fire at Substations, etc., and the mode of procedure in the event of an outbreak of fire; employees concerned must make themselves familiar with such instructions.

1. (a) The nearest Fire Brigade, where one is available, must be immediately summoned in the event of any Fire of an ordinary character occurring on the Departmental Cars, Lines or premises.

(b) Notices indicating the position of the nearest fire alarm must be posted in Station offices and Signal-boxes so that, should a fire occur, no time will be lost in summoning the Brigade. Station-masters are responsible for seeing that this is done.

(c) Instances have occurred in which the efforts of the Fire Brigade to quell an outbreak of Fire in a dwelling were interfered with in consequence of the water hose, which was laid across the railway Line, having to be moved to permit a train to pass.

In special circumstances such as this, immediate application should be made by the officer in charge of the Station concerned to the Train Running Officer, Spencer-street, or the District Superintendent, as the case may be, for a direction as to whether an approaching train may be delayed or not, but, whenever practicable, to do so the hose should, of course, be laid under the rails.

2. A mere electrical discharge or an arcing due to a break in an electric circuit is not to be considered as a Fire, but in the event of its setting Fire to woodwork of cars, Stations or premises, and the flames spreading, "Fire" must be considered to have broken out, and the Fire Brigade must, in that case, be summoned.

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Water must on no account be applied to an electric wire or conductor until after the electric current is cut off; Station-masters and Signalmen, immediately on becoming aware of an electrical Fire, or of any Fire adjacent to Live conductors, must, when requested, arrange to have the current cut off.

3. Station-masters must make themselves acquainted with the positions of the various gas-cocks and water valves at the Stations, so that the gas can be readily turned off and the water turned on in case of necessity.

4. Station-masters must see that men usually sent to act in their absence are properly instructed in these matters.

(For instruction respecting precautions to prevent an outbreak of Fire from cigars, cigarettes or tobacco embers, etc., on trains arriving at Terminal Stations, see page 169.)

5. When any damage has been caused by Fire, the Heads of the Brigades concerned must be at once advised.

6. **Fire Appliances.**—At every Station (except where there are Brigades specially organised by the Rolling Stock Branch), the control of Fire Appliances is vested in the Station-master, who is responsible for seeing,

- (a) That the current instructions are thoroughly understood by all concerned;
- (b) That every employe under him is drilled in the use of the appliances, and instructed in his specific duties in case of an outbreak of Fire. (See clause 10.)
- (c) That every employe has a knowledge of the position of fire-plugs, stop-valves; and
- (d) That the appliances are kept in a state of efficiency without overtime being incurred.

7. (a) All Fire Appliances must be inspected daily, and any defect promptly reported. The Hydrants, Stand Pipes, and Hose must be tested at least once a month, and all appliances, after being used, should be replaced in the receptacles provided for their accommodation. The hose must be thoroughly dried and carefully flaked and coiled before being replaced.

(b) A Book (M.176) must be kept at each Station at which appliances (other than fire buckets) are provided for Fire fighting. At each such Station the equipment and appliances must be inspected prior to the date on which the Station stores requisition is due, i.e., once each quarter, by the Station-master and the Works-Foreman, who must fill in and initial the record in the Book.

Where the Fire appliances are attended by the Metropolitan Fire Brigade the Inspecting Officer attached to the Metropolitan Fire Brigade will initial the Book. The item headed "Fire Extinguishers" includes those in Vans at Dépôt Stations.

(c) The Station-master must see that every Departmental millecock, Fire plug, and Stop valve in the Station Yard is kept clear of ashes or other material, so that, if necessary, it will be available for immediate

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use. The position of each in the Station Yard is plainly indicated by a notice in vermilion on a white background on the nearest suitable object, as follow:—

Millcocks—by the letters "M.C."
 Fire Plugs— " " "F.P."
 Stop Valves— " " "S.V."

8. (a) The supervision and repairing of the Fire Equipment, including the charging and testing of the Hand Chemical Fire Extinguishers, except those which form part of the equipment of Brake-vans, will be attended to as under:—

(i.) At Metropolitan and other places shown below by an employee of the Metropolitan Fire Brigade; a fireman belonging to the Metropolitan Fire Brigade Station will be on duty in the Metropolitan area, and sign the Attendance Book at the various places, as shown:—

Places to be Visited.	When.	Attendance Book to be signed at—
Spencer-st. Railway Offices ...	Daily	Caretaker's Office.
" Station ...	Daily	Station-master's Office.
" Offices of Supt. Melb. Yards...	Daily	Supt. Melb. Yards Office.
" No. 1 Signal-box...	Daily	Signal-box.
" Dudley-st. Signal-box ...	Daily	Signal-box.
" Goods Sheds ...	Daily	Timekeeper's Office.
" Car Shelter Shed, Dudley-st.	Daily	Shelter Shed.
" Electrical Workshops and		
Pintsch Gas Works ...	Daily	Office.
" Railway Storekeeper's Store		
Receiving Depot ...	Daily	Head Storeman's Office.
Arden-street Workshops ...	Daily	Office (ordinary Attendance Book)
North Melbourne Car and Waggon Shop	Daily	To report to Signing-on Clerk.
Newport Workshops ...	Daily	To report to Signing-on Clerk.
Newport Power House ...	Weekly	"The Lodge."
North Melbourne Running Sheds	Weekly	To report to Signing-on Clerk
Flinders-st. Station ...	Weekly	Station-master's Office
" "A," "B," and "C"		Each Signal-box.
Signal-boxes ...	Weekly	
Jolimont Workshops ...	Daily	Leading-hand's Room
Overhead Repair Depot ...	Bi-weekly	Office.
Princes Bridge Station ...	Weekly	Station-master's Office.
" Signal-box ...	Weekly	"D" Signal-box.
All Substations ...		
St. Kilda-Brighton Electric Railway		
Depots ...	Weekly	Office.
St. Kilda ...	Weekly	Station-master's Office.
Brighton ...	Weekly	Station-master's Office.
Sandringham ...	Weekly	Station-master's Office.
Caulfield ...	Weekly	Station-master's Office.
Oakleigh ...	Weekly	District Engineer's Office.
Port Melbourne ...	Weekly	Station-master's Office.
Williamstown ...	Weekly	Station-master's Office.
Moorabbin ...	Monthly	Station-master's Office.

* These places will be visited, and the Attendance Book signed, in accordance with Special Instructions issued by the Chief Electrical Engineer.

(b) **Testing and Repairing of Fire Hoses.**—The testing and repair of all fire hoses provided at Stations will in future be carried out by the Metropolitan Fire Brigade.

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(c) At Ballarat, Ballarat North Workshops, Ballarat East, Bendigo, Bendigo North Workshops, Geelong, Seymour, Warrnambool, Wodonga, West Spotswood Storehouse, Spotswood Way and Works Workshops, Lilydale, and Upper Fern Tree Gully, the testing and repairing of fire hoses will be carried out under the control of the Metropolitan Fire Brigade; the care of the fire appliances will be attended to by a local railway employe specially appointed for the purpose.

(i.) The abovenamed places will be visited by an officer of the Metropolitan Fire Brigade, once in every three months. When it is necessary for the hose at any of these places to be tested, it will be withdrawn, and a substitute hose provided by the Metropolitan Fire Brigade. The hose to be tested must be forwarded to the "Chief Officer, Metropolitan Fire Brigade, Spencer-street," and a label showing the Branch and place to which it belongs must be attached; the Station-master, Spencer-street, must notify the Fire Brigade Station when any such hose comes to hand; the ordinary and substitute hoses must be waybilled "Free" on the forward and return journeys.

(ii.) If any hose be condemned, the hose to replace it must be handed over to the proper employe of the Metropolitan Fire Brigade, in order that it may be tested and the couplings, etc., adjusted.

(d) At all other Stations provided with fire hoses, the withdrawal of these hoses for testing and repair will be carried out in accordance with the following method:—

(i.) Five substitute hoses (numbered No. 1 to No. 5) will be provided by the Inspector of Ironwork. They will be marked "Substitute Hose," and a basket will be provided for each hose, each basket having affixed a brass plate marked "Victorian Railways Fire Hose Basket." The five substitute hoses contained in the baskets will be handed over to the Metropolitan Fire Brigade for testing and coupling, and will be returned to the Station-master, Spencer-street, who will forward three hoses to Denilquin and two hoses to Echuca Wharf.

(ii.) The Station-masters concerned must, on receipt of substitute hoses, delegate an employe to detach the branches (nozzles) and leather washers from the Station hoses and retain them; the Station hoses must be forwarded in the baskets provided, addressed to the "Chief Officer, Metropolitan Fire Brigade, Spencer-street," and a label showing the Station to which it belongs must be attached to each hose. On receipt of five (5) hoses, addressed as above, the Station-master, Spencer-street, must notify the Metropolitan Fire Brigade Station that such hoses are available for collection.

(iii.) Immediately after withdrawing the Station hose for despatch to the Brigade, the substitute hose must be placed in the hose box, and carefully flaked and coiled on the peg.

(iv.) On the return of the Station hose, after being tested and repaired, the branches (nozzles) and the washers must be

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- refixed and the hoses carefully flaked and coiled on the peg in the hose box; the substitute hoses must then be placed in the baskets and, except as shown in section (v.), waybilled to the Station named in the third column of the list shown below.
- (v.) On completion of the North-Western Line the Station-masters, Dimboola, Diapur, and Serviceton, and on completion of the Eastern Line the Station-masters at Stratford and Bairnsdale, must forward the substitute hoses in baskets to the "Chief Officer, Metropolitan Fire Brigade," Spencer-street, for testing purposes.
 - (vi.) If any hose be condemned, the hose to replace it must be handed over by the Inspector of Ironwork to the Metropolitan Fire Brigade in order that it may be tested and coupled.
 - (vii.) All Departmental hose baskets must be waybilled "Free" on both the forward and the return journeys; the number on each hose must be entered on the waybill.
 - (viii.) After being tested by the Brigade, the substitute hoses will be returned to the Station-master, Spencer-street, who must forward them to the Stations set out on the list.

Station.	No. of Hoses.	Substitute Hoses to be forwarded to undermentioned Stations on return of station Hoses after repair.
Deniliquin ..	3	Echuca
Echuca Wharf ..	2	Raywood
Echuca ..	3	Elmore
Elmore ..	3	1 to Mitiamo, 2 to Kerang
Raywood ..	2	Swan Hill
Mitiamo ..	1	Korong Vale
Kerang ..	2	Korong Vale
Swan Hill ..	2	Castlemaine
Korong Vale ..	3	2 to Castlemaine, 1 to Boort
Boort ..	1	Woodend
Castlemaine ..	4	2 to Woodend, 2 to Maryborough
Woodend ..	3	1 Maryborough, 2 Creswick
Maryborough ..	3	Mildura
Creswick ..	2	1 Avoca, 1 Mildura
Mildura ..	4	1 Donald, 3 Bacchus Marsh
Avoca ..	1	Donald
Donald ..	2	Ararat
Bacchus Marsh ..	3	Beaufort
Beaufort ..	3	Stawell
Ararat ..	2	Stawell
Stawell ..	5	Warracknabeal
Warracknabeal ..	5	2 Glenorchy, 1 Murtoa, 1 Hopetoun, 1 Jung
Glenorchy ..	2	Horsham
Murtoa ..	1	Dimboola
Hopetoun ..	1	Diapur
Jung ..	1	Serviceton
Horsham ..	2	Serviceton

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Station.	No. of Hoses.	Substitute Hoses to be forwarded to undermentioned Stations on return of Station Hoses after repair.
Dimboola ..	1	Chief Officer, Metropolitan Fire Brigade
Diapur ..	1	Chief Officer, Metropolitan Fire Brigade
Serviceton ..	3	Chief Officer, Metropolitan Fire Brigade The Fire Brigade will return hoses to the Stationmaster, Spencer-street, who will forward 2 No. to Hamilton, 2 No. to Casterton, and 1 No. to Condah
Hamilton ..	2	Penshurst
Casterton ..	2	Camperdown
Condah ..	1	Glen Thompson
Glen Thompson ..	1	Koroit
Penshurst ..	2	Colac
Koroit ..	1	South Geelong
Camperdown ..	2	Birregurra
Colac ..	2	South Geelong
Birregurra ..	2	Benalla
South Geelong ..	3	1 Tallarook, 2 Longwood
Tallarook ..	1	Wangaratta
Longwood ..	2	Benalla
Benalla ..	4	2 Wangaratta, 2 Chiltern
Wangaratta ..	3	1 Wahgunyah, 2 Beechworth
Chiltern ..	2	Yarrawonga
Wahgunyah ..	1	Murchison East
Beechworth ..	2	Rushworth
Yarrawonga ..	2	Shepparton
Murchison East ..	1	Mansfield
Rushworth ..	2	Numurkah
Shepparton ..	2	Nathalia
Numurkah ..	2	Mansfield
Nathalia ..	2	Wallan
Mansfield ..	3	2 Kilmore East, 1 Healesville
Wallan ..	2	Kilmore
Kilmore East ..	2	Healesville
Kilmore ..	2	Pakenham
Healesville ..	3	Dandenong
Dandenong ..	3	1 Korumburra, 2 Warragul
Korumburra ..	1	Moe
Pakenham ..	2	Warragul
Warragul ..	4	2 Moe, 2 Traralgon
Moe ..	3	2 Traralgon, 1 Stratford
Traralgon ..	4	2 Sale, 2 Stratford
Sale ..	2	Bairnsdale
Stratford ..	3	Chief Officer, Metropolitan Fire Brigade
Bairnsdale ..	2	Chief Officer, Metropolitan Fire Brigade
		The Fire Brigade will return hoses to the Stationmaster, Spencer-street, who will forward 3 No. to Deniliquin, and 2 No. to
		Bebuca Wharf

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(e) Notification of the receipt and despatch respectively of both Station and substitute hoses, stating the number of hose lengths and the numbers on these hoses, must be forwarded immediately to the General Superintendent, Room 56.

9. (a) The maintenance, testing and re-charging of Hand Chemical Fire Extinguishers (other than those which form part of equipment of a Guard's Van, those in Refreshment Rooms, and those attended to by an employee of the Metropolitan Fire Brigade, and specially referred to in the preceding clause 8), shall be carried out by the Works Foreman concerned. All such appliances must be examined and tested annually, emptied, by discharging, and re-charged; when additional Fire Extinguishers are installed at Station buildings, Refreshment Rooms, Institute buildings, or other places at Stations, they must be charged as soon as installed.

(b) The maintenance, testing and re-charging of Hand Chemical Fire Extinguishers in Refreshment Rooms will be carried out by the Refreshment Services Branch.

Periodical inspections will be carried out by the Refreshment Services Inspectors, who must satisfy themselves that the whole of the Refreshment Services' staffs thoroughly understand how to discharge the Fire Extinguishers, and that the Manager or other employee allotted the duty, thoroughly understands how to re-charge them; it shall be the duty of every Manager of a Refreshment Room where Fire Extinguishers are installed to always have on hand one spare charge for each extinguisher.

(c) Supervising Officers must satisfy themselves that employees allotted these duties thoroughly understand what is required of them. If necessary, and the Water Supply Engineer is communicated with, arrangements will be made for an Officer from that Division to visit the District Engineers' Depots or Sub-depots, and instruct Supervising Officers in the maintenance, etc., of these appliances.

10. A Metropolitan Fire Brigade Inspector will visit the Stations on the Suburban Lines from time to time for the purpose of inspecting the Fire appliances. He will give any advice that he thinks necessary, and employees must, as far as is reasonably practicable, accept the suggestions offered by him. The Station-master should see that employees are kept informed regarding any advice tendered by members of the Fire Brigade Staff.

11. At Metropolitan Stations employees will be drilled at regular intervals by one of the Fire Brigade Staff.

12. Fire Alarms connected with the local Fire Stations are provided at Ballarat and Bendigo, and the employee in charge of the fire appliances at each place must test the alarm daily, in order to see that it is in proper order.

13. Under no circumstance must the hose, fire buckets, or other fire equipment provided for protection against Fire be used for any other purpose.

14. At every Station where Fire Buckets have been supplied, the Station-master or person in charge must appoint a man whose duty it will be to keep the buckets filled with water, and the Station-master

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must frequently examine them, and satisfy himself that they are kept ready for use, and in good order. The water must be renewed as necessary, but in no case must more than one week be allowed to lapse without the buckets being emptied and refilled.

15. Chemical Fire Extinguishers are provided in the Brake-vans of all trains. For particulars regarding same see under Ambulance Instructions, pages 64-67.

16. (a) **Departmental Buildings.**—Steps must be taken by officers and employes concerned to see that fires are properly extinguished when finishing duty. The banking up of fires in offices at Stations and allowing them to remain alight during the night, after the staff has gone off duty, so as to be available for the staff next morning, involves a serious Fire risk, as well as unwarranted consumption of fuel.

(b) The removal of fire from one fireplace to another at a Station or departmental residence is also strictly forbidden.

(c) **Sweeping of Chimneys.**—Every Works Foreman, Road Foreman, Station-master, and every other employe responsible for the supervision of departmental property, and every employe residing in a departmental house, must inspect at regular periods the chimneys therein, and see that they are kept in a clean state, and free from any excessive accumulation of soot. This is of special importance in the case of wooden buildings. The Works Foreman for the section must be promptly advised of any chimneys that require sweeping.

(d) All stoves in departmental houses should be thoroughly cleaned at least once a week; appliances for cleaning purposes are supplied with each stove, and when these are worn out, application must be made to have them replaced.

(e) A fire must not be allowed in a stove or fireplace if the chimney be defective; the defect must be immediately reported.

(f) **Rest Houses.**— Although smoking is not prohibited in Rest Houses, employes smoking therein are hereby directed to exercise due care to obviate all risk of causing Fire.

17. Station-masters and the staff concerned are to see that Kerosene Lamps, where used in offices, Signal-boxes, or other structures are carefully and properly extinguished when the Station is closed for business, or when it is left without attendance for more than 30 minutes. In the case of waiting-rooms, if they are occupied by passengers, the lamps may be left burning during temporary absence of employe in charge.

18. (a) To prevent fires from taking place in Lamp Rooms, care must be taken to see that matches, before being thrown away, are properly extinguished; that the space under the cleaning bench is kept quite free from oil-saturated waste, kerosene cases, or other inflammable material; and that any lighted lamps which may be left in the Lamp Room during the temporary absence of employes are properly disposed of and adjusted. A bucket or kerosene tin containing dry sand or friable earth, to be used for extinguishing burning oil, must be kept in a handy position.

GENERAL INSTRUCTIONS.

(b) Wooden cases must not be placed on the iron benches in Lamp Rooms for the purpose of placing oil drums thereon; Supervising Officers must give special attention to this objection.

(c) Lamp Rooms must be kept locked, and the key, when not in actual use, must be held in safe custody by the Station-master or the Assistant Station-master, and handed by him to the delegated employe on each shift when required for use.

(d) A copy of the placard "Protection Against Fire in Lamp Rooms" (M 156a), which has been supplied to all Stations, must be posted in a conspicuous position in every Lamp Room.

All Public Notices received referring to danger from Fire must be exhibited in a conspicuous position on Departmental Poster Space.

19. Fires Near Railway Buildings.—(a) Every precaution must be taken to avoid an outbreak of fire on any portion of the Railway premises or in any Railway building. A fire must not be lighted for any purpose whatever in the open air adjacent to Station buildings. If it be necessary to have a fire, it must be lighted in a fireplace if one is available, or if not, a fire pot must be placed in the safest position that can be found away from all buildings and any inflammable material. In every case the employe who lights the fire will be responsible for preventing it from spreading, owing to the action of the wind or otherwise. Fires in Departmental houses, or in or about Departmental premises must not be left unattended. Special care must be taken to see that ashes and embers, when removed from fireplaces or stoves, are completely extinguished.

(b) Places forming portion of, or close to, the main Station buildings, also wooden platforms at Stations, must be carefully inspected when the offices are being closed for the night, in order to detect smouldering cigarette ends or other material likely to cause Fire.

20. Lime, when consigned in lots of 2 tons or over, must not be loaded into wooden trucks, unless specially authorised. When covering any consignment of Lime, care must be taken to see that the Tarpaulins are absolutely waterproof, that a proper ridge is made, and that, where provided, ridge poles are used, and that the Tarpaulins are so arranged and secured that every portion of the contents of the truck is protected. If, while a truck of Lime (slacked or otherwise) is on hand, heavy rain appear, the truck should be placed under cover, if practicable, or isolated, and should be examined occasionally in order to detect and deal with any indications of Fire. The most effective method of dealing with bagged Lime that has fired in a truck is to remove the Tarpaulin, pull the burning bags away, and cut them open, and the loosened lime will smother the fire.

21. At Stations, Goods Sheds, or Goods Yards where trucks are used locally for the conveyance of rubbish to Rubbish Sidings, wooden trucks must not be used for such purpose, except by special permission of the

GENERAL INSTRUCTIONS.

Station-master or other responsible officer, who (if such permission be given) must see that proper precautions are taken to prevent the contents of the truck taking fire.

22. (a) Undergrowth or anything which might promote the possibility of Fire must not be allowed to accumulate in the vicinity of the buildings or platforms, and special care must be taken in the storage and disposal of inflammable articles; every effort must be made to keep the under portions of platforms and sheds in Railway Yards clear of all debris, and in the event of any debris accumulating the Road Foreman must be notified.

(b) Accumulations of debris from sawmill sites, firewood, or grain-stacking sites are not to be burned on Railway premises, except in the furnace of the boiler where a steam plant is used; in all other cases, debris must be removed away from the Railway premises by the lessee.

(c) Shavings and other material used as packing must not be left loose, but must be replaced in the cases and covered or removed.

23. Smoking is Strictly Prohibited in all Places where Danger of Fire Exists.

24. Live Cinders Discharged from Engines.—Owing to the large number of sleepers destroyed on Running Lines and in Sidings by live cinders discharged from engines on the Permanent Way, when fires are being cleaned out, Enginemmen are instructed to as far as possible discontinue the practice, and in cases where it cannot be avoided, water must be thrown on the live cinders in order to thoroughly extinguish the flames. Live ashes are not to be allowed to accumulate in Ash Pits, but must in all cases be damped with water before they are left. Station-masters and Officers-in-Charge are to see that these instructions are carried out.

25. Fires on Railway Premises.—Except as shown in clauses 26 and 27 hereof, whenever a Fire occurs on Railway premises, the District Officers, viz., Metropolitan or District Superintendent or Superintendent of Melbourne Yards, as the case may be, District Rolling Stock Superintendent and District Engineer, must without delay hold a joint enquiry to ascertain the cause and the circumstances in which it occurred; when necessary, a representative of the Chief Electrical Engineer or Chief Engineer of Signals and Telegraphs shall be nominated. On learning of the fire having taken place, the District Officers must promptly arrange among themselves in regard to holding such enquiry and not wait for the issue of instructions from the Head Office. A joint report should be submitted as soon as practicable.

26. Outbreaks of Fire in Cars, Vans, Trucks, Etc.—(a) All outbreaks of fire in Rolling Stock, however small, must be brought under notice by wire, care being taken to state what has been done with the vehicles affected; see item (k), page 10.

(b) Except where the cause of the fire is apparent, all cases of fire in rolling stock should be promptly investigated by a Board of Inquiry.

GENERAL INSTRUCTIONS.

(c) The Branch representatives on such Board of Inquiry will be as under:—

- | | |
|---|---------------------------|
| (i) ROLLING STOCK BRANCH— | REPRESENTATIVE. |
| In the Melbourne District and including
Melbourne to Kilmore, Kilmore East,
Sunbury, Bacehus Marsh, and Manor | } Car and Wagon Inspector |
| In the case of fire occurring in Outer
Districts not included in the above
when the vehicle affected is sent to
Melbourne for repairs | |
| In the case of fire occurring in Outer
District when the vehicle is not sent
through to Melbourne | } District Superintendent |
| | |
| (d) When the Car and Wagon Inspector is not available the Work-shops Manager, Jolimont, or the Chief Foreman, North Melbourne Car and Wagon Shops, will act in respect of the Rolling Stock Branch. | |
| (ii) WAY AND WORKS BRANCH— | REPRESENTATIVE. |
| All outbreaks | District Engineer. |
| (iii) TRANSPORTATION BRANCH— | |
| All outbreaks | District Superintendent. |

27. Arrangements should be also made for a representative of the Fire Brigades Board to attend the Inquiry in an advisory capacity only, in all cases of outbreaks of fire in the Metropolitan area.

RAILWAYS (BOARD OF DISCIPLINE) ACT.

1. Appeals to the Board of Discipline.—(a) It is prescribed under the provisions of Section 11, Sub-section 4, of the Railways Act No. 3227, 1922, that every appeal by employes against punishment imposed upon them by the Head of a Branch shall be lodged with the Secretary for Railways within **seven** days after the date of the decision which is appealed against. Every such appeal—

- (i.) must be in writing;
- (ii.) must specify the punishment appealed against, the officer by whom, and particulars of the charge in respect of which such punishment was imposed; and
- (iii.) be signed by the appellant with his personal signature.

(b) In every instance in which an employe may appeal against any punishment imposed upon him by the Head of his Branch, it will be necessary for such employe to lodge an intimation to that effect within **seven** days of the date on which the notification of the decision of the Head of the Branch has been delivered to him, **otherwise the appeal will be disallowed**, unless satisfactory proof be furnished that the non-delivery of the Notice of Appeal within the prescribed time was unavoidable.

The time lost in connection with an appeal will not be paid for if the Board consider the appeal to be **trivial**.

GENERAL INSTRUCTIONS.

Specimen Form of an Appeal to the Board of Discipline.

Station
 Date

To the Secretary for Railways.

Sir,

I beg to appeal to the Board of Discipline against the decision of the General Superintendent of Transportation that I be fined the sum of £3 for that I upon the 22nd day of April, 1923, without obtaining leave in that behalf did absent myself from duty between the hours of 2 and 6 o'clock p.m.

Signature
 Grade

2. (a) Appeals to the Commissioners.—An appeal lies to the Commissioners from any decision of the Board of Discipline whereby punishment involving dismissal, or reduction of rank, position, grade or pay is imposed.

Every such appeal—

- (a) must be in writing;
- (b) must specify the decision appealed against;
- (c) must be signed by the appellant with his personal signature; and
- (d) within seven days after the date on which the person bringing the appeal was notified of the decision appealed against, be delivered to the Secretary for Railways. See specimen form of appeal hereunder.

Specimen Form of an Appeal to the Commissioners.

Station
 Date

To the Secretary for Railways.

Sir,

I beg to appeal to the Commissioners against the decision of the Board of Discipline that I be dismissed the service for that I, upon the 20th day of April, 1923, while acting as the driver of the 2.50 p.m. down Bendigo train, did, without being properly authorised so to do, pass the Home Signal at the Clarkefield Railway Station while the said Signal was at the "Stop" position.

Signature

RAILWAY EMPLOYEES AS JURYMEN.

In order to prevent the inclusion of the names of permanent employees of the Railways Department in the lists of persons who may be called upon to act in the capacity of a jurymen, the Commissioners direct that in every case in which a Constable of Police or other official applies to a permanent employee for information in connection with the compilation of the Jury List, such employee shall notify the Constable or other official that he is in the Government Service, and therefore entitled to exemption from service as a Jurymen, in accordance with Section 18 of Act 2119, which prescribes that—

"All officers and employees of the Commissioners shall be exempt from serving as jurors under any law whatsoever," and request that his name be omitted from the list.

GENERAL INSTRUCTIONS.

As an additional safeguard, the Commissioners further direct that every permanent employe shall carefully scrutinise the preliminary Jury List, which is exhibited at Post Offices and Municipal Halls during the early portion of March each year, and, in the event of his name appearing thereon, that he immediately make application to the Special Court of Petty Sessions for its removal from the list on the ground that he is exempt from service as a Juryman in consequence of his employment under the Government.

If any employe be summoned he should hand the Subpoena to his superior officer so that application can be made to the Sheriff to excuse his attendance.

DUTIES WHICH MUST NOT BE ALLOTTED TO EMPLOYEES UNDER THE AGE OF 21 (Regulation 30).

1. In addition to the provisions of Regulation 30, which prescribe that no employe under 21 years of age shall be engaged in the position of Inspector, Driver, Guard, Signalman, Fog Signalman, Foreman, Ganger, Flagman, Signal Adjuster, Train-examiner, or Pilotman—no employe under 21 years of age shall be engaged in any of the following duties:—

Working Signals or *Points,	Covering or lashing vehicles.
Working Block, Tablet, or Electric Staff Instruments.	Pilotman's Duties.
Dealing with Train Staffs or Tablets	Blasting (see page 500).

* Any employe who has reached the age of 20 years, and who has had at least two years' railway experience, may be allotted shunting duties, provided the Station-master or Officer in charge is satisfied that he is competent; but employes under 20 years of age must not, under any circumstances, perform shunting duties.

2. When, owing to emergency or otherwise, it becomes necessary to utilise a Shed Porter, Labourer, or any employe other than a Shunter to perform shunting duties, Station-masters should, as far as practicable, select a man who has had previous experience in shunting; but in any case the Station-master will be held responsible for satisfying himself that every employe, before being placed in charge of shunting operations, or to assist in such operations (except in the capacity of a learner), has a sufficient knowledge of the duties pertaining to the position.

3. Employes are prohibited from working any Block, Lock and Block, Electric Train Staff or Electric Train Tablet instrument, or any Interlocking Frame, unless certified as competent by the Block and Signal Inspector.

TRAINING OF EMPLOYEES.

1. Responsible Officers are expected to see that Junior and other employes under their control are afforded opportunities of acquiring such experience in practical Railway working as will increase their usefulness to the Department, and enable them to qualify for higher positions in the service. Supervising officers will, however, be held responsible for seeing that such employes are competent to perform the duties entrusted to them. See preceding Instructions respecting Regulation 30.

GENERAL INSTRUCTIONS.

2. Pamphlets containing questions on Fixed Signals, use of Detonators, Hand Signals, and Fog Signalling, and Systems of Train Signalling, etc., with references to the Rules, Regulations, or Instructions in which answers shall be found, are available for employes studying the respective subjects, and Station-masters must see that such employes under their supervision are supplied with a copy of the pamphlet required.

PERIODICAL EXAMINATION OF EMPLOYES IN THE RULES, REGULATIONS, AND OTHER INSTRUCTIONS.

From time to time every employe concerned will be examined by a duly appointed Examining Officer regarding his acquaintance with the Rules, Regulations and other Instructions. Employes must be prepared for re-examination at any time.

The examination, which is an oral one, will be mainly on the following subjects:—

Rolling Stock Branch—

1. Engine-drivers and acting Engine-drivers, on their acquaintance with:—

- (a) The safe working of trains under all conditions.
- (b) Fixed, Hand, and Detonating Signals.
- (c) Signalling in Foggy Weather.
- (d) The Special Whistle Code.
- (e) The Mechanism and Working of the Locomotive, the Automatic Brake and Inter-communication.

2. Firemen and Acting Firemen on their acquaintance with:—

- (a) The safe working of trains under all conditions.
- (b) Fixed, Hand, and Detonating Signals.
- (c) Signalling in Foggy Weather.
- (d) The Mechanism and Working of the Locomotive and the Automatic Brake.

3. Drivers, and Acting Drivers, of Electric trains, on their acquaintance with:—

- (a) The safe working of trains under all conditions.
- (b) Fixed, Hand, and Detonating Signals.
- (c) Signalling in Foggy Weather.
- (d) The Special Whistle Code.
- (e) The Mechanism and Working of Electric Trains and the Automatic Brake.
- (f) Directions to be observed in cases of electric shock and electrical fires,

4. Drivers of Rail Motor trains, on their acquaintance with:—

- (a) The safe working of trains under all conditions.
- (b) Fixed, Hand, and Detonating Signals.
- (c) Signalling in Foggy Weather.
- (d) The Special Whistle Code.
- (e) The Mechanism and Working of Rail Motor Trains.
- (f) Directions to be observed in cases of electric shock and electrical fires.

GENERAL INSTRUCTIONS.**Transportation Branch—**

1. Station-masters and persons in charge of Stations, on their acquaintance with:—

- (a) The safe working of trains under the conditions which apply to the particular system or systems of train signalling; and overhead sectioning arrangements that are in force at their respective Stations.
- (b) Fixed, Hand, and Detonating Signals.
- (c) Foggy Weather instructions.
- (d) In the Electrified Area, directions to be observed in cases of electric shock and electrical fires.
- (e) The "First Aid" section of Ambulance Instructions.

2. Guards and Acting Guards on their acquaintance with:—

- (a) The safe working of trains under all conditions.
- (b) Fixed, Hand, and Detonating Signals.
- (c) Signalling in Foggy Weather.
- (d) The Special Whistle Code.
- (e) The conveyance of Explosives.
- (f) The Automatic Brake and Inter-communication by means of such Brake.
- (g) In the Electrified Area, directions to be observed in cases of electric shock and electrical fires.
- (h) The "First Aid" section of Ambulance Instructions.

Note.—Guards of Electric Trains must possess a general knowledge of the sectioning, etc., of the overhead equipment, and Guards and Shunters, whose duties require it, must be qualified to perform the duties of Motor-man in case of emergency.

3. Signalmen, and other employees who act as Signalmen, on their acquaintance with:—

- (a) The safe working of trains under all the conditions which apply to the particular system or systems of train signalling; and overhead sectioning arrangements that are in force at their respective Signal-boxes.
- (b) Fixed, Hand, and Detonating Signals.
- (c) Signalling in Foggy Weather.
- (d) The Special Whistle Code.
- (e) In the Electrified Area, directions to be observed in cases of electric shock and electrical fires.

4. At any Station where Explosives or Dangerous Goods are dealt with, every employe in the Transportation Branch at such Station is liable to be examined at any time as to his acquaintance with the Rules and Instructions relating to the handling and conveyance of Explosives and Dangerous Goods.

GENERAL INSTRUCTIONS.

5. Electric Street Railways.—Motormen, Conductors and Signalmen on their acquaintance with:—

- (a) The safe working of Street Railway Cars under all conditions.
- (b) Directions to be observed in cases of electric shock and electrical fires.

Way and Works Branch—

Foremen, Gangers, and other employes who are required to deal with out-door safety arrangements, on their acquaintance with:—

- (a) Fixed, Hand, Detonating and Special Permanent Way Signals.
- (b) Signalling in Foggy Weather.
- (c) The protection of the Line, Trains, Trolleys, etc., and safety of men on the tracks.
- (d) Over-head wires; track circuits; safety of workmen and others in proximity of live wires; electrical rail bonds, and precautions against interruption of traffic; reporting of over-head failures and protection of employes engaged in over-head repairs.
- (e) In the Electrified Area, directions to be observed in cases of electric shock and electrical fires.

6. General.—(a) Every employe in the Way and Works, Electrical Engineering, and Signal and Telegraph Branches, required to perform the duties of Flagman or Look-out man, also the Foreman, Ganger, Leading-hand, or other official under whose direction such employe is to work, must be examined—by an officer appointed by the Head of the Branch—in Regulations 271 and 296, and the Supplementary Instructions contained on pages 110-111, also sub-clause (b) of clause 10, page 402, of this book, and certified to as competent, prior to being permitted to carry out the duties mentioned, and (in the Electrified Area) directions to be observed in cases of electric shock and electrical fires.

(b) When arrangements are made for the examination of an employe in any system, it will be necessary for the employe when reporting himself for the re-examination to have in his possession the original certificate issued him.

(c) Should the original examination concerning the system in question have been recorded by an endorsement on a certificate issued for some other system, the employe must produce that certificate.

(d) When directing an employe to report for re-examination in any system, Officers-in-Charge are enjoined to remind the employe of this instruction; but this will not relieve the employe of responsibility in the matter.

(e) "First Aid" Examinations.—At country centres where classes are held, employes must attend such classes, and in the Metropolitan Area they must attend the Railway Institute. At centres where classes are not held, the employes will be issued a First Aid Book, a bandage, and a summary of the lectures (as given at the classes) on application to the Ambulance Officer. When an employe is ready for examination he must notify the Ambulance Officer, and the latter will make arrangements to examine him.

GENERAL INSTRUCTIONS.

TRICYCLES.

Tricycles are located at the undermentioned Stations, either for use in emergencies or in connection with the supervision of neighbouring Stations:—

Avoca	Curyo	Macorna	Rupanyup
Annuello (Motor)	Daylesford	Manangatang (M't'r)	
Balranald (Motor)	Diapur	Manor	Seymour
Bacchus Marsh	Donald	Moe (Hernes Oak)	Sheephills
Baxter		Murchison East	Stratford
Beeac	Ebden	Moulamein	Swan Hill
Ben Nevis	Everton	(Motor)	
Beulah		Nandaly (Motor)	Thorpdale (T.S.M.)
Birchip	Gheringhap	Natimuk	Tooborac
Bonnie Doon	Glen Forbes	Netherby	Toora
Brooklyn "A"	Gunbower (Mtr.)	Newtown	Trentham
Bright		Nhill	
Buckrabanyule	Inglewood		Underbool
Bunnaloo (Motor)		Piangil	Wakool (Motor)
Castlemaine "A"	Kerang	Pyramid	Wallan
Signal-box	Kiata	Raywood	Wedderburn Jun
Cathkin	Lal Lal	Ringwood (Bi-	Werribee
Cope Cope	Langi Logan	cycle)	Woodleigh
		Rokewood	

Uniform Time, Etc.

UNIFORM TIME TO BE KEPT AT ALL STATIONS, AND BY GUARDS AND DRIVERS.—(Regulation 44).

1. (a) Melbourne time must be observed at all Stations, and Clocks and Watches must be regulated accordingly. Melbourne Observatory time will be transmitted daily from Melbourne at 10 a.m. to all Stations at which a telegraph instrument is fixed.

(b) TELEGRAPHING TIME SIGNAL.—Stations in circuit with Melbourne will receive the time signal direct from that Station, and the Telegraph Operators, or other persons in charge of the instruments at those Stations, will, simultaneously with the receipt of the signal from Melbourne, signal the Stations with which they are in circuit, and so on, till every Station having telegraph communication is reached at the same time.

(c) TELEPHONING "TIME" SIGNAL.—The "Time" signal is transmitted by telephone at 10 a.m. daily from Spencer-street Telegraph Office and other Depots to Stations in circuit on Telephone Lines; at these Stations conversation on the telephone must cease, and all "Receivers" be replaced on hooks at 9.58 a.m. Immediately prior to the commencement of the sending of the signal at 9.58 a.m., the sending Officer at the Depot Station shall "listen in" on the telephone, and instruct any Stations conversing to replace "Receivers" on hooks. An Officer must be in attendance at every telephone Station at 9.58 a.m. to receive the "Time" signal, which will be transmitted by the sending Station giving short intermittent rings till 10 a.m., when one long continuous ring will be given.

(d) At Stations where there are Refreshment Rooms, the Station-master must daily compare the time kept by Clocks in the Refreshment Rooms with that shown by the Station Clock, and any adjustment necessary must be made at once.

The Clocks at out-lying Signal-boxes must be set by the Clock of the nearest adjoining Station, and Signalmen are responsible for comparing their Clocks with that at the Station and adjoining Signal-boxes, as soon as practicable after 10 a.m. daily.

(e) Drivers, Guards and Acting Guards in charge of trains and in some cases Leading Shunters, are supplied with watches, which they must always carry with them when on duty, and produce when required.

Every Driver and Guard must set his Watch daily by the Clock at the first Station having telegraphic communication at which his train stops or starts from after 10 a.m., except where a Station Clock is electrically controlled, in which case each Driver and Guard must adjust his Watch with such Clock as soon as practicable after he commences duty.

The Guard must give the time to all Stations having no telegraph to which his train forms the first available communication. The person in charge of the Station is responsible for seeing that this is done.

2. (a) When erecting a Clock, a solid dry wall, free from vibration, should, if possible, be chosen. The Clock should be hung on a screw or strong nail, the head of which should point upward at an angle of approximately 45 degrees; if the wall be of brick, a wooden plug should be driven firmly in, and a screw inserted at the required angle.

UNIFORM TIME, ETC.

(b) When the Clock is in position, the pendulum should be carefully placed on the brass bracket at the back of the works, the steel pin connected with the clock should work in the slot in the pendulum, and care should be taken to avoid bending the brass wire carrying the steel pin, as any permanent deflection of it will cause bad time-keeping.

(c) The top of the ball of the pendulum should be in line with a mark on the pendulum rod before it is placed in the Clock; correct time should be obtained at that mark. The pendulum needs only a very slight swing to start the Clock; a violent swing may produce a permanent deflection in pendulum connections and adversely affect time-keeping of the clock.

(d) The Clock must be wound slowly and smoothly, and if, when starting it, the beats be uneven, it must be moved slightly until it is plumb and beating evenly; when it is seen that the Clock is working satisfactorily, a pencil line should be drawn on the wall on each side of the Clock case as a guide in the event of the Clock being accidentally moved when it is being wound.

(e) To regulate the Clock, the nut at the bottom of the pendulum should be screwed upward to make the Clock go faster, and screwed downward to make it go slower. When setting the Clock to time always turn the minute hand; do not touch the hour hand, as any force exercised on this hand may damage the clock-gear.

(f) The rims holding the glass, and also the doors of the Clock, must, ordinarily, be kept secured in the closed position; employees are not allowed to write or make any mark on the Clock dial.

(g) If, after having been fixed and adjusted as prescribed in the foregoing instructions, the Clock should fail to keep correct time, the circumstances must be promptly reported by the most expeditious means to the Chief Electrical Engineer and District Superintendent, or District Engineer, according to the Branch concerned.

3. (a) The winding (and, as far as possible, the regulating) of all the Clocks at the Station must be done by or under the personal direction of the Station-master, whose duty it will be to keep the keys, and see that the Clocks are wound either daily or weekly, as may be required, and that the correct Melbourne Observatory time is shown; where it is not practicable for the Station-master to personally attend to the winding and regulating of Clocks, he must appoint an adult member of his staff to perform that duty, which must always be performed by the same person.

(b) A set time for winding the Clocks must be determined by the Station-master or Officer in charge, who must see that the duty is performed with due regularity.

(c) The staff at certain Stations, particularly in the Suburban area, must pay proper attention to the time-keeping of Station Clocks. Attention is directed to the fact that the electrically controlled clips only operate on the minute hand when it comes within reach of the clips, which is impossible when a discrepancy of more than a minute or a minute and a half exists; a check of Station Clocks must therefore be made daily at a time when the minute hand is directly over the centre of the figure 12, and if the clips fail to correct the error, the necessary adjustment must be made carefully by hand; failure of the regulating clips must be promptly reported.

4. (a) All matters relating to the mechanism of Clocks and Watches will be dealt with by the Chief Electrical Engineer.

(b) Clocks and Watches requiring repairs must be sent to the Officer-in-charge, Clock Repair Shops, Spencer-street, who should also be advised of the character of the defect, if such be known; advice of despatch must be, also, forwarded to the Chief Electrical Engineer.

(c) When forwarding a Clock to the Repair Shops the pendulum must be removed and secured to a piece of wood to prevent damage during transit; and to ensure its being delivered with the Clock, the pendulum must be packed and placed inside the Clock case. Due care must be taken to avoid damaging the pendulum rod, and the name of the forwarding Station must be clearly shown.

(d) If from any cause a Departmental Watch becomes unreliable, the employe in possession of it must at once report the circumstances to his superior officer. When a Departmental Watch is forwarded for repair a memorandum must be sent stating the reasons for forwarding, also the full name and title of the employe to whom the watch was issued, and the name of the Station.

(e) The mechanism of Departmental Clocks and Watches must not be interfered with by unauthorised persons.

SIGNALS.

COLOUR OF SEMAPHORE ARMS.

The front of Semaphore Arms is painted Red with a white "bar," and the back of the Arms, White with a black "bar."

POSITION AND VIEW OF FIXED SIGNALS.

1. Every Inspector, Station-master, Driver, Guard, Signalman or Shunter should bring under the notice of his superior officer any case in which he considers it reasonably practicable to improve the position of any Fixed Signal, or any case where the view of a Signal is defective owing to back-ground, or where it is interfered with by Station buildings, trees, telegraph poles, etc. If the lights of a Signal be affected by Arc-lights or by the reflection of other lights in the vicinity or if other lights not necessarily used for Railway purposes are likely to conflict with Signals, the matter should be also promptly brought under notice.

2. Any case of defective Signals or Signal lights, or any case in which it is considered that the focus of any Signal light might be improved, must be promptly reported.

AUTOMATIC SIGNALS AT OR NEAR LEVEL CROSSINGS.—

(Regulation 74.)

Where an Automatic Signal is fixed at or near a Level Crossing, the position of the Gates may, or may not, affect the working of the Signal, when, therefore, in accordance with Regulation 74 a Driver passes an Automatic Signal at the Stop position and finds the Level Crossing gates across the Line, he must not assume the position of the Gates to have been the cause of the Signal being held at the Stop position.

Whatever may appear to be the cause of an Automatic Signal being held at the Stop position, a Driver must not in any way relax his vigilance, and even though the cause of the Signal being held at Stop may be apparent, no employe has any authority to waive or modify any phase of the Regulation; full responsibility rests on the Driver, who after passing an Automatic Signal at the Stop position must, without exception, exercise the utmost caution throughout the whole of the Section governed by the Signal.

POINT OF TRANSITION IN SYSTEM OF SIGNALS.

(Regulation 59.)

At any point where the system of Signalling changes from Three-position to Two-position Signals, and the first Two-position Signal is a Distant Signal, the last Three-position Signal will (providing the Section ahead is clear) display the Proceed Signal although the Home Signal next in advance is at the Stop position. It must, however, be understood that in such cases, the Signal next in advance is a Distant Signal, and Drivers must be prepared to act as prescribed in Regulation 40 in the event of the Distant Signal being at Danger.

TWO-POSITION AUTOMATIC SIGNALS.

(Regulation 47, Clause (d).)

Two-position Automatic Signals are in use where shown hereunder:—

During Special Passenger traffic on Up and Down Lines between Newmarket Junction and Show Grounds, or Flemington Race-course.

TRACK BLOCK SYSTEM OF TRAIN SIGNALLING ON DOUBLE LINES.

1. (a) On Lines where the Track Block System is in force, the Starting Signal or other Signal controlling the entrance to the Block Section is governed by Track Circuit, so that the Signal is electrically secured at the Stop position, if an engine, train, or portion of a train is in the Section, or until the whole of the train has arrived at the Signal-box next in advance.

(b) See clause 4 of instructions on pages 267-268, respecting the working of Rail Motor Inspection Cars where Track Block Signalling is in force.

2. The object of this System of Train Signalling is to prevent more than one train being in the Section between two Block Signal-boxes on the same Line at the same time. This is accomplished by a Signalman not being able to lower his Starting Signal (or other Signal) controlling the entrance to the Block Section ahead, until that Signal has been electrically released by the whole of the train having passed out of the Section.

3. Where the Track Block System is in operation, the employees engaged in signalling duties or working of trains are not relieved of responsibility for seeing that the Regulations and other instructions respecting the protection of trains, trolleys and other obstructions, or respecting the safe and proper working of the Signals, Trains and Lines, are properly carried out.

4. (a) Any of the following circumstances will prevent the Signal or Signals controlling the entrance to the Section from being placed to the Proceed position:—

(i) An engine, train or vehicle on the Section; see sub-clause (b), clause 1.

(ii) Any metallic or other conducting substance so placed as to form a connection between the rails.

(iii) A broken or displaced rail.

(iv) Any wire bond becoming detached or broken.

(b) If any defect hindering, or likely to hinder, the proper working of the Electrically Controlled Signals is noticed by any employee, steps must be at once taken to communicate with the Signalman at the nearest Signal-box, in order that the defect may be remedied without delay.

5. An Indicator is provided on the shelf at the back of the controlled lever, for the purpose of enabling the Signalman to ascertain whether the controlled lever has been released. The Signalman must not attempt to operate the lever, until a proper indication is obtained, otherwise the mechanism may be damaged.

SIGNALS.

6. The following instructions must be observed should any irregularity occur in connection with the working of any Signal that controls the entrance of trains into a Track Block Section:—

- (a) In the event of the Signal failing to go to the Proceed position when the lever is pulled over, the Signalman, before allowing a train to proceed, must (unless he see that the Section is clear) first confer with the Signalman at the Box in advance, and inform him of the circumstances. If it be then ascertained that the Line is obstructed, arrangements must be made for the obstruction to be cleared as promptly as possible.
- (b) If it be found that the Signal is defective, a competent employe must be placed at the defective Signal with Hand Signals and (where necessary) Detonators to act under the instructions of the Signalman, as directed in Regulation 95. Where it is not reasonably practicable to appoint a Hand-signalman in time to avoid delay to trains, the Driver may pass the Starting or Advanced Starting Signal upon being directed to do so by the Signalman, but a Hand-signalman must be appointed as soon as possible.
- (c) No train must be allowed to pass a Signal-box into that Section without having been previously brought to a stand, and the Driver and Guard or Guards advised of the circumstance. The Engine-driver must then be instructed to proceed cautiously, in order to stop short of any obstruction there may be on the Line. Where there are no Speaking Instruments, or when the Speaking Instruments have failed, the Driver of the first train thus warned must be instructed to stop at the Signal-box in advance, and inform the Signalman of the failure.

No train must be allowed to follow another train until the ordinary running time of the Section has elapsed, unless the Signalman see that the Section ahead is clear, and when a Tunnel intervenes in a Block Section, not within ten minutes, unless the Signalman can satisfy himself the Section is clear; in both cases the Driver must be stopped and cautioned as above directed.

Steps must be immediately taken to have the Apparatus put into working order.

7. As soon as it is reasonably practicable after coming on duty the Signalman must examine the Fixed Signals that work in conjunction with a Track Block Section, and satisfy himself that they work and show properly. He must—

- (i.) Watch the Signal so as to ascertain that it obeys the lever, and also that it goes fully to the Stop position when the train passes into the Section.
- (ii.) Test the Signal Lever immediately the Signal has been operated by the train, and before the train has passed off the Section; if whilst the Section is occupied, he finds that the Signal is not properly replaced to and secured at Danger, he must act as provided in sub-clauses (b) and (c) of the preceding clause of this instruction.

8. The Track Block System of Train Signalling is in force on the Sections shown hereunder:—

On all Down Lines between No. 1 Box, Spencer-street and Franklin-street Junction.

On Up Goods Line between Viaduct Junction and Dudley-street Box.

On Down Goods Line between Weighbridge Junction and Kensington.

On Up and Down Lines between Clifton Hill "B" and Northcote Loop Junction.

PERMANENT WAY RELAYING OR REPAIRING OPERATIONS.

(Regulation 274.)

1. (a) When a reduction of speed is necessary in connection with any repairing operation to the Permanent Way, or for any other cause, the Ganger, or other employe in charge of the operation, in addition to complying with Regulation 274 (clauses "a" and "b") must also arrange for the Permanent Way Signal, as described in sub-clause (b) hereof, to be fixed on the left-hand side of the Line at the point where Normal Speed can be resumed not less than 800 yards ahead of the portion of the track effected.

(b) The Permanent Way Signal referred to in this instruction consists of a Disc 15in. (fifteen inches) in diameter painted Green on one side and White on the other; the Green side is to face the train that is required to resume normal speed; the Disc is fixed on a sharp pointed pole, which can readily be firmly fixed in position at least 5 feet from the nearest rail.

2. (a) In the event of no Permanent Way Signal being available, the Ganger, or other employe in charge of the work, must arrange for a competent employe to exhibit a Green Hand Signal held steadily in the hand at the point specified above for the Permanent Way Signal. The Flagman must be properly instructed in his duties, and, on a Double Line, must exhibit a signal in such a manner that it shall not conflict with any Hand Signal being exhibited for a train approaching in the opposite direction.

3. Train crews will understand that (after receiving a Green Hand Signal waved slowly from side to side indicating a reduction of speed as laid down in Regulation 274), the Permanent Way Signal, or the exhibition of a Green Hand Signal held steadily in the hand, will indicate that normal speed may again be resumed.

4. The Permanent Way Signal or the Green Hand Signal held steadily in the hand must not be used in the vicinity of Stations or Junctions where they would be liable to conflict with Fixed Signals, or Hand Signals exhibited for other signalling purposes.

5. The foregoing instructions will not apply where the Special Permanent Way Warning and Caution Signals are in use. See following instructions

INSTRUCTIONS FOR THE USE OF SPECIAL PERMANENT-WAY WARNING AND CAUTION SIGNALS.—(Regulation 274.)

(The Warning and Caution Signals must not be used at Stations, or Junctions, or at any other place where they would be liable to conflict with the Fixed Signals, nor in any position where misunderstanding is likely to arise as to the Line to which the Signals apply.)

1. (a) The following Instructions for the use of Special Permanent-way Warning and Caution Signals must be observed during repairs to bridges or culverts, or re-sleepering, or re-laying of the Permanent-way, or other works affecting the safety of any Running Line, which render it necessary for trains to travel at a reduced rate of speed for a lengthened period.

(b) These Signals are of two designs, and are constructed of posts with Boards and Discs for Day Signals, and Lamps for Night Signals.

2. (a) The Warning Signal, for use by day, is a fish-tailed Board, painted Yellow in front, with the word "WARNING" shown thereon in Red letters; the back of the board is painted Green. Two lamps, for use by night, are fixed, one on each side of the post, about a foot below the board; each Lamp, when lighted, will exhibit a Purple light in front, and a Green or a White back-light.

(b) The Caution Signal, for use by day, is a Disc, painted Yellow in front, with the word "CAUTION" shown thereon in Red letters; the back of the Disc is painted Green. A Lamp, for use by night, is fixed about a foot below the Disc, and, when lighted, will show a Purple or Green front-light, and a White back-light, or, according to its situation, no back-light.

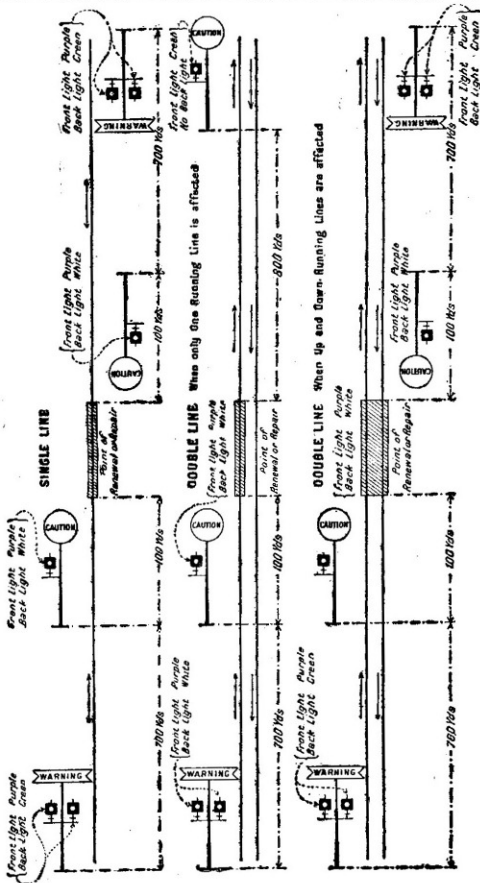
3. The Warning and Caution Signals must be placed in the respective positions shown in the diagram on page 109, and the lights exhibited at night must be in accordance with the diagram.

4. Drivers must keep a good look-out when travelling in the locality in which Special Permanent-way Warning and Caution Signals are exhibited, and, when approaching such Signals, must have their trains under perfect control, and not pass over any portion of the Line protected by such Signals, at a greater rate of speed than that laid down in the Weekly or other Notice, and Drivers must not increase the rate of speed until their engines have passed the Green Signal, at 800 yards in advance of the point of repair or renewal.

5. Before the Warning and Caution Signals are brought into use, at least four days' notice must be given to the Staff in the Weekly or other Notice. Such Notice should indicate the location of the Signals and the places to which they refer. The Road Foreman must arrange for a competent person to be appointed, whose duty it will be to see that the Warning and Caution Signals are placed in their proper positions, that the lamps are lighted as soon as it commences to be dusk, and that they burn brightly and show properly.

6. When due to fog or other cause a good and distant view of the Warning and Caution Signals cannot be obtained by Drivers, these Signals must not be relied on, but, in addition, the operations must be protected by Hand-signalmen, in accordance with the Regulations.

DIAGRAM showing positions of Special Permanent-way Warning and Caution Signals exhibited by the Way and Works Branch during Renewals or Repairs to any Running Line



SIGNALLING IN CONNECTION WITH REPAIRS TO OVERHEAD EQUIPMENT.

1. During the time any repairs on the overhead equipment are being carried out, the precautions laid down in Regulation 296 must be observed by the employees concerned, and the Foreman or other person in charge of the work must carry out the provisions prescribed in the Regulation for their safety.

2. Before a trolley conveying material is placed upon the Line, or before any gear which would cause an obstruction to a train, is used on or in the vicinity of the Line, the Foreman or other person in charge of the work must see that the provisions of Regulation 271 are strictly observed.

3. **Special Overhead-repair Signals.**—(a) When it becomes necessary, in consequence of repairs, to lower the Pantograph at certain points, the Special Overhead-repair Signals must be exhibited. The Overhead Superintendent, or his representative, must notify the Station-master or other responsible Transportation Officer-in-Charge at what points these Signals are required, and must satisfy himself that the Special Signals are fixed according to requirements; where there is no Transportation Officer, the Overhead Superintendent or his representative must fix these Signals as required.

(b) The following instructions for the use of Special Overhead-repair Signals must be observed during repairs to any section of the overhead equipment, if such work renders it necessary that the Pantograph of Electric Trains is to be lowered when passing the portion undergoing repair:—

- (i.) The Foreman or other person in charge of repairs must send a man back at least 800 yards, or as much further as the circumstances of the case render necessary, who must fix two Detonators on one rail of the Line for which he is signalling, and exhibit a Red Signal at reasonable distance from the Detonator to stop any approaching Electric train. On the train being stopped, the Hand-signalman must verbally inform the Motorman of the place at which the repairs are being carried out, and of the structures between which it will be necessary for the Motorman to have the Pantograph down.
- (ii.) If the man in going back should arrive at a Signal-box, or if the work is near to a Signal-box, and within the protection of the Home Signal of such Box, he need not proceed beyond the Box, but he must advise the Signalman in charge of it of the necessity for slackening the speed of any train running in the direction of the repairs, and when the Fixed Signals are lowered, the Hand-signalman must himself exhibit his Hand Danger Signal, so as to be plainly visible to the Driver of the approaching train, the Driver of which must be verbally instructed as above directed; but the Hand-signalman need not place the Detonators on the rail unless it is necessary to do so to attract the attention of the Driver.
- (iii.) In such cases the Signalman must keep his Signals at the Stop position until the speed of the train has been sufficiently reduced, when he must, if the Rules and Regula-

tions have been complied with, exhibit the Signals to allow the train to pass.

If the man in going back should arrive at a Station, he must exhibit his Danger Signal, and instruct the Driver, at the end of the Station nearest to the repairing operations, but unless there is a Signal-box at the Station, the Detonators must be placed at least 200 yards outside the Station in the direction of the approaching train.

- (iv.) A special Signal, consisting of the letter "L," i.e.—Lower Pantograph Signal—must be displayed on the left-hand structure at which the Motorman will be required to lower the Pantograph; and a Signal, consisting of the letter "R," i.e.—Raise Pantograph Signal—will be displayed at a point in advance, at which the Pantograph may be again raised. These letters will be displayed in Black on a White ground by day, and illuminated by night.

The Foreman or other person in charge of the repairs will be responsible for seeing that these Signals are fixed according to the requirements, and that the Hand-signalman understands his duty.

- (v.) Motormen must keep a good look-out for these Signals, and immediately before the train passes the first Signal—"L"—must lower the Pantograph, which must not be again raised until the whole of the train has passed the point where the Raise Pantograph Signal is displayed.

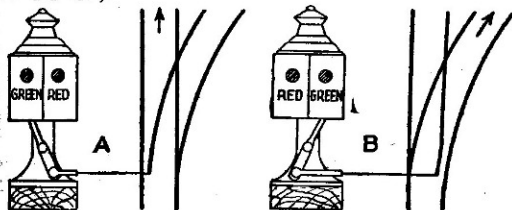
POINT INDICATORS.

(Regulation 69, Clause (d)).

1. There are three types of Point Indicators, viz.:—

- (i.) The original type, described below under clause 2.
- (ii.) The "Arrow" type, described under clause 3.
- (iii.) Special type for Plunger Locked Hand Points described in clause 4.

2. ORIGINAL TYPE.—(a) Where this type of Point Indicator is provided, as per diagrams below, it is connected to, and works with, the Points to which it applies. Except where the Indicator is attached to Catch Points or Deraill Blocks, it has a face of two colours — Red and Green by day, with corresponding coloured lights by night (see diagrams "A" and "B").



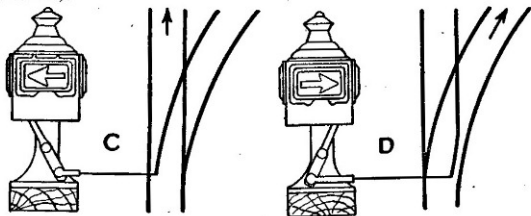
SIGNALS.

(b) When approaching the Points, the Green side of the Indicator is the one in the direction for which the Points are set, and Drivers must see that the Green Indicator is exhibited on the proper side for the Line required before passing over the Points.

(c) When the Indicator works in conjunction with Catch Points or with a Deraill Block, it shows a face of one colour only, viz., Red by day, and two Red Lights by night, and a train or engine must not pass an Indicator showing in this position.

(d) When the Catch Points are set in position for any movement over them, the Indicator shows a Green face by day and two Green Lights by night.

3. ARROW TYPE.—(a) Where this type of Point Indicator is provided it is connected to, and works with, the Points or Deraill to which it applies; when attached to Points other than Catch Points the Indication, both by day and by night, is a White Arrow (see diagrams "C" and "D" hereunder).

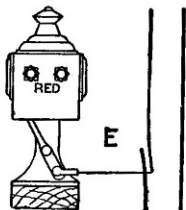


(b) When approaching the Points the Arrow points in the direction for which the Points are set, and Drivers must see that the Arrow is pointing to the proper side for the Line required before passing over the Points.

(c) Where the Indicator is attached to Catch Points or Derails it displays, by day, a rectangular Red target, and, by night, two Red Lights when the Catch Points or Deraill are set for derailment; a train or engine must not pass the Indicator showing in this position (see diagram "E").

(d) When the Catch Points or Deraill are set in position for any movement over them, the Indicator shows a White Arrow pointing to the side opposite to that on which a vehicle would be derailed if the Catch Points or Deraill were set for derailment.

4. TYPE IN USE AT PLUNGER LOCKED POINTS.—This Indicator consists of a Disc which is connected to and operates in conjunction with the plunger. The aspect of the Disc when the plunger is "IN" is a "Green enamelled face" for facing movements, and a "White enamelled face" for trailing movements. When the plunger is withdrawn, the Disc will be automatically turned off.



SIGNALS.**STATIONS AND SIDINGS WHERE FIXED SIGNALS ARE NOT PROVIDED.**

1. When approaching Stations or Sidings where Fixed Signals are not provided, Trainmen must keep a good look-out for any Hand Signals that may be exhibited.

For list of Stations where Fixed Signals are provided, see Book of Signals.

2. In the case of trains booked to call when required, a Red Flag or a Red Light must be exhibited to intimate to the Driver that his train is required to stop.

3. (a) On Double Lines, worked under the Block Telegraph or Lock and Block System, no train is allowed to perform shunting work at any Station not equipped with Fixed Signals when the Block Instruments are out of order, unless a competent man accompanies it to perform the shunting whilst the Guard protects his train.

(b) Unless specially authorised by the General Superintendent of Transportation, no train must be allowed to perform shunting work during foggy weather at any Station not equipped with Fixed Signals, except on a Single Line when the Driver is in possession of the Train Staff, or Tablet.

See page 217 for list of these places at which trains are not permitted to shunt between sunset and sunrise.

4. (a) At Stations on Double Lines, and (when a train is travelling on a Train Staff Ticket) at Stations on Single Lines, the Guard must take steps to protect his train, in accordance with the Rules and Regulations, should it, from whatever cause, remain stationary for an unusual length of time. For instructions in respect of "Use of Master Keys" and list of Lines where provided, see pages 554-558 of this book.

(b) On Single Lines worked under the Train Staff and Ticket System, should a train be travelling on a Staff Ticket, the Guard must, when it arrives at an Intermediate Station where there are no Fixed Signals and there is a Caretaker or person in charge, inform the Caretaker or person in charge that his train is travelling on Ticket, and the Caretaker or person in charge must, as soon as the collection of tickets and other urgent duties in connection with the train have been attended to, protect the train in the rear by exhibiting a Red Hand Signal, and continue to do so for 10 minutes after its departure. The Guard must see that no undue delay occurs in exhibiting the Red Hand Signal in the proper place, which the District Superintendent will determine.

5. (a) **Flag Stations.**—At Flag Stations a Red Flag for use by day, and, where necessary, a Lamp showing a Red Light when lighted, for use by night, are provided. A Notice Board intimates to intending passengers that they will require to exhibit the Red Flag by day, and to light the Lamp by night to stop a train, and the Driver must accept such Signals. Before the train leaves, the Guard, if it be daylight, must

SIGNALS.

replace the Flag in its fixture, or, if it be night-time, must turn off the Red Light. The Guard of the last stopping Passenger or Mixed train at night must extinguish the Platform Lamp or Lamps. See pages 205-208 for instructions regarding the working of No-one-in-charge Stations.

(b) For the purpose of indicating the location of the Station to the Driver at night, a White Light must, except where instructions are issued to the contrary, be exhibited in a prominent position on the platform at the Stations (open for Passenger traffic) at which Fixed Signals are not provided, and also at any Station where Fixed Signals are provided, but not in use (see Regulation 91), when trains which run during the hours between sunset and sunrise are booked to stop, or are required to work at any such Stations.

Working of Points and Signals, Etc.

SUPERVISION OF SIGNALMEN.

1. The Signalmen at every Signal-box, other than those controlled by the Superintendent of Melbourne Yards, are under the orders of the Station-master, through whom all instructions, reports, and correspondence must be sent.

2. (a) Each Signalman at a Box at or within 500 yards of a Station must, before commencing duty, report himself to the Station-master, or person in charge, unless special exemption from this duty has been given to him, and the Station-master or person in charge is required to report each instance of disregard to this instruction, and, further, to visit the Box immediately after an omission has occurred and satisfy himself that the Signalman is on duty.

(b) Should the Signalman or Signalmen commence duty earlier than the Station-master, or person in charge, the latter must visit the Box or Boxes as soon after he commences duty as he possibly can. Station-masters must visit, not less than once a day, Signal-boxes situate within half a mile of the Station, unless specially exempted from this duty. He must initial the Train Register Book on each occasion, inserting the time and date.

(c) At some Stations, where Block Telegraph or Lock and Block instruments are not in use, but Level Crossing Gates and Signals are controlled from a Signal-box, it will be the duty of the Station-master to inspect the Train Register Book at the end of each week. He must check the work of each day with the Time Tables and special notices to see whether the particulars in respect of the arrival, departure, or passing of trains have been duly entered by the Signalmen, and if any omission, discrepancy or irregular entry is observed a report of the circumstances must be forwarded with the Book and the Signalman's explanation to the Block and Signal Inspector. Duplicate Books will be provided to be used and checked alternatively each week. See list of Stations affected by this clause, and instructions under the heading of Train Register Books, pages 682-685.

3. The Block and Signal Inspector must see that the Signalmen at each Signal-box in his district maintain their knowledge of the Regulations, the Block Telegraph, Overhead Sectioning arrangements, and such other Rules and Instructions as may be in force; that they and the Block Recorders are competent to perform their duties, and that they are supplied with the necessary articles for the proper working of the Signal-box.

The Inspectors must visit the men at each Box occasionally, at night as well as by day, and enter their signature in the Train Register Book on each visit.

4. At any Signal-box where more than one Signalman is on duty at the same time, the Senior Signalman is regarded as the man in charge, and he will be held responsible for bringing under notice any matter

that requires special attention, and for exercising, as far as is reasonably practicable, a proper supervision over the working of the Signal-box. He must promptly report any case in which an Assistant Signalman or Block Recorder commits any irregularity, or fails to properly attend to his duty. The Assistant Signalman must bring any infringement of the Rules, Regulations or other current instructions under the notice of the Senior Signalman, and, in the event of any accident or defect, act under his instructions. If more than one Senior Signalman be on duty at the same time, the one who would be on duty in the ordinary course of working will be regarded as the Signalman in charge.

5. (a) Every Signalman before leaving duty must satisfy himself that the man relieving him thoroughly understands the state of affairs, particularly as to whether the Block Sections on each side are clear or occupied, and which sections of the overhead, if any, have been made dead. He must not leave his Box until the whole of the operations which he may have in hand at the time are completed, and at every Signal-box on the Suburban Lines, and at Ballarat, Geelong, and Bendigo, until any train for which the "Train Departure" signal may have been received, has arrived.

(b) A Signalman must not be allowed to work for another for a longer period than two hours, and then only in a case of emergency.

The instructions in force regarding the hours of duty must be strictly adhered to. Every Signalman must sign on duty in the "Remarks" column of the Train Register Book opposite the first entry made by him, and enter the time of his leaving duty immediately under his last entry, and place his signature thereto. Where the entries are made by a Block Recorder, the signatures must be placed opposite the first and last entries respectively for which the Signalman is responsible.

(c) If a Signalman is not relieved at the proper time, he must at once communicate with the Station-master or other Officer, who is responsible for each man under his supervision being relieved.

(d) Should any emergency arise necessitating a Signalman being kept on duty longer than the time specified, the Metropolitan or District Superintendent, or the Superintendent of Melbourne Yards, as the case may be, and the Block and Signal Inspector must be at once advised, so that relief may be arranged.

(e) In the event of a Signalman being unable to take duty, he must at once give intimation to the Station-master, who must advise the Block and Signal Inspector, so that arrangements may be promptly made to provide a substitute. Signalmen at Signal-boxes controlled by the Superintendent of Melbourne Yards, must communicate with the Superintendent's office.

ORDER BOOKS AND NOTICES FOR SIGNAL-BOXES.

1. Every Signal-box must be provided with a Foolscap size Order (M 37) Book, in which all special orders relating to the Box are to be entered, both for the information of the Signalmen working the Box, and for any other Signalmen who may be subsequently transferred thereto. The Signalmen must keep this book written up to date, and the pages numbered consecutively, and the Station-master must see that this is done.

WORKING OF POINTS AND SIGNALS, ETC.

2. Where there is more than one Signalman on duty at the same time the Senior Signalmen will be responsible for keeping the Book up to date, and for satisfying themselves that the Assistant Signalmen are familiar with and understand the instructions contained therein.

3. Every Signal-box must be supplied with a copy of the Weekly Notice, and of all orders and circulars affecting the duties of the Signalmen or the working of the Box.

SIGNAL-BOXES AT LEVEL CROSSINGS.

See various instructions under heading of "Working of Level Crossings," pages 218-229.

CLEANING OF SIGNAL-BOXES.

1. The attention of every Signalman is drawn to the necessity for keeping his Signal-box clean and tidy, and for removing all cancelled and out of date notices.

2. When a Box is being renovated, the Signalman must not request the Painter or any other employe to paint over panes of glass that are not already painted, nor to do anything that will interfere with the view of the Line or of the Signals, or of any train or engine that may be standing at a Signal; neither must a Signalman himself in any way block out the view.

SIGNALMEN TO REPORT IRREGULARITIES.

1. Any infringement or disregard of any Rule or Regulation, or Instruction, or any occurrence coming under the notice of a Signalman affecting the safe and proper working of the traffic must be immediately reported to his superior officer, in accordance with Regulation 10; in matters affecting the Passenger Service, Signalman under supervision of Superintendent of Melbourne Yards, must also advise the local Station-master.

Any such irregularity must also be noted in the Train Register Book.

2. When owing to any unusual occurrence, a train is detained or likely to be detained between Richmond and Flinders-street, or between Flinders-street and Kensington or South Kensington, the Signalman, in addition to informing his Station-master, must promptly notify the Office of the Superintendent of Melbourne Yards, Spencer-street, or the Yard Foreman, Flinders-street.

Full particulars must be given by the Signalman, and a note must be entered in the Train Register Book, stating the time and the name of the person who receives the message on behalf of the Station-master, Superintendent, or Yard Foreman.

WORKING OF POINTS AND SIGNALS, ETC.

OPENING AND CLOSING OF SIGNAL-BOXES.

1. Where Three Position Signals are in Operation (Regulation 55, Clause b.).—At some places where the Points of the Crossover Roads or Sidings are only occasionally used, the Signal-box may be opened or closed as required in accordance with the following instructions:—

- (a) When the Signal box is closed the Points are set and secured for the Running Line, and the interlocked levers governing the Fixed Signals and (where provided) a closing lever are in the pulled-over position; the Signals then work automatically and an illuminated letter (A)—signifying automatic—is displayed on the Signal Post when the Signal is at the Stop position.
- (b) When it is necessary to open the Signal-box to perform shunting operations, or when owing to accident or obstruction it is necessary to stop an approaching train, the interlocked levers must be put to the normal position. If, however, a train has entered a Section approaching the Signal-box, the Signal levers which in all cases are governed by Approach-locking cannot be put fully back to normal to release the Point Levers until the train has passed clear, but the Signal levers may be put back far enough to place the Signals to the Stop position and to switch-out the distinguishing letter (A). If necessary, the levers may then be put fully to normal by using the Emergency Release of the Approach-locking as prescribed on pages 133-134.
- (c) An illuminated diagram is exhibited in the Signal-box to indicate whether any of the Sections controlled from the Signal-box are occupied by a train, and before attempting to alter the position of any of the interlocked levers the Signaller or other authorised employee must by reference to the diagram satisfy himself as to the position of any train that may be approaching. Sections of the Running Line on each side of the Signal-box are represented on the diagram; when any such Section is occupied by an approaching train the Light in the portion of the diagram which represents the Section occupied by the train is automatically extinguished. When the Sections are clear each Section of the diagram is illuminated, and the levers of the Signals may then be put to the normal position; this operation places the Signals to the Stop position, switches out the distinguishing letter (A), and the Signals then display the indications of Home Signals and must be worked and observed as prescribed in Regulation 60.
- (d) At some Signal-boxes a Switch is provided for the purpose of switching the illuminated diagram in or out when opening and closing the Box.
- (e) Where a closing lever is provided it must be the last lever to be pulled over when closing the Box, and this operation of the closing lever will switch-in the illuminated letter on each Signal-post; the closing lever must be the first lever to be put back when opening the Box, and this operation of the lever will switch-out the illuminated letter.

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- (f) **To open the Signal-box** the authorised employee must first examine the diagram, and, providing all the Sections represented thereon are clear, all levers must be placed to the normal position; this operation will permit of the levers which govern the Points being worked as required for shunting operations under the protection of the Home Signals. If the diagram indicates that there is a train approaching the Box, the Signals must be placed to the Stop position as prescribed in Regulation 81.
- (g) **Closing the Signal-box.**—When the shunting operations have been completed, or the train has been shunted to the Siding and the Running Lines are again clear, the Signaller must set the Points for trains to pass on the Running Lines, and take the control off the Fixed Signals, when (provided the Sections are clear) the Proceed Signals will then be exhibited and the Signals will again work automatically.
- Where a Closing Lever is provided care must be taken to see that it is fully pulled over in the frame when closing the Box, otherwise the illuminated letter (A) at the Signal will not be switched in.
- (h) The levers must be worked in the order shown in the instructions exhibited in the Signal-box. The Signaller must see that everything is in proper order, and that all instructions exhibited in the Signal-box are fully observed.

2. Where Block Telegraph is in force (Rule 26, Appendices IV. and VI.)—(a) If shortly before the time for leaving duty, the **Is Line Clear?** signal is received, and the acceptance of such signal would necessitate the Box being kept open later than the authorised time for Switching out, this signal need not be acknowledged, but provided the **Train Arrival** signal has been received for the train for which the **Is Line Clear?** signal was last accepted, and all Sections are clear in accordance with the Rules, the prescribed signal (3.4.3.) may be given and acknowledged.

(b) If when the time for leaving duty arrives, the Section in advance is occupied and the **Is Line Clear?** signal is received from the Signal-box in the rear, such Signal need not be acknowledged until the **Train Waiting** signal is received for the train; but if the **Train Arrival** signal is received from the Signal-box in advance before the **Train Waiting** signal is received, the **Closing of Signal-Box** signal may be sent and the Box may then be Switched out; if, however, before the **Train Arrival** signal is received from the Box in advance the **Train Waiting** signal is received from the Box in the rear, the **Is Line Clear?** signal must, provided the Line is clear in accordance with the Rules, be accepted.

(c) On receipt of the **Closing of Signal-Box** signal 3.4.3. the Signaller in the rear must repeat the **Is Line Clear?** signal, preceded by the **Call Attention** signal.

(d) If, owing to any circumstance, the Signal-box should be open as a Block Post, when ordinarily it would be closed, the Signaller on duty there must notify the Signaller on duty at the Box on each side; and the Signaller on each side must, unless the fact of the

intermediate Box being open has been specified in a special Time Table or Circular, stop each train proceeding in the direction of the Signal-box, and inform the Driver of the circumstances.

The above clause (d) does not in any way relieve Trainmen of their responsibility for proper observance of Signals.

(e) Before closing time, the Signalman must see that the fire in his Signal-box is out. He must also take care to see, before leaving duty, that all lights (except those required to be kept burning) in connection with the Signals and the Signal-box are extinguished, that the door and windows are properly secured, and that the key of the Box is disposed of in accordance with the instructions issued by the supervising officer.

(f) At Signal-boxes where Key Switches are provided, the Signalman should, before attempting to turn the Key that switches the Block Instruments "In" or "Out," first press in the Switch Key to the full extent, when it may then be turned freely. Force should not be used to turn the Key, otherwise both the Switch and the Key will be damaged.

RUNNING OF A SPECIAL TRAIN OR RELIEF ENGINE IN METROPOLITAN AREA WHILST THE SIGNAL-BOXES ARE CLOSED.

1. Should it become necessary to despatch from Melbourne a Break-down Van train, or Relief Engine, during the time the Signal-boxes are not open on any of the Lines specified under clause 2 hereof, the Driver of the Special Train or Relief Engine must be accompanied by a travelling Signalman, specially authorised, who will be provided with duplicate keys to open the Signal-boxes where necessary for the purpose of working the Points, Signals, and Interlocked Gates.

2. Duplicate keys are kept at the office of the Station-master, Flinders-street, for the Signal-boxes and Interlocked Gates on the under-mentioned Lines:—

Williamstown, Essendon, Coburg, Clifton Hill, North Fitzroy, Reservoir, Camberwell, Oakleigh, Frankston, St. Kilda, Port Melbourne, and Sunshine.

- (a) The Driver of the Break-down Van train, or Relief Engine, when approaching a Signal-box must, unless the Signals are exhibited for the train to proceed, bring his train or engine to a stand at the Home Signal, and the travelling Signalman must proceed to the Signal-box and ascertain whether the regular Signalman is available.
- (b) If the regular Signalman be not in attendance, the travelling Signalman must enter the Signal-box to work the Points and Signals as required, restoring the Signals and Points to normal position before proceeding with the train; he must make an entry across beneath the previous entry showing the time and Line on which the Special train has passed, and in every case he will be responsible for seeing that the train has arrived complete.

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- (c) Except when specially authorised, not more than one train is to be dealt with under these instructions, and in every case the Driver when proceeding must be prepared to stop clear of any obstruction on any portion of the Line.
- (d) Where the Block System is in force, the next following train must be stopped and the Driver must be informed of the circumstances and instructed to proceed cautiously to the next Block Signal-box,
- (e) On a Single Line, the Train Staff or Electric Staff and Tablet Rules and Instructions must be strictly adhered to.

UNDER PORTION OF SIGNAL-BOXES.

1. Unless instructions are issued to the contrary, the under portion of any Signal-box must not be used as a storehouse for Kerosene, Firewood, Rubbish, etc., but must be kept clear, in order that nothing may interfere with the working of the locking gear and Signal wires, and also that Signal Adjusters may have easy access to the machinery, and be able to repair any defects without difficulty.

2. When coal is supplied to a Signal-box it must, unless a coal bin be provided, be kept in bags.

3. (a) To prevent unauthorised persons entering the lower portion of any Signal-box, the door must be kept locked, and, unless otherwise ordered, the key is to be retained by the Signaller, who must not hand it over to any person other than an authorised employe, and the latter must sign an entry in the Train Register Book, stating the time and reason for its use. When the key is returned the Signaller must insert and sign an entry in the Train Register Book stating the time; this entry must be made in the presence of the employe returning the key.

(b) Where any Automatic or Power Signalling Apparatus is in use the under portion of Signal-boxes must be reserved exclusively for the apparatus, and the door (or doors) leading to this apartment, which will be fitted with a special lock, must be kept locked except when required to be opened for the purpose of inspection or for repairs, etc., to the signalling apparatus. Where these locks are fitted, the Staff under the Chief Engineer of Signals and Telegraphs, who will be supplied with keys, will be responsible for keeping in order this portion of the Box and for the removal of any litter or rubbish and securing the door after the completion of any necessary work or inspection.

(c) A special key for use in case of fire or other such emergency will be left under seal in the Signal-box. The Signaller on duty will be responsible for the custody of this emergency key which he must not hand over to any person except the Supervising Officers or other authorised employes for the purpose specified in clause 1. Every person using the Emergency Key must sign an entry to that effect in the Train Register Book stating the time and reason for its use. The Emergency Key must be replaced in its receptacle and sealed by the authorised employe immediately after using it, and the seals must be inspected and breakages registered and reported by the Signaller in the same way as the seals of electric appliances.

(d) Any employe finding the door improperly open must immediately close it, and this as well as any unauthorised use of the under portion of the Signal-box must be reported by the employe observing it, to his Superior Officer.

FAILURE OF SIGNAL LIGHTS.

If the light of a Home or Distant Signal becomes extinguished at night, or during foggy weather when a Fog Signalman is not at the post, steps must at once be taken to prevent any train or engine leaving a Block Post or Signal-box in the rear until the Signal has been re-lighted, or the Driver has been informed of the circumstances, and instructed in respect of the description and location of the Signal the light of which has become extinguished.

Steps must immediately be taken to have the Signal re-lighted, and, until this is done, a Hand Signal must be exhibited at the Signal Post whenever a train is approaching.

SIGNALS OBEYING LEVERS, REPEATERS, AND ADJUSTMENT OF WIRES. (Regulation 78).

1. Where a Back Light is provided on a Fixed Signal a White Light is exhibited towards the Signal-Box when the Signal arm is at the Stop position, and when the Signal is not at the Stop position the Back Light is obscured. Signalmen must carefully test the working of all Signals at least once on each shift, and record the fact of their having done so on the figure line (not in the "Remarks Column"), in the Train Register Book by the entry, "Signals Tested and Adjusted," or "Signals Tested," as the case may be, and record the time.

2. (a) Should an electric Signal Repeater appear to be out of order, the first duty of the Signalman will be to test the adjustment of the Signal wire, as it may happen that the fault is with the adjustment of the wire or the Signal itself, and not with the electrical apparatus. If the Signal wire is found to be properly adjusted, and the Signal is working well, and the Repeater is still out of order, the Electrical Fitter must be promptly advised.

(b) At Flinders-street "B" or "C" Box, if the current supplied to the Repeaters from the Electric Light Station be cut off, the Signalman must switch on the auxiliary battery.

3. Signalmen must pay strict attention to the adjustment of the wires working the Signals, more especially where Point Detectors are provided, as any neglect in this direction interferes with the working of the Detectors and causes them to lock the Points.

Interlocked Points equipped with mechanical Detectors should be reversed and each Signal tested, and where a Signal applies to more than one route the Signal must be tested in each direction. It is not enough to merely test the working of the Signals without reversing the Points, as although the Signal may go to the Stop position, the Detector gear attached to the wire may not be clear of the Detector-bar attached to the

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Points; in addition to testing the wire by operation of the Signal the Points must be operated also. This does not apply in the case of Electric Detectors. See Diagrams of Point Detectors, pages 126-128.

The most frequent cause of the breaking of Signal Wires arises from want of proper adjustment when the temperature becomes low. A Signal may be working properly in the daytime, but at night, should the temperature become much lower, a great strain is put upon the wire if it is not let out, and the Arm or Disc may not go fully to the proper position when the lever is put back in the frame. Every Signaller must, therefore, see that the wires are adjusted whenever necessary owing to a sudden change of temperature.

The Signals should be adjusted daily, when it commences to be dusk, so as to ensure proper working during the night.

4. At any place where Signals are automatically controlled by Track Circuit, each Signaller must, as soon as practicable after coming on duty, examine the Fixed Signals which are electrically controlled, and satisfy himself that they work well and show properly. He must watch the Signal so as to ascertain that it obeys the lever and goes fully to the Stop or the Proceed position, and also that it goes fully to the Stop position when operated by the train; and test the Signal-lever immediately after the Signal has been operated by the train, and before the train has passed off the Section.

SIGNALLING AND INTERLOCKING APPARATUS OUT OF ORDER, AND BLOCK, TABLET, OR ELECTRIC STAFF INSTRUMENT FAILURE.

1. The maintenance of all Signalling and Interlocking equipment (including Automatic Train Stops), and of the Block, Tablet and Electric Staff Instruments is controlled by the Chief Engineer of Signals and Telegraphs. Whenever any serious damage, or accident, or failure occurs, the Station-master or Signaller (the Senior Signaller in the case of any Signal-box under the supervision of the Superintendent of Melbourne Yards) must report the matter as under:—

- (a) If the Points or Signals or any portion of the Interlocking Gear be out of order, to the Electrical Fitter or Signal Adjuster, as the case may require.
- (b) In any failure of the Block, Tablet, or Electric Staff Instruments, or any portion of the Electrical Equipment, to the Electrical Fitter.
- (c) In any case of serious damage or accident, the Chief Engineer of Signals and Telegraphs must be also advised, and, when necessary, the Signal Supervisor, as well as the Block and Signal Inspector.

2. (a) If during a failure of the Staff or Tablet Instruments the Electrical Fitter should have arrived at one end of the section, and if

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is necessary for him to proceed to the other end to remedy the defect, the Transportation Officer-in-Charge shall take steps to expedite his transport by the most expeditious means to the other end of the Section.

- (i.) Should an occasion arise that a failure has occurred as above, and the information has been received by the Electrical Fitter at his Depot Station, or other Station within reasonable distance of the section where the failure exists, the instructions as shown in clause (ii) hereof shall be carried out.
- (ii.) If no train should be shortly due to travel in the direction of the failure and it is likely to involve serious delay to traffic the Officer-in-Charge shall immediately arrange for a Light Engine to convey the Fitter to the failure; if a Light Engine or other suitable departmental vehicle cannot be procured, the Officer-in-Charge must, if practicable, engage a motor car or other private vehicle for the prompt conveyance of the Fitter.

HOURS OF DUTY.—Signal and Telegraph Foreman, Electrical Fitters, Interlocking Fitter and Signal Adjusters in the Metropolitan Area, are in attendance as shown at the places and times hereunder:—

Flinders Street.—Telephone: Auto 248 or 163—

Note.—Electrical Fitter on duty continuously.

Week Days or Saturdays—Signal and Telegraph Foreman, from 8 a.m.-11.45 p.m.; Interlocking Fitter, from 8 a.m.-11.45 p.m.; Signal Adjusters, from 7.30 a.m.-11.45 p.m.

Sundays—From 10 a.m.-10 p.m.

South Yarra.—Telephone: Auto 417—

Week Days and Saturdays—Electrical Fitter, from 6 a.m.-11.45 p.m.

Sundays—From 10 a.m.-10 p.m.

Outside these hours, send to Flinders Street.

Caulfield.—Telephone: Auto (Dial O, ask for 134W).

Week Days and Saturdays—Electrical Fitter, from 7 a.m.-11 p.m.

Sundays—Reports should be sent to Electrical Fitter, South Yarra, from 10 a.m.-10 p.m.

Outside these hours, send to Flinders Street.

Hawthorn.—Telephone: Auto (Dial O, ask for 120W).

Week Days and Saturdays—Electrical Fitter, from 6.15 a.m.-11.30 p.m.

Sundays—From 10 a.m.-10 p.m.

Camberwell.—Telephone: Auto (Dial O, ask for 122W).

Week Days and Saturdays—Electrical Fitter, from 7 a.m.-11 p.m.

Outside these hours, send to Flinders Street.

Sundays—Reports should be sent to Electrical Fitter, Hawthorn, from 10 a.m.-10 p.m.

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Viaduct Box—Telephone: Auto 259—

Note.—Electrical Fitter on duty continuously.

North Melbourne—Telephone: Auto 127—

Week Days and Saturdays—Electrical Fitter, from 6.15 a.m.-11.45 p.m.; Signal and Telegraph Foreman, from 8 a.m.-11.45 p.m.; Interlocking Fitter, from 8 a.m.-11.45 p.m.; Signal Adjusters, from 7.30 a.m.-11.45 p.m.

Sundays—From 10 a.m.-10 p.m.

Franklin-street Box.—Telephone: Auto (Dial O, ask for 17L).

Week Days and Saturdays—Electrical Fitters, from 6.15 a.m.-11.45 p.m.

Sundays—From 10 a.m.-10 p.m.

Outside these hours, send to Electrical Fitter, Viaduct Box.

Newmarket.—Telephone: Auto (Dial O, ask for 27W).

Week Days and Saturdays—Electrical Fitter, from 6.15 a.m.-11.45 p.m.

Sundays—From 10 a.m.-10 p.m.

Outside these hours, send to Electrical Fitter, Viaduct Box.

Footscray.—Telephone: Auto (Dial O, ask for 34W).

Week Days—Electrical Fitter, from 8 a.m.-5.15 p.m.

Saturdays—From 8 a.m.-12.15 p.m.

Outside these hours, send to Electrical Fitter, North Melbourne, or between midnight and 6 a.m. to Viaduct Box.

Clifton Hill.—Telephone: Auto (Dial O, ask for 134W).

Week Days and Saturdays—Electrical Fitter, from 6.30 a.m.-11.30 p.m.

Sundays—From 10 a.m.-10 p.m.

Outside these hours, send to Electrical Fitter, Viaduct Box.

Note.—Signal and Telegraph Foreman, Flinders Street and North Melbourne, will arrange for the attendance of Signal Adjusters as required after 5 p.m. week days, 11.45 a.m. Saturdays, or on Sundays.

4. For Headquarters and Districts of the Electrical Fitters; Headquarters and Districts of the Signal Adjusters, and for private addresses of the Signal Supervisors, see pages 919-922.

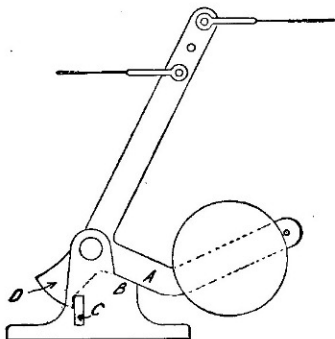
POINT DETECTORS.

1. At some places where the levers working the Points and Signals are interlocked, and at Stations on Single Lines where the Points are fitted with Plunger Locking, Point Detectors are provided for the purpose of ensuring that the Facing Points are properly set. If the point rodding break, or any of the connections between the Facing Points and the Lever

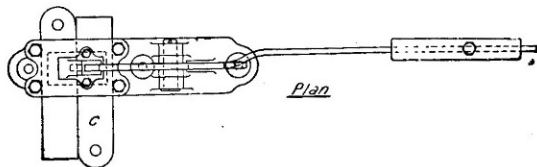
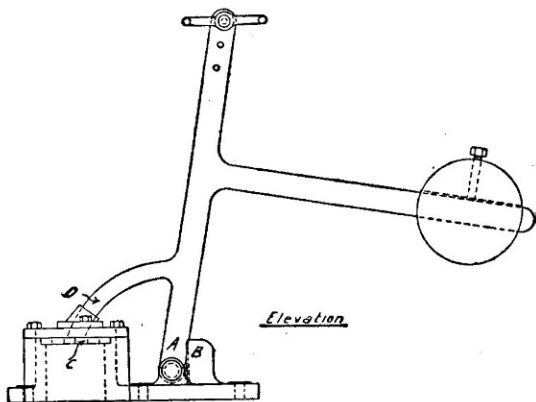
which works them become disconnected, the Points may be set in an improper position and the Detector will then prevent the working of the Signal which applies to such Points. In any such case the Signaller must examine the Points and satisfy himself that they are in the proper position before allowing any train or engine to pass over them. (See Instruction, "Defective Signals and Points," pages 129-130). If the Points be defective, arrangements must be made for the safe working of traffic in accordance with Regulation 95 until such time as they are again in proper working order.

2. Three types of Detectors are in use, viz., the Slide Detector, the Weighted Detector, and the Hatchet Detector. Illustrations of these appear at the end of this Instruction.

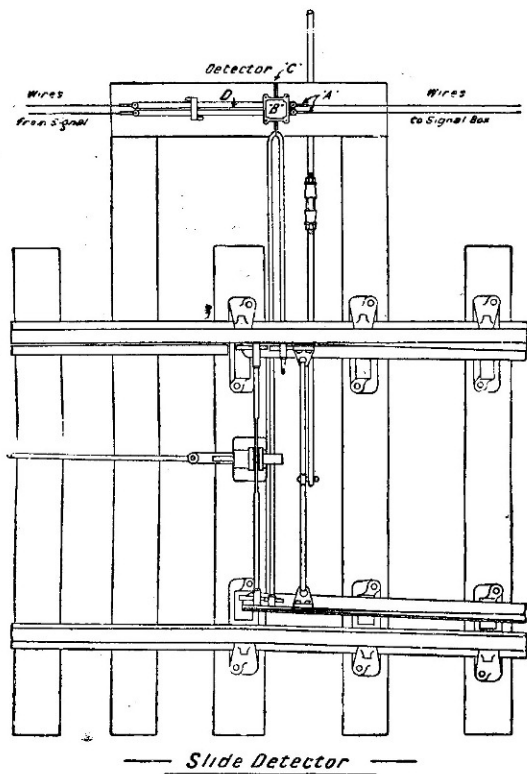
3. The Signal wires between the Lever and the Detector, and between the Detector and the Signal, must be kept in proper adjustment by means of the screws provided for the purpose, so that when the Signal is in the Danger position, the shackle "A" on the slide bar of the "Slide" Detector type, and the Lever "A" of the "Weighted" and "Hatchet" Detector type (see illustrations) will be hard up against the casting "B." Unless the shackle or lever is in this position, the blades "C" will be foul, and it will not be possible to move the Points lever. Special attention must be paid to the adjustment when changes of temperature occur.



Hatchet Detector



— WEIGHTED DETECTOR —



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RULES FOR THE AUTOMATIC SYSTEM OF TRAIN SIGNALLING ON A SINGLE LINE SECTION AND REMOTE CONTROL OF POINTS AND SIGNALS AT AN UNATTENDED JUNCTION.

8. A Booklet, C. 14/26 (pink cover), containing instructions for the Automatic System of Train Signalling on a Single Line Section and Remote Control of Points and Signals at an unattended Junction is issued to all employes concerned.

Supervising Officers must see that employes concerned are supplied with a copy of the new book, and every such employe must make himself thoroughly acquainted with the instructions contained therein.

The above-mentioned system is in force on the Sections specified hereunder:—

Lines.	Sections.
North-Eastern—Seymour-Goulburn Junction; see page 791.	
Maryborough—Castlemaine-Maldon Junction; see also pages 739-740.	

DEFECTIVE MECHANICALLY-OPERATED SIGNALS AND POINTS.

1. In any case where it is found that a Signal or Points will not answer to the lever in the ordinary Interlocking Frame, or where it is found that in reversing a Facing Point the road cannot be properly set, steps must at once be taken to endeavour to trace the cause of the defect.

If a Point Lever in an Interlocking Frame be moved in a slow, hesitating manner, the Points may not properly close, even though the catch is firmly down in the notch. The Signaller must, therefore, be careful when pulling over or reversing a Point Lever to do so by one prompt movement, so that the Points will properly obey the Lever.

2. It will be generally found in connection with defective Facing Points that it is in consequence of the Detector Lock not clearing properly; this may be due to the wire of the Home Signal requiring adjustment. When a Signal controlled by a Detector cannot be put to the Proceed position, the Signaller must examine the Points worked in connection therewith, and satisfy himself that they are in their right position and properly secured before allowing any train or engine to pass over them.

3. In any other case of a Signal or the Points not answering to the lever, not only may it be from the wire or rod requiring adjustment, but from a stone getting in the wheel, or chain getting off the wheel, or in the case of Points it may be from a stone becoming wedged in the runners over which the rods travel, or a stone having got between the blade of the point and the stock rail. Any such case as this can generally be detected by the sudden stoppage of the lever in the Frame, and whenever anything of the kind occurs, steps must at once be taken to have the wire or rod traced to the Signal or Points, commencing from the connection with the lever underneath the Signal-box.

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If a Signaller be unable to leave his Box for the purpose of tracing a defect, he must obtain assistance from the Station or Yard staff. After such steps have been taken, if the defect cannot be discovered, the Signal Adjuster must be immediately sent for.

4. Any unusually light or heavy movement of a Point or Signal lever must be promptly investigated.

CAUTION ORDER FOR DRIVERS TO PASS HOME SIGNAL.

(Regulation 95, Clause (c)).

In any case in which printed forms of the Caution Order referred to in Regulation 95 are not available when required, the Signaller must furnish the Driver with the order in writing; when writing the instruction for the Driver, the Signaller must, however, strictly adhere to the wording of the form as printed in Regulation 95.

When the Signaller requires a train worked by two engines to pass a defective Home Signal at the "Stop" position, the responsible employee must show the order to the Driver of the second engine before delivering it to the Driver of the leading engine. This will also apply in the case of two or more Light Engines coupled, in which case the order must be shown to the Driver of each engine and then delivered to the Driver of the leading engine.

EXAMINATION OF LOCKING GEAR.

Every Signaller is required to notice the interlocking of the levers in his Signal-box, and to test it as frequently as possible, and if in any case he find that a lever can be moved, when, in his judgment, it should be locked, he must immediately report the occurrence to the Stationmaster, who must at once telegraph particulars to the Superintendent of Goods Train Service, and Chief Engineer of Signals and Telegraphs, and forward the Signaller's report direct to the General Superintendent of Transportation.

This does not relieve the Signal Supervisor or any other employee concerned from the responsibility of regularly testing the Locking, and seeing that it is kept in proper working order.

LOW SPEED SIGNALS AND CALLING-ON SIGNALS.

(Regulations 59, Clause (d), and 64, Clause (b).)

1. Where a Low Speed Signal is fixed on the post of a Home Signal, the Low Speed indications are displayed by means of a Light Signal, but its light will not be visible except it is required to display a Low Speed Indication, when the Green or Yellow Light, as the case may require, will be exhibited to the Driver.

2. In the general practice Low Speed Signals (when fixed on Home Signals) apply to Goods Lines only: but in case of failure of signalling apparatus, or when necessary for a second train to enter a Section to render assistance, or where for other exceptional circumstances its use

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is authorised, the Low Speed Caution Signal may be displayed for any of the Running Lines to which the Home Signals apply. This is accomplished by means of an instrument which is operated by a Push-button and fixed convenient to the interlocked lever that governs the Signal.

3. When in the circumstance referred to in clause 2 the Signaller finds it necessary to display a Low Speed Indication for a train movement to any Line other than a Goods Line, he must—after setting the Points as required and actuating the lever that governs the Signal—press the Push-button firmly home, when, provided all Signals on the Post are in the Stop position, the Low Speed Caution Signal will be displayed.

Low Speed Signals are not replaced to the normal condition by the passage of the train. The Signaller must promptly restore the Signal Lever to its normal position when the train has passed the Signal; this operation of the Signal Lever will restore the Push-button to its normal condition.

4. If it should become necessary to use the Low Speed Signal for a train movement to any Line other than a Goods Line, particulars must be entered in the Train Register Book.

5. It must be distinctly understood that a Low Speed Caution Signal (when displayed at a Home or Dwarf Signal) does not imply that the Section ahead is unoccupied; responsibility for safe running rests wholly on the Driver.

6. At the undermentioned places it will not be necessary for the Signaller to wait till the train has been stopped at the Home Signal before giving the Low Speed or Calling-On Signal; but such signal must not be given until the train has passed the Signal next in the rear, and is approaching the Home Signal.

Flinders-street Yard.—All Low Speed or Calling-on Signals, with the exception of those which apply to Nos. 1 and 2 Roads, East and West. (*See Special Instruction "Train Movements to Platform Roads Already Occupied," pages 722-723.*)

Flinders-street "E" (Jolimont Junction).—For Goods trains or Engines proceeding to Goods Yard.

Vladuet Junction.—For Goods trains or engines proceeding to Goods Line.

Spencer-street, Centre Yard.—For movements to South end of No. 1 Platform Road.

Dudley-street Box.

North Melbourne Junction.—For Goods trains or engines proceeding to Goods Lines.

Weighbridge Junction Box.

South Kensington.—For Goods trains or engines proceeding to Goods Lines.

Kensington.—For Goods trains or engines proceeding to Goods Lines.

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Newmarket.—For Goods trains or engines proceeding towards Cattle Yards. This does not apply during special Passenger traffic on Racecourse Line.

Ceelung, "A" Box.—For shunting movements when a Goods train is being made up in No. 1, 3 or 4 Road, and a portion of the train is already in the Road.

USE OF DISC SIGNALS FOR ARRIVING TRAINS.

1. At Stations where Disc Signals are on the same post as a Home Signal, such Disc Signals are, ordinarily, to be used for shunting operations only.

2. At places where a Disc Signal is used for an arriving train, the Signalman must, before turning off the Disc, see, or have verbal intimation from Shunter-in-charge, that all Hand Points are properly set for the intended movement, and that the Line is clear to the point to which the train is ordinarily required to run; if the Line on which the train is to arrive be obstructed, a Shunter must be stationed at a suitable position to protect the obstruction by Hand Signal before the Disc Signal is exhibited for the train to enter the Yard, and the Disc Signal must be kept at the normal position until the train has been almost stopped.

Where there is a Signal-box at each end of the Station, the permission of the Signalman at the opposite end must be obtained before the Disc Signal is exhibited for a train to arrive, and the Signalman at the opposite end, after giving such permission, must not allow the Line upon which the train will arrive to be fouled by any other movement.

ELECTRIC CONTROL OF SIGNALS AT STATIONS AND JUNCTIONS.

1. **Electric Route-Locking.**—(a) Electric Route-locking consists of an arrangement of electrical interlocking by means of which the interlocked lever of a Signal becomes locked when the lever is in the pulled-over position, and when so locked, the Signal Lever cannot be put fully back to normal till the train has passed a pre-determined distance in advance of the Signal. If, however, after having displayed a Signal to proceed, it should become necessary to stop the train, the Signal Lever may be put back far enough to replace the Signal to the Stop position; but the position of the Points cannot be altered without the use of an Emergency Releasing Instrument provided for each form of Route-locking.

The use of an Electric Route-locking Apparatus does not relieve the Signalman of his responsibility for working the Fixed Signals and Points in accordance with the Regulations and principles governing the Route-locking Apparatus.

(b) Before making use of the Emergency Release the Signal must be put to the Stop position, and the Signalman must take care that the Driver is aware of the Signal having been reversed, or take effective steps to prevent the train from approaching the Signal. (See Regulation 84.)

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When in doubt as to the proper route for an approaching train the Signalman must keep the Signal at the Stop position till he has ascertained what route is required.

2. (a) Two separate forms of Route-locking are in use, viz., (a) Back-locking Apparatus, and (b) Approach-locking.

(b) Back-Locking Apparatus—

- (i.) With this apparatus the Signal Lever becomes locked automatically when pulled from its normal position, and the lever cannot be replaced to normal until the Route-locking is released.
- (ii.) An indicating instrument shows the distinguishing number of the lever or levers controlled by the apparatus, and when any such lever is pulled over, the words "Back Locked" appear in the instrument on a Red background and the lever becomes locked in that position. When the train passes over an electrical contact ahead of the Signal it releases the Route-locking and the word "Free" appears on a Green background; the Signal Lever may then be restored to its normal position.
- (iii.) The provision of the Back-locking apparatus does not relieve the Signalman of responsibility for his working the Fixed Signals in strict accordance with Rules and Regulations, and the principles governing the Back-locking apparatus.
- (iv.) Should the Indicator of the Instrument at any time show "Free" when it should show "Locked," the Signalman must raise the rod connected with the Signal Lever; if the rod still fail to hold the Indicator in the locked position, the circumstances must be immediately reported by the most expeditious means to the Signal Supervisor and the Electrical Fitter so that the failure may be rectified without delay. A full report must be sent to the Block and Signal Inspector.
- (v.) **EMERGENCY RELEASE.**—If it should become necessary to replace the Signal Lever to its normal position before it has been released by the train, the Signalman must break a paper seal fixed at the side of the instrument and press the contact of the Emergency Release.

(c) Approach-locking.—

- (i.) With this arrangement of electric interlocking the Route-locking is applied by an approaching train, and released when the train has passed a certain distance beyond the Signal; the Signal Lever does not, therefore, become locked by being merely pulled over, unless a train has entered the Block Section in the rear of, and approaching the Signal. But if, whilst the Signal Lever is in the pulled over position, a train should enter upon the Section approaching the Signal, or if the Signal Lever be pulled over whilst a train is in the Section, the lever will become locked in that position until the train has passed the Signal.

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- (ii.) Approach-locking is provided for all Three-position Signals that govern Facing or Trailing Points.
- (iii.) **EMERGENCY RELEASE.** — The Emergency Release for Approach-locking consists of a clock-work apparatus, known as the "Time Release." This apparatus, which is under seal, may be arranged to run for a determined period, and is adjusted according to the time required for a train to travel from the entrance of a Section to the Signal. As the Route-locking cannot be released until the apparatus has run down, the Signal Lever remains locked in the pulled-over position until the train has stopped at the Signal, unless, for some exceptional reason, the train be stopped in the Section.

To operate the Time Release the Signalman must turn the handle slightly, in the counter-clock-wise direction; this will release the clock-work apparatus, and when the latter has completed its operation, the Route-locking will be released. The apparatus automatically registers each case in which it is used.

The Signalman must not omit to re-set the clock-work apparatus after using the Time Release, otherwise the Fixed Signal will be held at the Stop position.

3. Track-locked Signals.— (a) At a Station where any Signal is electrically secured at Stop for the purpose of protecting a Platform Road or other portion of the Line against the possibility of turning an engine or train into any such Road while it is occupied, the Signalman is in no way relieved of the duty of satisfying himself by observation, if practicable, that the Road or other portion of the Line is clear, before he attempts to place the Fixed Signal to the Proceed position. See clause 4, instructions on pages 267-268, respecting the Working of Rail Motor Inspection Cars on Lines where Signals are electrically controlled.

(b) **EMERGENCY RELEASE.**—An Emergency Release is provided, to enable the Signalman to release the Track-locked lever in the event of defect. In the event of any apparent failure of the mechanism, the Signalman must satisfy himself that there is no obstruction on the Road before resorting to the use of the key for the purpose of releasing the locking.

4. Signals Electrically Controlled from Two Signal-boxes.—

(a) Where a Signal is electrically controlled from another Signal-box, an Indicator is provided for the purpose of enabling the Signalman to ascertain whether the Signalman at the Box from which the lever is controlled has released it.

(b) When the controlled Signal has been released, the lever releasing the control is back-locked until such time as the controlled Signal has been replaced to the Stop position. The Signalman must not attempt to work the lever of a Signal, or replace the Control Lever beyond the special notch to normal, till a proper indication is obtained, otherwise the electric lock may be damaged.

(c) **EMERGENCY RELEASE.**—In the event of any apparent failure of the electric locking, the Track-locked Controlled Signal may be mechanically released by breaking the paper seal, and pressing the Emergency

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Release Key provided for the purpose, but in any such case the Signalman must first satisfy himself that the Road is clear, and that the Signalman at the Box from which the lever is controlled is aware of the circumstances, and has authorised the train movement contemplated.

5. (a) Whenever a paper is broken in order to permit of the use of the Emergency Release in connection with the Electric Lock and Block Instruments, Electric Back-locking, Track-locking Apparatus, or Electric Control of Signals, or whenever the Time Release is operated, the Signalman concerned must enter up the particulars on the Form provided for the purpose ($\frac{T.N.}{T.R. 22}$). If it be necessary to use the Release whilst the paper is broken, the reason for doing so must also be entered upon the Form, and a special report on the subject sent to the Block and Signal Inspector. The Form ($\frac{T.N.}{T.R. 22}$) must be sent to the Block and Signal Inspector at the end of each week with the Train Register Book.

(b) The Fitter or Fitters concerned must be promptly advised regarding any broken seal, and if it be not restored on the same day that it is broken, the Signalman who is on duty at 10 p.m. must send a special report on the subject to the Block and Signal Inspector.

(c) Every Signalman, before taking charge of a Signal-box where there is Electric Locking, must inspect the paper seals, and see that the breakages, if any, are duly recorded. The mechanism of the Time Release must also be tested; but, in order that this operation will not register, the Signalman must re-set it before the clock-work is completely run down.

MECHANICALLY CONTROLLED SIGNALS.

1. Where a Signal worked from one Signal-box is mechanically controlled from another Signal-box, and it is necessary for the Controller to be taken off, this may be done when the Road is clear, on receipt of the proper bell signal from the other Box, but the Controller must be put to "on" again when the Road is occupied. The request to take off the Controller must not be made until the Road is required for use.

2. If for any reason the Controller is required "off" while the Road is occupied, the Signalman may release it after there is a clear understanding between the Signalman at each Box that the proposed movement is safe, but the Controller must be put to "on" again as soon as possible, and the Signalman manipulating the Controller will be responsible for seeing that this is done.

TOOLS AT INTERLOCKED SIGNAL-BOXES.

1. A set of tools, consisting of a hammer, cold chisel, punch, and a set of spanners, is provided at every Signal-box where the levers working the Points and Signals are interlocked. The tools must be kept in a rack in the Signal-box, where they will be readily accessible, and they must not be used for any purpose other than that called for by the requirements of the interlocking connections. A suitable piece of wire should also be kept in the Signal-box, so that in the event of a Signal-wire breaking, temporary repairs can be readily effected.

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2. At places where there are Interlocked Gates across the roadway, chains and padlocks are provided for the purpose of securing the Gates, when necessary, during stormy weather, and when the Signalman is off duty. These are to be considered as a portion of the Signal-box equipment.

3. Should any article be damaged or missing, the Signalman who is on duty at the time that the loss is discovered will be held responsible for such damage or loss being reported without delay.

WORKING OF SIGNALS AT SWITCHED-OUT BLOCK POSTS.**Clause (e) of Rule 26, Appendix IV.**

1. At the places specified hereunder, the Signals are not required to be used for protection when the train is stopped at the Station for an ordinary period during the time the place is not open as a Block Post; the Signals must, however, be placed to the Stop position if, from any cause, the train remain stationary beyond the ordinary period:—

Flemington Bridge,
Preston,
Regent,

Mont Albert,
Tunstall.

2. (a) At any place where levers are provided on the Station Platform in order that, when the Signal-box is closed, the necessary Signals may be placed to the Stop position for the protection of a stopping train, the Signalman must, before he switches in the Instruments, see that the Signal levers on the platform are pulled off and locked in the "pulled off" position, so as to prevent the Signals being placed to the Stop position from the platform, whilst the Box is open.

(b) When the time arrives for the Signal-box to be closed, the Signalman must place the necessary Signals to the Proceed position, and before going off duty, release the platform levers, and hand the key over to the Station-master.

(c) When the Signals are worked from the platform, the Station-master will be responsible for the safe custody of the keys of the locks which are used to secure the platform levers, and when the Signal-box is open the Signalman will be responsible for their safe custody.

3. The attention of Trainmen is directed to clause 2 of the instructions respecting the Working of Fixed Signals at No-One-in-Charge Stations, on page 205.

COLOURS OF LEVERS IN SIGNAL-BOXES.

The levers and footplate of every interlocking apparatus must be properly painted. Except where otherwise specified, the standard colours for the gear are as follows:—

- Levers working Signals—Red.
- Levers working Points or Gates—Black.
- Levers working Lockbars—Light Blue.
- Levers working Cross-locks—Top half, Light Blue; bottom half, Black.
- Levers working Overhead Section Switches—Green.
- Levers working Tramway Signals and Derails—Red and Black Bars.
- Levers working Platform Indicators—Top half, Red; bottom half, Black.
- Pilot levers—Top half, White; bottom half, Black.
- Spare levers—White.
- FOOTPLATE—Black.

LIGHTING, EXTINGUISHING, AND CLEANING OF SIGNAL LAMPS (Regulation 87).

1. All Three-position Signals will be electrically lighted, and the lighting, extinguishing and inspection of these Signals will be performed by the Signal and Telegraph Branch.

2. The undermentioned is the general practice in regard to the lighting and extinguishing of the Fixed Signal Lamps:—

Line.	WEEK DAYS (SUNDAYS EXCEPTED.)	
	When Signals are to be lighted.	When Signals are to be extinguished.*
Metropolitan Stations—	When it commences to be dusk	At daylight next morning
Suburban Lines—		
Suburban Sections over which Main Line Country trains run	When it commences to be dusk	At daylight next morning
Purely Suburban Lines, with no Main Line Country traffic	When it commences to be dusk	After last train at night unless required for early trains next morning
Country Lines—		
Melbourne to Mangalore; Benalla to Albury; Melbourne to Bendigo; Melbourne to Serviceton (via Geelong); Melbourne to Warragul	When it commences to be dusk	At daylight next morning
Other Lines or Sections of Lines in Country Districts	If trains run after dusk to be lighted one hour before train in either direction	After last train at night unless required for early trains next morning

*This will not apply in the case of Fixed Signals, the indications of which are required to be displayed by lights during day and night.

WORKING OF POINTS AND SIGNALS, ETC.

- (i.) During the months of May, June, July and August, the employe whose duty it is to attend to the lighting and extinguishing of Signal Lamps, must give special attention to the weather conditions and, if there are indications that a fog may occur before the usual time for lighting the Signal Lamps, he must take steps to have them lighted; and during the months specified above, he must not extinguish the Signal Lamps until he has consulted the Signaller-in-charge, and the latter has agreed that the Lamps may be extinguished. Station-masters and Foremen must see that Porters and Lampmen whose duty it is to attend to Signal Lamps understand and observe all instructions in regard to lighting and extinguishing the Lamps. Every employe connected with the working of Signals or trains, including the Supervisor of Fog-signalmen, must give attention to the conditions of Signal Lamps, and in the event of a Lamp not showing properly, must at once take steps to have the defect rectified.
- (ii.) Unauthorised persons must not be permitted to light or extinguish Signal Lamps.
- (iii.) Where Signal Lamps that are on the structures of the overhead electrical equipment require attention they must in every case be attended to by an adult; boys or youths are forbidden to ascend these structures.
- (iv.) On Sundays, when trains run after dusk, the Signal Lamps must be lighted as soon as it commences to be dusk. At places where Signal Lamps are authorised to be left burning all night, they need not be extinguished on a Saturday night until the Staff come on duty on Sunday morning, unless it is convenient for the Metropolitan or District Superintendent, as the case may be, to arrange otherwise.
- (v.) Where there are more Signals than one showing in the same direction on a post, or where there are two or more posts, side by side, or quite near to each other, the Lamps of all such Signals must be kept burning during the whole of the time it is necessary to keep any one of them burning, in order that a Driver may, by its relative position, as accurately select the Signal which applies to him during the night as he can when the whole of the arms are visible during the day.
- (vi.) Oil lamps must be lighted twenty minutes before they are required, and, unless otherwise authorised they must be taken to the Signal posts already lighted. The wick, when first lighted, should be lowered until the top of the flame becomes level with the top of the burner, and then gradually raised until it burns steadily, without smoking.
- (vii.) At every Caretaker Station, Block-Signal-box which is switched out, or any other place where there are Fixed Signals (except where such Signals are out of use), the Signal Lamps applying to the Line, or Lines, upon which trains run after dusk must be lighted, and left burning all night, if the staff go off duty before the last train, or trains, are due to arrive.

WORKING OF POINTS AND SIGNALS, ETC.

3. Cleaning and Trimming of Signal Lamps.— (a) Except as shown in clause 1, 4, and section 1 hereof, Signal Lamps must be removed from the Signals and cleaned daily, in the lamp room, except at Melbourne, Geelong, Ballarat, Ararat, Cressy, Benalla, Warragul, Caulfield, and any other Station exempted from this arrangement by the General Superintendent of Transportation; it will not be necessary for the Lamps to be taken to the Lamp Room daily for the purpose of cleaning them, but the Lamps must be cleaned daily, as prescribed in sub-clause (b).

Signal Lamps are not to be cleaned in the Signal-box, unless specially authorized by the General Superintendent of Transportation.

(b) The burners must be frequently cleaned, and all corrosive and sooty substance removed, by means of a blunt knife when the burners are cold; chipped or damaged burners should be replaced by new ones.

(c) The fonts must be filled up with oil every time the lamps are trimmed. The kerosene must be emptied out of the fonts once a month, or more often if necessary, and the fonts well cleaned. If the oil is found to be discoloured with rust, it must not again be used in Signal Lamp fonts.

(d) The wicks must be removed and examined closely each time the lamp receives attention; when dirty, or when too short to reach the bottom of the font, a fresh wick must be used. No wick must be allowed to remain in service more than two months. The charred, or burnt, part of the wick must be removed each time before the lamp is lighted. The wicks in stock must be kept perfectly dry, and when a new one is required it should be saturated with oil before it is used.

(e) The large size burners and wicks must be used for the interiors of the Semaphore and Point Indicator Lamps, and the small size for the interiors of the Disc Signal Lamps.

(f) The employe lighting the Signal Lamps must, on each occasion, see that the spectacles and lenses of the Signal Lamp Case are perfectly clean, and showing properly in the right direction. The glasses and spectacles must be kept clean to the edge of the glass; where stepped lenses are in use, as in the Adlake type, the inside corrugations must be kept clean.

(g) When the interiors are placed in the old pattern lamps at the Semaphores, the flap at the top of the interior must always be raised, and the broad side of the burner should face the lens. Care must also be taken to close the lid of the Signal Lamp-Case. When replacing a font in an Adlake lamp, care must be taken to see that a clear flame is showing to the centre of the lens, and that the metal edge of the burner will not cast a shade on it.

(h) If it be found that a good light cannot be obtained without packing up the interiors, the matter should be brought under the notice of the District Officer concerned.

(i) The lens of every old pattern Lamp-Case is pinned in position, so that the focus cannot be altered, and if it be considered that a better light can be obtained by altering the position of the lens, the Signal Adjuster must be advised.

4. Long-Time Burning "Adlake" Type of Semaphore Lamp.

—These lamps, which are specially supplied with Long Time Burning Oil, are provided where authorised by the General Superintendent of Transportation, and the following instructions as to the care and maintenance of these burners must be observed:—

(a) Lamps equipped with Long-Time Burners must be inspected and refilled at least twice weekly, and all hard crust must be removed from the wick, and the flame properly adjusted.

(b) A space of one-quarter ($\frac{1}{4}$) inch must be left unfilled in the font for expansion and ventilation.

(c) Long-Time Burning Oil must be used in these Lamps, and no attempt must be made to improve the quality of oil by adding other oils; if the oil be unsatisfactory, prompt report must be made to the General Superintendent of Transportation.

(d) Lamp fonts must be drained at least monthly, and refilled with fresh oil.

(e) Lamp bodies must be kept clean. Soot or dirt must be removed and all vents must be kept open so that air supply will not be impaired.

(f) All lenses must be kept bright and clean both inside and outside.

(g) Burners must be kept clean, and to this end may be boiled in soapy water and brushed with a small brush. Gas vents must be kept open. Defective burners must be inspected by an Officer of the Transportation Branch before being scrapped.

(h) Wicks must be of sufficient length to reach the bottom of the font and fit the burners properly; the wicks must be changed every two months, or more frequently if necessary.

(i) Semaphore spectacle glasses must be kept bright and clean; broken or cracked spectacle glass or lens must be immediately reported to the District Signal Adjuster.

(j) Containers are supplied for conveying the fonts of Adlake lamp between the Semaphores and Lamp Room. The screw caps on fonts must be replaced after removal; this is necessary to ensure a good light and economy in oil consumption.

INSPECTION OF FIXED SIGNAL LAMPS.—(Regulation 119.)

1. Unless otherwise ordered by the General Superintendent of Transportation, the inspection of the Fixed Signal Lamps must be made by the Station-master in respect of the Signals which are worked from a Signal-box that is under the supervision of the Station-master, and by the responsible Officer or other authorised employee in respect of the Fixed Signals worked from a Signal-box which is not under the supervision of a Station-master; see clause 1, page 137, in regard to inspection, etc., of Three-position Signals.

2. When inspecting the interiors of lamps special attention should be paid to the Vapor Burners, as the light given will not be a good one if the burners are chipped or otherwise damaged.

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EMPLOYEES AUTHORISED TO VISIT SIGNAL-BOXES.—

(Regulation 86.)

1. Any employee who desires to learn the working of any kind of Signalling Instrument or any Interlocking Frame, must first obtain permission from the General Superintendent of Transportation by forwarding an application through his superior Officer to the Block and Signal Inspector.

2. Every Signalman must see that each employee, who enters his Signal-box for the purpose of learning the duties of signalling, signs his name in the Train Register Book on the line immediately following that on which the last entry was made prior to his arriving, and the time every such employee remains in the Signal-box must be entered at the end of his name.

3. The Signalman must understand that he is responsible for the proper working of the Points and Signals and Electrical Instruments, and for the correctness of the entries made in the Train Register Book during the time such employee is in the Box.

4. It is important that unauthorised employees should be excluded from Signal-boxes, so that the Signalmen's attention may not be diverted from their work. Station-masters and Signalmen are instructed to prevent anyone from loitering in the Signal-box or otherwise interfering with the Signalman. Clothing Contractors or other unauthorised persons must not be allowed into the Signal-boxes.

BLOCK RECORDERS NOT TO WORK THE INSTRUMENTS OR SIGNAL LEVERS, ETC.

No Block Recorder is to be permitted to work or interfere in any way with the working of the Block Instruments nor (unless special Instructions are issued to the contrary) with the Interlocking Apparatus in a Signal-box. Every signal exchanged on the instruments must be distinctly called out by the Signalman for the Block Recorder to register. Each Block Recorder must sign on and off duty in the "Remarks" column of the Train Register Book, on the line opposite the first and last entries, respectively, made by him or, if this line be occupied, then on the line immediately above or below. The Signalman in charge must examine the work of the Block Recorder at reasonable intervals, and will also be held responsible for seeing that the Recorder is properly performing his duties, and that he signs "on" and "off" in the proper place.

TELEPHONIC COMMUNICATION, AND WORKING OF TELEPHONES.

1. Telephone communication is provided between Signal-boxes to afford Signalmen a ready means of communicating information as to the working of traffic, and they must make free use of the telephones for the purpose of giving and obtaining any information that may be required in connection with the trains.

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2. The use of the Telephone for ascertaining whether the Section is clear when a failure is supposed to have occurred is attended with risks of a misunderstanding, and except where specially authorised, is prohibited. Where the use of the Telephone is permitted, the messages referring to trains must be very definite, the number and description of every train referred to being distinctly stated, both by the person enquiring and the person replying, to prevent any misunderstanding.

3. In telephoning a message which requires to be written out, only a few words should be spoken at a time, and each word should be pronounced distinctly; the person receiving the same, after writing them down, should answer "Yes," and the Signaller at the sending Station or Box must then continue with a few more words, and so on until the message is finished. When the receiver has counted the words, and they agree with the number given, he must repeat the whole of the message back to the Sender, so that the latter may be able to detect any errors. When it is found that the message has been correctly transmitted, both Signallers will answer "OK," and the Sender must then write upon the form the words, "Repeated back, 'OK,'" together with his initials and the time.

4. (a) Except in cases of urgency, or unless otherwise ordered, the sending of messages through Signal-box Telephones, other than those in connection with actual train working, is prohibited. Communications regarding Luggage, Parcels, etc., should be sent by train, or to the nearest Telegraph Station.

(b) Long distance telephones should be used for urgent matters only; business that can be conveniently conducted by memo., should be so dealt with.

5. Stations and Signal-boxes within the electrified area will be supplied with a Telephone Message Book, into which all communications, when sent to, or received from Substations or elsewhere, in regard to overhead faults, or to the operation of Section Switches, must be recorded. Each entry must be timed and initialled by the employee sending or receiving the message. Where special Telephones are provided, for use in connection with Substations or sectioning arrangements, they must not be used for any other purpose.

In every case the name of the person who actually transmits the message, together with the name of the employee that accepts it, must be recorded in the Telephone Books.

6. If at any time an employee become aware of an electrical disturbance, such as unusual buzzing or ringing in a telephone or other electrical instrument, the particulars must be at once communicated to the Overhead Superintendent, and a written report must be forwarded in the usual course.

7. In cases of telephone failure, it may be necessary that urgent messages for the Control Engineer, Newport Power House, shall be transmitted by telegraph or partly by telegraph and partly by telephone. Every facility must be given by Station-masters and others to ensure that all such messages shall be transmitted, and, where delivery by messenger is necessary, delivered promptly.

PLUNGER LOCKED FACING POINTS AT NON-INTERLOCKED CROSSING AND TERMINAL STATIONS ON SINGLE LINES.

1. At Non-interlocked Crossing and Terminal Stations the Facing Points in the Main Line are secured by means of a Plunger Lock working in conjunction with a weighted Detector.

2. (a) In connection with this apparatus (see Diagram, at end of these instructions) there are—

(i.) A lever to work the Plunger which is fixed between the rails at the Points, and

(ii.) A weighted Detector which works in conjunction with the Plunger Lock and prevents the Fixed Signal from being operated from the platform, unless the Points are secured in the normal position by means of the Plunger.

(iii.) In addition to the ordinary Quadrant Lever on the platform, a Quadrant Lever is fixed near to the Main Line Points, and when a train requires to be turned on to any Road other than the Road for which the Points normally lie, the Fixed Signal must be worked from the Quadrant near the Points.

(iv.) An ordinary ground lever to work the Points.

(v.) For instructions respecting Point Indicators connected to Plunger-locked Points, see "Point Indicators," page 112.

(b) The Signal Lever at the Points, when in its normal position, must be secured with a padlock, the key of which, when not required, must be kept in the Station-master's Office, and the Plunger when "In" must be secured in that position by means of the Catch in the Plunger-guide.

3. When it is required to admit a train into the Road for which the Points normally lie, the Signal must be worked from the ordinary Quadrant on the Platform, and when the Signal is displayed to admit the train, the position of the Plunger-locked Points cannot be altered until the Signal is replaced to the Stop position.

4. (a) When it is intended to turn an approaching train direct into any Road other than the Road for which the Points normally lie, the Home Signal must be kept at the Stop position until the train is brought almost to a stand, and before the Signal is exhibited to admit the train, the Plunger must be withdrawn and the Points tested; the catch in the Plunger-guide will prevent the Plunger from being accidentally replaced. If the Points are in working order, the Signal may be operated from the Quadrant at the Points, and the Points held for the Road required; a Green Hand Signal must at the same time be exhibited to the Driver and Guard of the approaching train.

The Driver must not allow his engine or train to foul the exit at the opposite end unless verbally authorised to do so by the Signaller in charge, and before giving such instructions the Signaller must see that the Plunger Lock has been withdrawn from the Main Line Points at that end, as directed in clause 6.

(b) The speed of any train when passing over Facing Points held by hand must not exceed 15 miles per hour.

5. (a) Where the Facing Points are equipped with Plunger Locking, the Signaller must not allow any employee to work the Signal Lever situated at the Main Line Facing Points, unless such employee holds a

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certificate for the Electric Staff, Tablet, or Train Staff and Ticket System, or a Guard's certificate, or a certificate of fitness (from the Block and Signal Inspector) for working the Plunger Locking and Signal Lever at the Main Line Facing Points. The employe will also require to have a knowledge of the special instructions applying to that Station.

(b) The Signaller in charge will, in every case, be responsible for seeing that the Home Signal is replaced to the Stop position as prescribed in Regulation 81, and that the Signal Lever at the Main Line Points is secured in its normal position by means of the padlock and key, except when it is required to signal a train in accordance with clause 4 hereof; he is also responsible for the safe custody of the key of the padlock securing the Signal Lever.

6. (a) Before permission is given for a Train or any Vehicle to pass over the Plunger Locked Points in the trailing direction from any Road other than that for which the Points normally lie, the Guard, Shunter or other employe in charge of the operation must see that the Plunger is withdrawn to release the Points, and that the Catch in the Plunger-guide is locking the Plunger lever in the withdrawn position, preventing the Plunger being accidentally replaced, and that the Signal Lever at the Points is locked in its normal position.

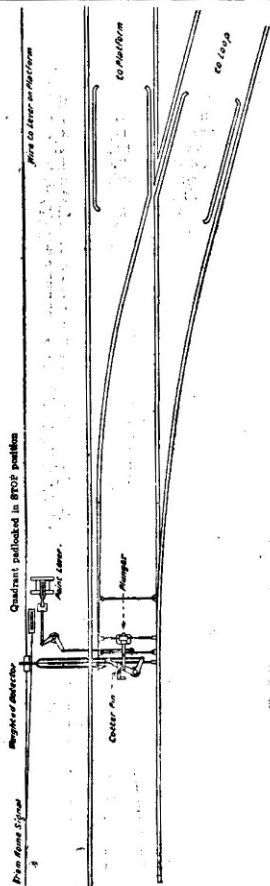
(b) The Driver must not pass over Plunger Locked Points in the trailing direction unless instructed to do so by the Guard, Shunter, or other responsible employe.

(c) Where Plunger Locking is provided at a Caretaker Station, or at any Station where ordinarily there is no one in charge, the Guard of each train must place the Home Signal to the Stop position, and withdraw the Plunger Lock as required for engine movements or shunting operations, and replace and secure the Plunger when the work is completed; the Signal must be kept at the Stop position until the train is quite ready to proceed on its journey.

7. When the position of any Plunger Locked Points requires to be altered to allow a Trolley or Tricycle, etc., to pass through, the Points must not be moved until permission to do so has been first obtained from the Signaller, and the latter when giving permission must instruct the person in charge of the Trolley or Tricycle, etc., as to whether the Plunger must be left "In" or "Out."

8. (a) If the Home Signal becomes defective, the Facing Points must be tested and held by a competent man for the passage of all trains; the trains being signalled in accordance with Regulation 95.

(b) If, owing to a defect in the Plunger Locking or the Detector, the Signal cannot be worked from the platform, but can be worked from the Quadrant at the Points, the Home Signal may be worked from the Quadrant at the Points, but the Signal must be kept at the Stop position until the train has been brought to a stand, and before the Signal is exhibited to admit the train, the Points must be tested, and held by a competent man for the passage of the train. If practicable, the Plunger must be used to secure the Points, and secured "In" by means of the Catch in the Plunger-guide. The man holding the Points must exhibit a Red Hand Signal to the Driver of the approaching train until the speed of the train has been reduced as required. (See pages 125-128 for instructions in regard to Point Detectors.)



— Plunger locking for Facing Points —

Not Drawn to Scale

WORKING OF SIDINGS CONTROLLED BY SPECIAL LOCKS.

Definition.—*For the purpose of this instruction, the term "Key" means Train Staff (Ordinary, or Electric) with key-end, Miniature Electric Staff, Train Tablet, Annett Key, or Master Key.*

1. (a) Except as specified on pages 562-579 and 580-600, or at places specially published, the Points in the Running Line at Caretaker Stations, No-one-in-Charge Stations, and intermediate sidings are ordinarily connected by rodding to Safety Points or Derails in the sidings, and secured with Special Locks, which are so constructed that the Key cannot be removed until the Points have been placed in their normal position for the Running Line, and securely locked so as to prevent vehicles passing from the Siding to the Running Line; when it is possible to do otherwise, the Lock or the Key is defective, and must be so reported without delay.

(b) After shunting operations have been completed, and the Key has been withdrawn from the lock, the Points must be tested by the employee who worked them. He must try the lever to see whether the Points have been securely locked for the Running Line, and that no movement is possible to or from the Running Line and the Siding. After the test has been made, care must be taken to see that the Catch of the Point lever is firmly down in the notch of the Lever Plate.

(c) If any defect be discovered, or should it be found possible to withdraw the Key from the Lock, and the Facing Points remain unlocked, the Guard must so inform the Driver, and, if no Ganger or Repairer be present, both the Guard and the Driver will be responsible for securing the Facing Points so as to make them safe for traffic; if, however, a Ganger or Repairer be present, he must be informed, and must thereupon see that the Points are properly secured. If no Ganger or Repairer be present, but one be met before the train reaches the first Station in advance where there is a Station-master, the train must be stopped, and the Ganger or Repairer advised of the circumstances, and he must then proceed to the Points and satisfy himself as to their proper security, and see that they are so maintained until such time as the Signal Adjuster arrives.

(d) When the train arrives at the first Station where there is a Station-master, the Guard must inform the Station-master of the circumstances, and he will be responsible for taking such measures as will ensure the safety of the Line, or for satisfying himself that proper precautions have already been taken, and for reporting the matter by wire to the Chief Engineer of Signals and Telegraphs and to the Signal Adjuster for the district without delay. The Guard and Driver must also report the circumstances to their superior officers.

2. Unless instructions exist to the contrary, the Guard, Shunter, or Fireman of a train that requires to work at a Siding on a Single Line where the Points are secured with a Special Lock, must act strictly in conformity with the following instructions:—

(a) **Annett Lock.**—

(i.) He must obtain from the Driver the Staff, to which the Key is attached, or the Master Key, as the case may be, and unlock the Points, after which the lever may be pulled over, and the road to the Siding made in the usual way.

(ii.) When a train that travels on a Staff Ticket is permitted to work at a Siding near the Staff Station, the Train Staff with key attached, must be in possession of a

competent employe, who is sent to assist, and he will be held responsible for unlocking, locking, and testing the Points, and also for returning the Train Staff, with Key attached, to the employe from whom it was obtained, after the train has continued its journey.

- (iii.) At places where the Key is not attached to the Train Staff, but is kept in a duplicate lock on the Interlocking Frame, the Guard or Shunter who obtains the Key will be responsible for unlocking, locking, and testing the Points and for the prompt return of the Key to the Signaller, or for securing of the key according to the Special Instructions, when the shunting operations are completed.

- (b) **Ordinary Staff Lock.**—The Key of the Staff Lock is the ringed end of the Staff for the section (Ordinary Train Staff or Electric Staff, as the case may be), or a Master Key, which the Guard, Shunter or Fireman must obtain from the Driver. To actuate the Lock, the ringed end of the Staff or Master Key must be inserted with the name engraved on it uppermost. After it has been pressed home, it must be turned to the right, when the bolt will be withdrawn, and the Points can then be altered. To withdraw the Staff or Master Key, it must be turned to the left, with the name uppermost. If it can be withdrawn in any other position, the Lock or the Staff or the Master Key is defective.

- (c) **Miniature Staff Lock.**—The Guard, Shunter or Fireman must obtain the Staff from the Driver, withdraw the slide of the lock, insert the Staff in it, and push the slide well home, after which the Points can be moved.

Some Miniature Staff Locks are fitted with small handles at the side of the Lock. To release the Points, withdraw the slide, and insert the Miniature Staff in it, then push home the slide and withdraw the plunger by means of the actuating handle at the side of the Lock, after which the Points can be moved.

- (d) **Tablet Lock.**—The Guard, Shunter or Fireman must obtain the Tablet from the Driver, withdraw the slide, and insert the Tablet in it, then push home the slide, and withdraw the plunger by means of the actuating handle at the side of the Lock. After this has been done the Points can be moved.

3. (a) The employe working the lever (which is usually connected by rodging to Points in the Running Line and to a Derail Block or Catch Points in the Siding) must actuate the lever by one prompt movement—not by a series of jerks—as otherwise the Points may not be properly set, even though the spring catch of the lever is in the notch. Care must be taken, during shunting operations, to see that the Derail Block is not foul.

Note.—At some places the Points in the Main Line only are connected to the Point lever, and a Scotch Block is provided in the Siding in lieu of a Catch Blade.

(b) Before giving the usual Hand Signal for shunting to proceed, the employe working the lever must see that the Points, which will become "Facing" for the proposed shunting operation, are properly set for the required Road.

(c) The Guard, Shunter or Fireman must be careful to see that vehicles are not moved into or out of the Siding before the Derail Block or the Catch Points are properly set, and that, when altering the Road, no portion of the engine or train is on the Points, but that all vehicles are clear of Points or Derail Block; the Fireman must assist as required. The employe operating the Points will be responsible for the foregoing duties, and also for seeing that the Spring Catch of the lever is properly in the notch before shunting to or from the Siding.

The Guard in charge of the train must instruct the Fireman in respect of the assistance required at Sidings controlled by Special Locks; the Fireman must not, however, detach the engine until he has received intimation from the Guard that he may do so in accordance with Regulation 204.

(d) Under no circumstances must the Staff, Tablet or Key be removed from the Lock whilst a vehicle is standing between the Points in the Main Line, and the Points, Derail Block, or Scotch Block in a Siding.

4. (a) When the necessary shunting has been completed, the Guard, Shunter or Fireman must re-make the Running Line (and, if a Tablet or a Miniature Staff Lock, withdraw the slide, take out the Tablet, or Staff, as the case may be, and close the slide), and test the Points, and except in the case of a Key that is to be returned to the employe from whom it was obtained, hand the Staff, Tablet or Master Key to the Driver, who must not proceed on his journey without it.

Note.—The Miniature Staff can be best withdrawn from the slide by pushing the Staff up from below.

(b) The Key cannot be withdrawn from the Lock until the Point blade is close up level with the stock rail, and bolted in that position; care must therefore be taken to see that no dirt, stones or other obstacles are between the Point blade and the stock rail, and the engine or nearest vehicle should be kept well clear of the Points, so that the working of the bolt will not be affected by a variation in the level of the Point blade and the rails in the vicinity of the Lock.

(c) It is specially important that the lid of the Key-way should be closed immediately after the Key is withdrawn from the Lock, so as to prevent the Lock being choked with sand or dust; neglect of this precaution always leads to serious inconvenience.

(d) If, after shunting operations are completed, the Point blade connected with the Lock cannot be put close up to the stock rail by ordinary means, the Fireman should use a bar to jamb the Points home to the stock rail, and thereby enable the Guard to actuate the Lock and to withdraw the Key. The circumstances must be reported by the Guard to the Station-master next in advance by whom the Signal Adjuster must be promptly notified to attend to the defect.

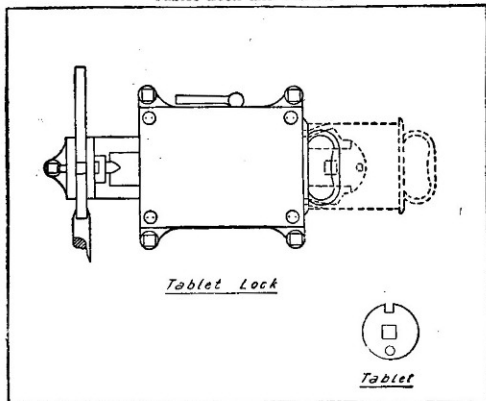
In all cases when any defect is found to exist in the Points, the Guard or Shunter in charge of the train must be informed by the employee who operated and tested them.

5. Where the Signal levers are situated on the platform and one or more sets of Points are secured by an Annett Lock with a Duplicate Lock on the Home Signal Levers, the Annett Key must, when not required for shunting operations, or for working the Signals, be kept in a safe place in the Station Office, known to those concerned. It must be used only by the Signaller for the working of the Signals, but he may hand it to a Guard or Shunter to enable shunting operations to be conducted. After shunting operations have been completed, the Signaller must not give permission for the train to proceed until the Key is withdrawn from the Lock, and in his possession. The Station-master will be held responsible for the safe custody of the Key.

6. Where necessary, the Signal Adjuster is supplied with an Inspection Key for the purpose of examining the Locks and connections in his district. The Key is not to be used for Traffic purposes, except as provided in the Rules and Regulations, or with the written authority and in the presence of the District Superintendent or a Block and Signal Inspector.

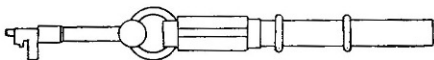
7. Hereunder are diagrams showing a Tablet Lock and a Tablet; an Annett Lock and a Staff with Annett Key attached; a Staff Lock, and an Electric Staff and a Train Staff (either of which can be used as a Key for a Staff Lock); and diagrams of Miniature Electric Staff Lock (two patterns), and a Miniature Staff.

Tablet Lock and Tablet.

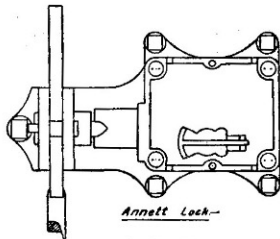


WORKING OF POINTS AND SIGNALS, ETC.

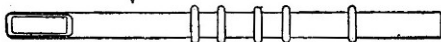
Annett Key attached to Train Staff. Annett Lock. Electric Staff.
Staff Lock. Train Staff.



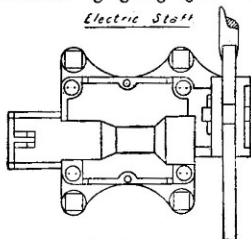
Annett Key on Train Staff.



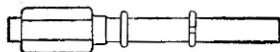
Annett Lock—



Electric Staff

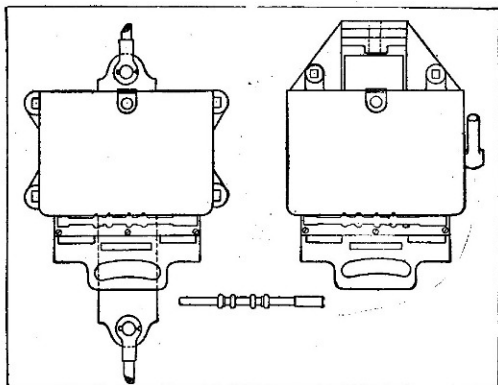


Staff Lock



Train Staff

Miniature Staff Locks and Staff.



Signalling in Foggy Weather.

THE FOLLOWING INSTRUCTIONS ARE SUPPLEMENTARY TO THOSE CONTAINED
IN THE BOOK OF RULES AND REGULATIONS

1. Duties of Fog-signalman where appointed in connection with an Automatic Signal.—(a) When a Fog-signalman is employed in connection with an Automatic Signal, he must place two Detonators, ten yards apart, on one rail of the Line for which the Signal is at Stop, and exhibit a Red Hand Signal to the Driver of an approaching train until the train has been brought to a stand.

(b) Where Three-position Signals are in use, the Fog-signalman must not take up the Detonators unless the "Clear Normal Speed," "Clear Medium Speed," or "Reduce to Medium Speed" Signal is exhibited.

When a Warning Signal is displayed indicating that the Signal next in advance is at Stop, the Fog-signalman must continue to exhibit his Red Hand Signal until the Driver has been warned by the explosion of one (or both) of the Detonators, when the Green Hand Signal must be exhibited to the Driver and Guard.

(c) In the case of an Automatic Signal having failed to go to the Stop position after the passage of a train the Fog-signalman must go back and act as prescribed for the Fog-signalman at a Home Signal; see clause (g) Regulation 103. The next following train must be stopped, and the Driver instructed to proceed cautiously, and to inform the Station-master or Signalman at the first Station or Signal-box of the circumstances.

2. Appointment of Fog-signalmen and Groundmen.—(a) At every Station where Repairers are employed as Fog-signalmen or Groundmen (see clause 17), the Road Foreman must, on or before the 1st February in each year, furnish each Station-master in his section with a statement showing the names of the Repairers and other Way and Works Branch employes that will be available to act as Fog-signalmen or Groundmen at his Station, and the following information in respect of each man:—

- (i.) Name (Christian and Surname).
- (ii.) Grade, and whether permanent or supernumerary.
- (iii.) If in possession of,—
 - (a) Copy of the current Fog-signalling instructions.
 - (b) Book of Rules and Regulations.
 - (c) General Appendix.
- (iv.) If up to required standard in Vision, Hearing and Colour Sense.

The Station-master must remind the Road Foreman in good time that the foregoing information is required.

(b) Except in the case of an Intermediate Station in Electric Staff or Tablet Sections, every Station-master must, not later than the 15th of February in each year, furnish the General Superintendent of Transportation, the Metropolitan or District Superintendent, as the case may be, and the District Block and Signal Inspector, with a list showing the names

SIGNALLING IN FOGGY WEATHER.

and addresses, etc., of the Fog-signalmen and Groundmen and the Post or Position to which each man is appointed; the information must be forwarded on the proper Form, which will be supplied in due course by the General Superintendent of Transportation. The statement furnished by the Road Foreman in respect of the Way and Works Branch employes that will act as Fog-signalmen or Groundmen, must be attached to the Form. When compiling the list of Groundmen, the then current instruction in connection with Groundmen may be taken as a basis.

(c) At all Signal-boxes from Kensington Junction and South Kensington Junction to South Yarra Junction and Hawthorn Junction inclusive, one spare Fog-signalman, or two if available, shall be appointed to each Signal-box. If the regular men have reported for duty, the spare man or men must remain in attendance until further instructed, and advice be sent at once by telephone to the Block and Signal Inspector's Office, Flinders-street. If any Station or Signal-box be short supplied, the Block and Signal Inspector must be promptly advised, when the best arrangements possible will be made as to the disposal of the spare men, but in the event of spare men not being available, the Block and Signal Inspector must advise the Superintendent of Melbourne Yards or the Metropolitan Superintendent, as the case may be.

(d) Accompanying the list must be forwarded a statement giving the name of every daily paid employe in the Transportation Branch at the Station, who is over the age of 21 years, and who has not been allotted to a position either as **Fog-signalman or Groundman**, and stating the reason for his exclusion.

(e) Before forwarding the list, an inspection of the Fog-signalling equipment at the Station and Signal-box must be made in order to see that the requisite number of Hand Signal Lamps and Flags are on hand and in good order; and also that a sufficient supply of Detonators is in stock. Any defect in the equipment or shortage of Detonators must be promptly brought under notice.

(f) A list of the names and addresses of the Fog-signalmen and Groundmen, showing the Post or Position to which each man is appointed, must be kept exhibited in a conspicuous place in the Station-master's Office, also in each Signal-box, and in any other convenient place that may be necessary to ensure all concerned having ready access to the information.

(g) It must be understood that the lists showing the names and addresses of the Fog-signalmen and Groundmen must be kept exhibited until such time as they are revised each year. Absence owing to sickness, transfer, or other cause, at any time, must be immediately reported to all concerned (see clause 3 of these Instructions), and the lists at once corrected. This is especially necessary in view of the fact that provision is made for the Fog-signalling Instructions becoming effective, not only in foggy weather, but also when from any similar cause, such as dust or snow storms, smoke, etc., the Fixed Signal cannot be clearly seen.

(h) When a new man is appointed to the position of Fog-signalman or Groundman, the Station-master must forward particulars on the proper Form to the General Superintendent of Transportation, the Metropolitan or District Superintendent, as the case may be, and the District Block and

SIGNALLING IN FOGGY WEATHER.

Signal Inspector. In the case of any employee who belongs to a foreign Station or Depot, the Form received from such employee's supervising officer must be attached to the Form filled in by the Station-master, and forwarded to the General Superintendent of Transportation. (See clause 3 in this connection.) Changes in the address or the Calling Station of any employee already appointed must be notified by memo.

(i) The Superintendent of Melbourne Yards, the Piermaster, Port Melbourne, and the Officer in Charge, Williamstown, respectively, must make all the necessary fog-signalling arrangements for the signal-boxes under their supervision, and carry out the duties laid down in these instructions to be performed by the Station-master.

(j) An employee whose Vision, Hearing, or Colour Sense is below the standard must not be appointed to a position as Fog-signalman, Groundman or Supervisor.

(k) Fog-signalman or Groundman to visit his post.—The Station-master or other Supervising Officer must arrange for each employee, as soon as possible after his appointment to the position of Fog Signalman or Groundman, to visit, during daylight, all posts at the Station at which he is appointed, and which are ordinarily manned during foggy weather, in order that he may make himself familiar with the locality.

3. Fog-signalman and Groundman Not Available for Duty.—

(a) When an employee in the Way and Works Branch who has been appointed to a position as Fog-signalman or Groundman is not available for duty as such, the Ganger or other responsible employee must at once advise the Station-master or other officer, in writing, specifying in all cases whether he can provide a substitute, and, if a substitute can be provided, giving full particulars on the proper Form. If a substitute cannot be provided by the Ganger or other responsible employee, the Station-master must arrange to have the vacancy filled.

In similar circumstances, the same arrangement will apply when men are provided from the Goods Shed, the Carriage Cleaning Staff, or the Stores Branch; the Melbourne Goods Superintendent, the Chief Foreman of the Metropolitan Car and Waggon Shops, or the responsible employee in the Stores Branch, as the case may be, advising the Superintendent of Melbourne Yards or other officers concerned. Transportation Branch officers, having men working under them who have been appointed as Fog-signalmen or Groundmen at Stations not under their supervision, must act in the same way.

Any change in the address of a Fog-signalman or Groundman must be notified by memo to the Station-master or other Officer concerned.

(b) As far as is reasonably practicable annual leave should not be granted to employees appointed to Fog-signalmen's or Groundmen's duties during the period May 1st to August 31st inclusive. In the event, however, of leave being arranged, the foregoing instructions in regard to the appointment of a substitute must be complied with.

(c) If any difficulty be experienced by the Station-master in obtaining the necessary men, the General Superintendent of Transportation, the Metropolitan or District Superintendent, and the Block and Signal Inspector must be promptly communicated with.

SIGNALLING IN FOGGY WEATHER.

4. Examination of Fog-signalmen.—(a) The Station-master must ascertain from the Examining Officers whether the Fog-signalmen who are required to do duty at his Station, or at any intermediate Signal-box or Station under his supervision, have been examined as to their fitness, and passed, by the authorised Officer. In the event of any such employee not having been passed, it will be the duty of the Station-master to examine him and satisfy himself that he is competent to act in the position to which he has been assigned.

(b) Every permanent employe of the Transportation Branch, who is required to do Fog-signalling duties and who is actually engaged in train running operations, and every permanent employe of the Way and Works Branch who is continuously employed as a Repairer, must be examined every third year as to his knowledge of fog-signalling duties. Every other employe, whether permanent or temporary, who is required to do Fog-signalling duties, including the platform staff at Flinders-street, Prince's Bridge, Spencer-street, North Melbourne, Ballarat, Bendigo and Geelong Stations, must be examined every year.

(c) All examinations in Fog-signalmen's duties should be completed each year not later than 31st of March.

(d) The Superintendent of Melbourne Yards must arrange for the examination of every Fog-signalman under his supervision. The Block and Signal Inspector, No. 1 District, must arrange for the balance of the examinations on the Suburban lines, as far as and including Werribee, Sunshine, St. Albans, Broadmeadows, Ringwood, Dandenong, and Frankston. At all places on the Down side of these Stations, the respective Station-masters must, except where otherwise provided (see following paragraph), conduct the examinations. If circumstances prevent the Block and Signal Inspector, No. 1 District, from completing the examination of men in the area mentioned, by 31st March, the Station-masters at the places concerned must promptly conduct such examinations and report the result to the Inspector, who must, however, re-examine the men at the earliest opportunity. The same course must be followed in cases where an employe who has not been examined is nominated to a Fog-signalman's position after the examinations for the Station have been completed.

At Castlemaine, Bendigo, Maryborough, Ballarat, Geelong, Seymour, and Tallarook, the Block and Signal Inspector must examine the men appointed to Fog-signalling duties, but if the Inspector is prevented from completing the examinations by the 31st March, the Station-master must examine the men as prescribed in the preceding paragraph. The Station-master must also examine any employe who may be subsequently appointed, provided he has not already been examined. The Inspector in each instance must re-examine the men at the earliest opportunity.

5. Station-master to satisfy himself Fog-signalmen and Groundmen, etc., are at their posts.—(a) In foggy weather, or when from any other cause the Fixed Signals cannot be clearly seen at a distance of not less than 400 yards, it is the duty of the Station-master or other appointed person to take care that Fog-signalmen and Groundmen are employed at all the places where their services are required.

Attention is directed to instructions respecting extinguishing the lights of Signals in foggy weather. (See sub-clause (i), clause 2, of Instructions on page 138.)

SIGNALLING IN FOGGY WEATHER.

(b) **Dust Storms, Smoke, etc.**—If at any time the Fixed Signals cannot be clearly seen at a distance of not less than 400 yards owing to their being obscured by smoke, falling snow, dust, and such conditions are likely to continue, it is the duty of the Station-master or other appointed person to take care that Fog-signalmen and Groundmen are employed in the same way as in foggy weather. In any such case the Signalmen and the Fog-Signalmen and any other employees concerned must understand that, as far as is reasonably practicable, any Rule, Regulation, or other Instruction that becomes effective during foggy weather, will also become effective during such time as the Fixed Signals cannot be clearly seen from any cause other than Fog.

(c) The Station-master must satisfy himself that the Fog-signalmen and Groundmen have duly proceeded to their respective Posts, when it is necessary for them to do so; and take the name of every man before sending him to the Signal-box to sign on. The Station-master must keep in close touch with the Signalman in charge of the Box until all the necessary positions have been filled.

6. Inspector's Office.—(a) The Block and Signal Inspector's Office, Flinders-street, is open continuously from 6 a.m. to 12 midnight on week days throughout the year.

(b) The Traffic Inspector and the Block and Signal Inspector who are on afternoon duty, must remain on duty all night, should the weather indications be such as to indicate that a fog will occur before 6 a.m. Both Officers must co-operate in any action they may be able to take, to ensure the Fog-signalmen and the Groundmen being on duty for the first passenger trains.

7. (a) Lighting and Extinguishing of Signal Lamps, Regulation 87.—Attention is directed to sub-clause (i.), clause 2, page 138, respecting the lighting and extinguishing of Signal Lamps during the months of May, June, July and August.

(b) **Station-masters to be on Duty in Time.**—At Suburban Stations, the Station-master or person in charge must, during the months of May, June, July and August, be on duty at least thirty minutes before the first passenger train is due, in order that he may, if necessary, make proper arrangements for the employment of the Fog-signalmen and Groundmen. If the weather be foggy when the Station-master comes on duty in the morning, he must immediately communicate with the Signalman and ascertain what men have reported for fogging duty, what places have been filled, and what arrangements have been made for calling those men who have not yet arrived.

8. Calling Arrangements.—(a) The General Superintendent of Transportation will issue special instructions as to how Fog-signalmen and Groundmen at certain places are to be called.

(b) When, from the indications, it appears reasonable to anticipate the approach of a fog, the Station-master, at places where an employee is appointed as Caller for the purpose of calling the Fog-signalmen and Groundmen, may arrange for him to be kept on duty after his usual hours so that he may be despatched at once for the Fog-signalmen and Groundmen should their services be required. Should the Caller be off duty, he may be sent for and retained in case his services should be

required; but this will not relieve the Station-master of the responsibility of sending for the Fog-signalmen and Groundmen by any other means should their services be necessary.

(c) The Station-master or other officer must satisfy himself that the Callers appointed are conversant with the places of abode of the men they are to call, and to ensure this, the Callers are to be furnished with names and addresses of the men required, and are to be given time off, so that they may visit each place in daylight and familiarise themselves with the exact location of the addresses given. Each Caller when his services are required must call **ALL the men on his list** with the greatest possible despatch. He must then return to his home Station to report results, and fill in particulars on Calling cards, showing the names of all the men on his list, the time each was called, and the reply received; thus:—"Will report"—"Not at home"—"Sick," and so on. The Officer-in-Charge must forward these Calling cards by the first available train to the General Superintendent of Transportation, but before doing so he must check them carefully to see that **all the men** to be called by his Station are accounted for. The Caller's explanation is to be obtained for any discrepancies, and subsequently forwarded to the General Superintendent of Transportation.

(d) It is most important that Fog-signalmen and Groundmen should lose no time in proceeding to their Posts after being called.

9. Supply of Refreshments.—(a) Inquiries should be made when a man takes up the duties of a Fog-signalman or a Groundman as to whether he has recently had a meal, and, if not, refreshments must be given him as soon as possible. If the man has had a meal shortly before going on Fogging duty, he must be supplied with refreshments three hours after taking up the duty.

(b) The most suitable refreshments are sandwiches and bread and cheese, and hot tea or coffee, and when necessary such refreshments must be provided, and an account for the same forwarded to the General Superintendent of Transportation.

(c) At any place where it is not practicable to supply a Fog-signalman or a Groundman with refreshments, either during the day or night, he should be instructed to bring his own refreshments; and it will be the duty of the Station-master or Signalman, as the case may be, to whom the man reports, to enquire as to whether he has sufficient food with him for the time that he is likely to be on duty as a Fog-signalman or Groundman.

10. Train Register Books.—The Signalman must record in the Train Register Book the time the Signals become obscured, and when they can again be clearly seen at a distance of not less than 400 yards. The entries must be made across the figure columns on the line immediately following the previous entry.

11. Signing On and Off Duty.—(a) Except as provided in Sub-clause (c), before an employee commences duty as a Fog-signalman or a Groundman, he must sign on in the Train Register or other Book provided for the purpose at the Signal-box in connection with which he is employed, and show the time, and before going off duty, he must sign off in the same Book, and again show the time.

SIGNALLING IN FOGGY WEATHER.

(b) Fog-signalmen and Groundmen appointed to any of the Signal-boxes from Kensington or South Kensington to South Yarra inclusive must report for duty to the Signaller as in the case of intermediate Junctions or Signal-boxes away from a Station; see Regulation 101.

(c) When a Fog-signalman starts from a Station, or has to pass a Signal-box on his way to take up Fog-signalling duties at a Distant Signal, he must personally inform the Signaller at such Station or Box that he is going to commence Fog-signalling at that Signal, and the Signaller so informed must advise the Signaller at the Box from which the Distant Signal is worked that the Fog-signalman has gone to his Post, stating the time, and the Fog-signalman will not then be required to go to the Box, in connection with which he is employed, to sign on duty. The time at which the Fog-signalman is reported as going to his Post must be recorded in the Train Register Book or the Attendance Book, as the case may be, at each place. The Fog-signalman must sign on at the Station or Box in the rear; but it will be necessary for him to sign off duty at the Signal-box from which the Signal in connection with which he is employed is worked. In such case the Fog-signalman's Lamp, Flags, and Detonators must be kept at the Station or Box at which he reports himself on duty.

(d) Where Attendance Books are provided for the Fog-signalmen, a separate book is to be used for each alternate week, after the manner of the Train Register Books, and when in case of a fog, the Attendance Book has been used, it must be forwarded along with the Train Register Book to the Block and Signal Inspector.

12. Distant Signals to be Manned First.—When a fog or other conditions arise which render necessary the employment of Fog-signalmen, the first Fog-signalmen to arrive must be sent to the Distant Signals even if they are not the regular men appointed to those Posts. As the manning of Distant Signals is of first importance, the men who are most readily available should be appointed to those Signals.

13. Appointment of Supervisor.—When the total number of Fog-signalmen exceeds 6, a competent man must be appointed as Supervisor to visit them at their Posts, and see that they are performing their duties in a proper manner, and are supplied with the necessary Signals, furnishing them with a further supply of Detonators if required. The Station-master must appoint the Supervisor, and should any difficulty be experienced in obtaining the services of a suitable employe for the position, the Station-master must advise the officers concerned in order that the Ganger or some other employe may be appointed.

14. Signalmen and Assistant Signalmen.—During foggy weather, or when a fog is in the vicinity, Signalmen and Assistant Signalmen, who have not been assigned to a Post or position in connection with Fog-signalling, must remain on duty and render such assistance as may be necessary unless they are informed by the Station-master that their services are not required. If they are in doubt as to what course to pursue, they must, before going off duty, obtain instructions from the Station-master.

15. Special Instructions to Fog-Signalmen.—In addition to having a copy of the Book of Rules and Regulations and the General Appendix, every Fog-signalman must be supplied with, and have with him when on duty, a copy of any Special Instruction which is issued in connection

SIGNALLING IN FOGGY WEATHER.

with Fog-signalling. At a Station the Station-master, and at an Intermediate Junction or Signal-box away from a Station the Signaller must see, before a Fog-signaller proceeds to his Post, that he is supplied with a copy; spare copies must be kept on hand for the purpose. In the event of any employee not having a copy of these Instructions, he must immediately apply for one.

16. Working of Signals During Foggy Weather.—Regulation 67, Clause (b), and Regulations 76 and 81.—(a) During foggy weather, or when from any other cause, the Signaller cannot see when the last vehicle of a train has passed the Signal controlling the entrance of trains into the forward Section, such Signal must not, except in case of accident or obstruction, be replaced to the Danger or Stop position until the Signaller has definitely ascertained, as shown hereunder, that the train has passed the Signal:—

- (i.) By the automatic release of the Back Lock by the train (if the lever concerned has Back Locking apparatus attached), or by the operation of any other apparatus which indicates that the train has entered the Section ahead of the Signal.
- (ii.) By a verbal or telephone message from the Fog-signaller, Groundman, or other competent employee, or—
- (iii.) In the absence of either of the above means, by advice from the Signaller in advance to the effect that the train has arrived there, or by the receipt of the **Train Arrival Signal**, in accordance with clause (c) of Rule 12, Appendices iv. and v.

(b) **Trains Delayed in Starting.**—Should anything occur to delay the starting of a train or engine from a Station during foggy weather or falling snow, the Station-master or person in charge must at once inform the Signaller.

17. Employment of Groundmen.—(a) The duty of a Groundman consists in ascertaining by personal observation and verbally informing the Signaller at the Signal-box in connection with which he is working, when the last vehicle of each train with Red Tail Light attached has passed a specified Clearing Point and is proceeding on its journey; in addition, the Groundman must carry out any other instructions specified herein with respect to the Post, to which he is appointed.

Special Instructions containing a list of places where Groundmen are appointed, and defining their duties, are issued each year by the Superintendent of Transportation.

Unless otherwise arranged, the Regulations and Instructions respecting the hours and places at which Fog-signallers are to report for duty will also apply to Groundmen. (See Regulation 101.)

(b) Unless otherwise arranged, the Station-master must instruct each employee appointed as Groundman, or any employee who will require to act as Groundman, in his duties, and must, in all cases, point out to the Groundman the Clearing Point which the last vehicle must pass before the Signaller is informed that the Line is clear. Unless otherwise provided, the Clearing Point is **440 yards** ahead of the outer Home Signal.

(c) When the Signaller has been advised by the Groundman that the train which last passed his Box on the Line for which the Groundman is acting has proceeded on its journey, and that the last vehicle of such

SIGNALLING IN FOGGY WEATHER.

train with Tail Signal attached has passed the proper Clearing Point, he may then give the **Train Arrival** signal. The Groundman, after the passage of each train or engine, must inform the Signalman whether the Fixed Signal has been replaced to the Stop position. Should the Groundman omit to give this information, the Signalman must make proper enquiries respecting the working of the Signal.

(d) At any place where a Groundman has not reported for duty, or at any place where a Groundman has not been appointed, or a Track Indicator is not provided, the Signalman must not give the **Train Arrival** signal to the Box in the Rear until he has satisfied himself either by personal observation that the train has passed the Clearing Point, or by obtaining advice from the Signalman that the train has arrived at the Box in advance. In the event of a Track Indicator being provided, but defective, the Station-master must, if practicable, appoint a Groundman, except when the Signalman shall have time to go to the Clearing Point to satisfy himself that the Line is clear.

(e) The Station-master must satisfy himself that the Groundmen have duly proceeded to their appointed Posts, but when filling the positions of Fog-signalmen and Groundmen the placing of Fog-signalmen must be considered as being of first importance.

(f) Every Groundman must be supplied with and have with him when on duty as a Groundman a copy of the current instructions issued for the direction of employes concerned in Fog-signalling.

18. Use of Telephones.—(a) Groundmen and Fog-signalmen who have to perform Groundmen's duties are permitted to use available telephones as a means of communication with the Signalman if time can be saved by so doing. The Station-master or other responsible officer must in all cases point out the position of telephones, and instruct the employes concerned in their use. If the telephone fail at any time, verbal communication must be resorted to. All communications, whether verbal or by means of a telephone must be direct between the Groundman and the Signalman, and a third person must never be permitted to act as an intermediary.

(b) When the **telephone** is used for communicating with the Signalman, the message must be spoken distinctly and in a clear, even tone, and the Signalman must repeat it back before he acts upon it. Where two or more trains are concerned the name of each train and the particular Line and direction in which the train is proceeding must be specified when giving the messages. The employe using the telephone must in every case ascertain that he is in communication with the proper Signal-box. The **Verbal** communication that passes between a Fogman and a Signalman must be clear and distinct; and if the Signalman receiving it has any doubt as to what is intended to be conveyed to him, he must have the communication repeated to him before he acts upon it.

CLAYTON FOG-SIGNALLING MACHINES.

1. At certain places, machines known as the Clayton Fog-signalling Machines are provided to enable the Fog-signalman to place Detonators on the rail or remove them from the rail, from the position at which he would ordinarily exhibit his Hand Signal. See diagrams of machine on page 163.

2. In connection with the Clayton Fog-signalling Apparatus there are:—

- (a) A detachable magazine which is capable of holding 30 Detonators.
- (b) A carrier by means of which a Detonator is carried from the magazine to the face of the rail, and
- (c) An operating lever connected by rodging to the carrier, and with which the Fog-signalman operates the Machine.

The operating lever is situated on the ground or in a fog-signalling pit between parallel Lines, or on the left side of the Line for which the Fog-signalman is acting.

Note.—Drivers must be particularly careful not to allow steam or water to pass from the ejectors or cylinder cocks of engine when passing Fog-Signalmen's pits.

3. Method of Working Machines:—

- (a) When the Fixed Signal is at Stop the operating lever should be in the "ON" position and the carrier of each machine should be holding a fresh Detonator on the rail.
- (b) When the Detonator is run over, the operating lever must be pulled over to the "MAC" position, thereby returning the carrier, still gripping the spent Detonator, to the magazine. The spent Detonator striking against the side of the magazine is knocked out of the grip of the carrier, which then enters the magazine, selects a fresh Detonator, and is ready for the next movement of the operating lever from the "MAC" to "ON" position, thus placing the fresh Detonator on the rail.
- (c) Assuming that a Detonator has been placed on the rail in the "ON" position as described above, and that the Signal for which the Fog-signalman is acting is put to the Proceed position, the Fog-signalman must then, if the Line is clear, move his operating lever from the "ON" to the "OFF" position (the centre notch), thus moving the carrier to the "OFF" position and holding the Detonator clear of the rail, and when the last vehicle has passed the machine (or both machines, if two be in use), the Fog-signalman must at once replace the Detonator or Detonators on the rail by returning the lever to the "ON" position.

When placing the operating lever from the "On" to "Off" position in accordance with Clause (c) care must be taken not to move the lever beyond the centre notch. If the operating lever is moved beyond the second notch the carrier releases its grip, and the Detonator may be misplaced.

- (d) Whenever the Signal is at Stop, the Fog-signalman must be careful to place and keep a good Detonator on the rail until one of the Detonators has been exploded by the train or engine. It must, however, be borne in mind that the second or inner Detonator is only intended for an emergency use in case of a failure of the outer Detonator; when, therefore, the outer Detonator is exploded by a passing train it will not be necessary to explode the inner one, which can be removed by the operation of the lever as described above

SIGNALLING IN FOGGY WEATHER.

before the train reaches it. If, however, only the outer Detonator be exploded the carriers must be returned to the magazine for fresh Detonators, and in such case the unexploded Detonator at the inner position would be dislodged from the carrier at the magazine among the Detonators previously exploded. The Fog-signalman or other employee must, when removing the magazine, select the unused from the spent Detonators and replace the former when necessary to recharge a magazine.

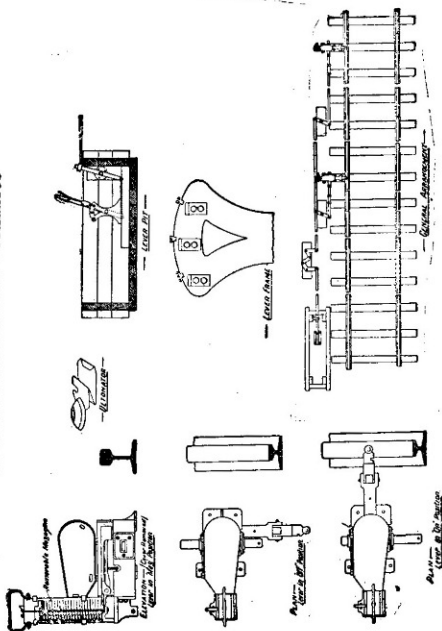
- (e) Should the inner as well as the outer Detonator fail to explode, the Fog-signalman, in addition to showing his Red Hand Signal, must, if practicable, immediately after the second or inner Detonator is run over, operate the lever to obtain fresh Detonators and at once place them on the rail between the wheels of the train and bring about an explosion before the whole of the train passes. If the Driver hears the explosion of a Detonator after passing the machines, he must act as if it had been caused by his engine or train.
- (f) The mechanism of the detachable magazine is so arranged that when there are only two Detonators left in the magazine the operating lever becomes interlocked and cannot be worked. This interlocking is designed to inform the Fog-signalman that the magazine requires to be re-charged with fresh Detonators. When, therefore, the Fog-signalman finds the movements of the lever obstructed he must at once examine his magazine, first placing two Hand Detonators on the rail. The Fog-signalman and the Supervisor (see clause 13, page 158), must see that the magazines are fully supplied with Detonators, and during the fog the magazine must not be removed from the machine for any purpose until Detonators have, by hand or otherwise, been placed on the rail.

The locking of the operating lever as described above is brought about when the sliding weight is at the bottom of the magazine, therefore when refilling the magazine care must be taken to first lift the weight so that it will be above and resting on the top Detonator.

- (g) Fog-signalmen in charge of machines must, before proceeding to their posts, be supplied with at least 36 Hand Detonators, which they must have ready for immediate use as in the preceding clause or in case of failure of the fog-signalling machines.
- (h) When the Fog-signalman has received the permission of the Signalman to discontinue fog-signalling, the operating lever must be secured in the "MAC" position by means of a padlock, and the key of the padlock, with the magazines and Detonators must, unless otherwise arranged, be left at the Signal-box.
- (i) The Signalman will be responsible for the custody and safety of the magazines and keys when not in use and for having the magazines charged and ready for use when the Fog-signalmen report for duty.

4. Diagrams of parts of Clayton Fog-signalling apparatus are shown on next page.

CLAYTON FOG-SIGNALLING APPARATUS



Detention at Home or Starting Signals.

(REGULATION 75.)

1. (a) When a detention occurs at a Home, Starting, or Advanced Starting Signal, the Driver must immediately sound the whistle, and the Signaller must, if he cannot allow the train to go forward at once, show a Red Hand Signal. If the Red Hand Signal be not given, the Guard, Shunter, or Fireman must, except as hereunder provided, at once, as well as in all cases of excessive detention, even if such Hand Signal has been given, go to the Signal-box, and remind the Signaller of the position of the train. In foggy weather, or when from any other cause, there is not a clear view between the Signal-box and the train, the Guard, Shunter, or Fireman must (except as shown in these Instructions) immediately upon the train coming to a stand, proceed to the Signal-box.

(b) In order that Trainmen may, when necessary at certain places, promptly remind the Signaller of the position of the train, special Telephone communication is provided between the Fixed Signals (see list of places shown at end of this Instruction) and the Signal-boxes from which such Signals are worked.

2. (a) The Telephone at the Signal is enclosed in a small wooden box, which is fixed either on or close to the Semaphore. The box is distinguished by having the letter "T" painted on the front. The door is secured with a spring latch, and may be opened by turning the latch handle. In the box is a combined Receiver and Transmitter and a Bell, and on the right hand side is a brass key, which, when firmly pressed, causes a Bell to ring in the Signal-box. The mode of communicating is as under:—

- (i) To call the Signaller, the brass key must be pressed firmly down whilst counting four, and when this has been acknowledged by the Signaller giving an answering ring, the Telephone must be taken off the hook and the necessary message communicated, each word being spoken clearly and distinctly. The message from either end must not be considered complete until it has been repeated back to the sender, and the latter has indicated that it is understood.
- (ii.) If, after the lapse of a short interval, no acknowledging ring be received, a second ring should be given, and the Telephone then taken off the hook, as it is possible that the Bell may have failed, and yet the speaking apparatus be in working order.
- (iii.) When the messages have been properly exchanged, the Telephone must be replaced on the hook, and the door of the box shut and securely latched.

(b) At the Signal-box the Telephone must be attended to personally by the Signalman who works the Signal from whence the bell ring is received.

(c) The Metropolitan Superintendent or the District Superintendent, as the case may be, and the Superintendent of Melbourne Yards must arrange for each special Telephone in the respective areas under their supervision to be tested daily by a competent employee. The result of the test and the time it is made must be entered on the figure line in the Train Register Book. If, when the test is made, the Telephone is found to be defective, steps must be immediately taken to have it put into working order. The Station-master at North Geelong must arrange to test the Telephone at the Down Starting Signal as above directed.

3. (a) Whenever a Light Engine, or a Passenger train with only one Guard, is brought to a stand at or in the vicinity of any of the Signals enumerated, the Driver must give a long whistle, and if the Signal remain at Danger or Stop, or, if it be taken off and the train or engine be unable from any cause to proceed, the Fireman must go immediately to the special Telephone and remind the Signalman of the position of the train, or engine, and at the same time state what train it is, and specify the Line it is on.

(b) If the Signalman cannot give permission for the train or engine to proceed or to be shunted clear of the Running Lines he must inform the Fireman as to—

- (i.) The cause of the detention.
- (ii.) How long it is likely to last, and, where sleeves can be used,
- (iii.) Advise him that the necessary sleeve or sleeves have been applied, in accordance with the Regulations, to the Signal or Signals necessary for the protection of the train or engine, but, before replying to the Firemen, the Signalman must make prompt use of the sleeve or sleeves.

(c) When the Fireman is satisfied regarding the nature of the detention, and is quite clear that the Signalman has advised him that the sleeve or sleeves have been applied, he must return to the engine and report the particulars of the Signalman's reply to the Driver. If the Driver be not satisfied with the information furnished by the Signalman, or if the Fireman fail to obtain a satisfactory communication within three minutes from the time that the train or engine has been brought to a stand, the Driver must see that the Fireman goes at once to the Signal-box as required by Regulation 75. The Fireman when going to the Signal-box should inform the Guard of his intention, provided this can be done without delaying his arrival at the Box.

(d) In the case of a train, when the Driver is satisfied with the information furnished, the Guard must, without delay, be advised in the following manner that the Signalman has been communicated with:—

- (i.) When there is nothing to obstruct the view between the engine and the rear portion of the train:—

In clear daylight, by the All Right Hand Signal. (See Regulation 71.)

Between sunset and sunrise, by the exhibition of a Green Light held steadily in the hand.

DETENTION AT SIGNALS.

(ii.) In foggy weather or at any time when the rear portion of the train cannot be seen—By the Driver giving a "Crow-whistle."

(e) The Guard must acknowledge the Hand Signals by repeating them, but if he should not receive a Hand Signal or hear the "Crow-whistle," or be informed by the Fireman that he is going to the Signal-box, he must without delay take steps to see that the Fireman communicates with the Signalman.

(f) Should the delay continue for three minutes after the Signalman has replied, the Fireman must again communicate with the Signalman, unless the Signalman in his reply stated that the detention would exceed three minutes, when the message must be repeated at the end of the time stated, and, in either case, during continued delay, it must be repeated as often as the Driver may consider necessary.

If the detention occur to a Passenger train with two engines and only one Guard, or two or more Light Engines coupled together, the Fireman of the leading engine must attend to the Telephone or go to the Signal-box, as may be necessary.

(g) When satisfactory messages have been exchanged between the Fireman and the Signalman, in accordance with the foregoing, the Fireman need not go to the Signal-box (Regulation 75 is modified accordingly); this, however, will not relieve the Guard or Shunter of responsibility of proceeding to the Signal-box, when, in accordance with Sub-sections (ii.), (iii.), (iv.), or (v.) of Regulation 75, it is his duty to do so, and in any case in which it is the duty of the Guard or Shunter to proceed to the Signal-box, the Fireman must, nevertheless, inform the Signalman of the detention, by means of the special Telephone.

In every case, whether it be to use the Special Telephone, or to proceed to the Signal-box, the Driver will be held responsible for seeing that the Fireman acts without any loss of time.

The attention of Trainmen is directed to the special Instructions on page 687, respecting the Down Starting Signals at Footscray Junction.

4. Every Signalman concerned is hereby informed that in every case of detention at a Fixed Signal, or the obstruction of any Running Road, he must promptly make use of the sleeves or other appliances where provided to serve as a reminder that certain Signals must be kept at Danger.

5. In the event of a train or Light Engine being detained at a Fixed Signal, where there is a special Telephone, the Signalman may require to communicate with the Driver by ringing the Telephone Bell. When the bell is heard ringing, the Driver must see that the Fireman proceeds at once to the Telephone.

6. Where Three-position Signalling is in operation it will not be necessary for Guards, Firemen or Shunters to go to the Signal-box, as required by Regulation 75; but, in every case when a train is detained at a Signal at which a Telephone is provided, the instructions respecting the use of such Telephones must be observed.

DETENTION AT SIGNALS.

Special Telephones are provided at the places specified hereunder.

Station or Signal-box.	No. of Signal Post.	Description of Signal.	Position of Telephone.
Flinders-street (A) ..	162	Up Home Signals, St. Kilda and Port Melbourne Lines	At foot of Signal Post
" " " ..	24	Disc Signal, No. 1 West	On Signal Post
" " " ..	—	No. 1 Signal Bridge	At West end of Plat. 4 & 5
Murrumbeena Box ..	8	Down Starting Signal	On short post near Signal
Carnegie Box ..	1B	Up Starting Signal	" " "
Caulfield (B) Box ..	24	Down Starting, Mordialloe Line	" " "
" " ..	29	Down Starting, Oakleigh Line	" " "
Glenhuntly ..	2B	Up Starting	In Gatekeeper's Cabin at Neerim Rd. Crossing
South Yarra Box ..	F124	Up Auto. Signal	On short post at foot of Signal Post
Windsor Box ..	14	Up Home Signal	On short post near Signal
Elsternwick Box ..	12	Up Home Signal	" " "
" " ..	6	Down Home Signal	" " "
" " ..	7	Down Dept. Home Signal	On short post near Down end of Up Platform
Brighton Beach Box ..	15	Down Home Signal	On short post near Signal
Burnley Box ..	2	Down Home Signal	" " "
" " ..	23	Down Dept. Home, Darling Line	" " "
" " ..	26	Up Home Signal, Darling Line	" " "
Hawthorn Box ..	2	Up Home Signal, Kew Line	" " "
" " ..	26	Down Dept. Home Signal Kew Line	On wall of Booking Office
Camberwell Box ..	63	Down Home Signal	On short post near Signal
" " ..	2	Up Home Signal	" " "
" " ..	12	Up Home Signal, Ashburton Line	" " "
" " ..	8	Up Dept. Home Signals	On end of Up Platform
Surrey Hills Box ..	14	Down Starting Signal	On short post near Signal
Box Hill Box ..	19	Up Starting Signal	" " "
Box Hill Station ..	—	—	One " on Fence Up end of Down platform, and one Up end of Island Flat.
Inglis-street Box ..	46	Up Starting Signal	On end of Up Platform, Montague
Graham Box ..	38	Up Starting Signal	On short post near Signal
Port Melbourne Box ..	24	Up Starting Signal	" " "
Northeast Box ..	5	Down Starting Signal	" " "
Northeast Loop Box ..	Auto. Box	Special to Loop Junct.	Up end of Up Platform, Rushall Station
Fairfield Box ..	188	Box	On short post near Signal
Viaduct Junct. Box ..	9	Down Home Signal	On short post near Signal
" " " ..	32	Down Homes, Nth. & Sth. Viaduct Lines	On short post near Down South Line Signal
" " " ..	16	Up Goods to Nth. or Sth. Viaduct	On short post near Signal
" " " ..	U16	Up Goods to Nth. or Sth. Viaduct	" " "
Ballerat East Box ..	2	Up Starting Signal	" " "
Hamilton Box ..	3 & 4	Down Home Signals, Ararat & Balmoral Lines	" " "
No. 1 Signal Box ..	30	Up Home to West Plat.	" " "
" " " ..	—	Electric Crosslocks, No. 9 & 10 East Plat. Roads	On short post near Crosslocks
" " " ..	—	Electric Crosslocks, No. 11	" " "
" " " ..	—	East Platform Road	" " "

DETENTION AT SIGNALS.

TELEPHONES.—Continued.

Station or Signal-box.	No. of Signal Post.	Description of Signal.	Position of Telephone.
Franklin street Box ..	5 & 2	Down East and West Home Signals	On short post near Signal
" " " "	W95	Down Essendon Line	" " "
" " " "	Auto.		
" " " "	69	Up Home Signal, Coburg Line	" " "
" " " "	29	Up Home Signal Race Line	" " "
" " " "	89	Down Home Signal, Race Line	" " "
" " " "	U46	Disc Signal, Engine Road	" " "
North. Melb. Box ..	1	Down Home Signal, Exit from Goode Yard	" " "
" " " "	6	Down Starting Signals, Signal Bridge, W'mstn., Country Lines	" " "
" " " "	11	Down Starting, Coburg Line	" " "
" " " "	R100	Up Auto. East Plat.	Up end Up East Platform
" " " "	M100	Up Auto. Centre Plat.	Up End Up Centre Platform
" " " "	W100	Up Auto. West Plat.	Up end Up West Platform
Kensington Box ..	25	Down Home Signal	On short post near Signal
Essendon Box ..	56	Down Starting Signal	" " "
Wallan Box ..	4	Down Home Signal	" " "
Sth. Brunswick Box ..	28	Down Starting Signal	On Signal Post
Sth. Kensington Box	19	W'mstn. & Country Lines, Up Starting	On short post near Signal
" " " "	38	Down Starting Signal	" " "
Footscray (A) Box ..	2	Up Starting Signal	" " "
" " " "	17	Down Starting, W'mstn. Line	" " "
" " " "	9	Down Starting, Bendigo Line	" " "
West Footscray Box .	17	Disc Signal, Gravitation Yard	On Signal Post
Sunshine Box ..	29	Up Starting Signal	On short post near Signal
" " " "	44	Down Starting, Bendigo Line	" " "
Yarraville (A) Box ..	23	Up Starting Signal	" " "
Newport (A) Box ..	34	" " "	" " "
N. Williamstown Box	61	" " "	" " "
" " " "	66	Down Starting Signal	" " "
Williamstown Box ..	72	Up Starting Signal	" " "
N. Geelong (B) Box	10	Down Starting Signal	" " "

NOTE.—Any case of theft or damage to the Telephones or Telephone Batteries must be immediately reported by telegraph to the Superintendent of Goods Train Service. In addition the usual reports must be sent through the District Superintendent; the local police must also be informed without delay.

Control and Working of Stations.

RESPONSIBILITY OF STATION-MASTER.

(Regulation 112.)

1. The attention of every Station-master is called to the necessity of his being on the platform when trains are approaching or passing, and to the importance of his giving special attention to out-door matters, and to the daily inspection of the Station Buildings, Signal-boxes, and Yard. He is further reminded that it is his duty to give personal attention to the shunting of trains into, and out of, the Sidings at his Station for Passenger trains to pass, particularly when trains are running late or out of course, also to superintend operations generally, and satisfy himself that the work is properly performed and the traffic conducted expeditiously. The Station-master must direct the attention of employees under his supervision to the instructions respecting disarrangement and reporting of irregularities of overhead electrical equipment and within electrified areas see that every such employee has a proper knowledge of the precautions necessary for safety.

See "General Description of Overhead, Etc.," pages 35 to 45 of this Book.

2. (a) Except as shown in clause (b) hereof, at Stations on Single Lines where the Station-master is not responsible for the working of the Tablet or Electric Staff instrument, or the carrying out of the Rules and Instructions in regard to the Train Staff and Ticket System, he must, nevertheless, see that the Driver receives the Tablet or Staff or the Train Staff Ticket for the Section over which he is about to travel before allowing the train to depart. This will not, however, in any way relieve any other employee responsible for the proper observance of the Rules and Instructions in regard to the Tablet, Electric Staff, or Train Staff and Ticket System, from the duty of seeing that the Driver is in possession of the necessary Tablet, or Staff, or Train Staff Ticket.

(b) The Station-masters at the Stations shown hereunder are exempt from the operation of clause 2, viz:—

Ararat
Benalla
Dandenong
Geelong
Hawthorn

Korong Vale
Maryborough
North Fitzroy
Sale
Stawell

Warragul (for Goods train
and Down Passenger trains)
Wodonga

EMPLOYEES ENTERING ARRIVAL TRAINS.

1. Unauthorised employees are prohibited from entering arrival trains at Terminal Stations until after all the passengers have alighted, and the vehicles have been searched by an employee told off for the purpose. This employee should, at the same time, see that there is no danger of an outbreak of fire from lighted matches, cigar or cigarette butts, or tobacco pipe embers. Station-masters and persons in charge are to see that this instruction is strictly carried out.

CONTROL AND WORKING OF STATIONS.

2. Before country trains are taken out of running a close examination of cars must be made and Porters and others authorised to search or otherwise attend to trains will be held responsible for the strict performance of this duty. Train Conductors must also be specially watchful to detect and remove any burning refuse which may be left by passengers. Prior to the suburban trains being taken out of running, Guards and Platform Porters are enjoined to keep a close watch in order that smouldering material may be promptly discovered and removed, and where practicable the compartments should be examined. Special attention must be paid to the examination of smoking compartments.

UNIFORM CLOTHING.

1. Members of the staff must not, whilst on duty, wear articles of attire that do not conform to the instructions respecting the wearing of uniforms; no employee in uniform shall wear a tie of any other colour than black, nor any article of attire that, in the opinion of his superior officer, is out of keeping with his uniform.

2. (a) The uniform cap shall be worn in the regular manner, straight on the head, with the peak in front, so that the number and badge may be easily discerned.

(b) No alteration in the number on a cap or hat worn by any employee shall be made without the authority of the General Superintendent of Transportation.

(c) No employee shall remove or cover his badge whilst in uniform, or wear the badge of another employee.

(d) Every employee shall keep his uniform clothing well brushed and clean and neat in every particular, and shall wear it only while on duty and when travelling to and from his place of employment. Every employee in uniform shall keep his boots clean and well polished.

(e) Any employee who disfigures or damages any portion of his uniform, through private or improper use, prior to the due date of renewal, will be called on to replace such portion at his own expense.

When the uniform of any employee is replaced by new uniform, the nickel buttons of the old uniform must be removed, and forwarded to the Chief Storekeeper.

SMOKING ON DUTY.

Officials whose duties bring them in view of and in contact with the public, must not smoke whilst engaged in such duties.

STATION ORDER BOOKS.

1. (a) At any Station where three or more employees are engaged, a Station Order Book, of which the pages are to be numbered consecutively, must be kept for the purpose of posting orders of a more or less

permanent character affecting the local staff. Notices or orders effective for a few days only should be suitably filed in a conspicuous place and noted by employes concerned, and when no longer operative should be at once removed from the file.

(b) At any Station where Special Instructions relating to Trains, Signals, or Working Orders are in force, a copy of every such instruction must be entered in a separate Order Book for the information and guidance of all employes concerned.

(c) At any Station where all the yard and platform work is not directly done or supervised by the Station-master, a separate Yard Order Book must be kept and all daily orders relating to yard work and to Passenger, Mixed, Goods and Live Stock trains must be entered therein.

(d) The Order Book must also contain a copy of any Special Instruction that may be in force in connection with the Guard's duties at any Station where he may be required to act as Station-master at certain Roadside Stations.

(e) The Order Book must be kept in a position readily accessible to the staff concerned, and every new order placed therein must be read and initialed by each member; the Station-master or other responsible official must see that the Order Book at each Signal-box is regularly written up and neatly kept.

(f) Employes will be held responsible for perusing the Order Book at their respective Stations, and for making themselves thoroughly conversant with the contents; the attention of Station-masters is directed to Regulation 112, respecting their duty in regard to the staff at Stations being conversant with instructions.

2. When an employe is transferred to, or sent to relieve at a Station, he must, before taking up duty at such Station, examine and initial the local Order Book.

3. Care must be taken to see that the whole of the staff read the instructions contained in each Weekly Notice, which must be initialed by them and kept neatly together in a position where the whole of the staff will have easy access to them.

4. Officers in charge must arrange for orders being brought forward in the Order Book from time to time with a view to their being kept permanently before the notice of the staff and readily accessible for reference. The standard Order Book (M. 163) is very large, and any Station at which the number of orders to be posted is limited should, for the sake of neatness and economy, utilise a book of foolscap size (M. 37).

TIME-TABLES.

1. When new Time-tables are issued, Station-masters and other officials concerned must at once carefully examine those portions of the Working and Sheet Time-Tables which have reference to their Stations, and to those Stations under their control. In the event of any errors or discrepancies being disclosed, particulars must be reported without delay to the Chief Time Tables Officer. See also general instructions respecting Working Time Table Book, page 4.

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2. Station Wall Sheet Time Tables are re-issued concurrently with the Working Time Table Books, and must be neatly posted in the appointed position on the Station platform; Wall Sheets must be renewed as soon as they become damaged or faded.

3. In order that intending passengers may not be inconvenienced by reason of altered timings of regular trains, Station-masters are enjoined to see that local residents are apprised of impending changes in the Time Tables, if necessary, by posting, for a few days, a Special Notice in a suitable position.

4. When Notices are issued announcing alterations to the Train Service, the necessary amendments must be made on the Sheet Time-tables in ink; or, when printed slips are provided for the purpose, such slips must be neatly pasted over the portion of the Time-table affected. When such Notices involve important alterations in the running of trains by which passengers are conveyed, the attention of passengers must be called to such alterations by means of posters placed in prominent positions near the entrance gates. Where it is reasonably practicable oral notification must also be given.

New Time Tables (book and sheet) for Caretaker and No-one-in-Charge Stations will be enclosed with those for their supervising Stations, and Supervising Station-masters will require to see that such are distributed and posted at due date, and that any necessary amendments are made on the Sheet Time Tables as specified above.

DISTRIBUTION OF NOTICES.

When any Notices relating to signalling matters or to the general working of the Line are forwarded to the Station-master for delivery to the Locomotive Officer, Foreman, or other responsible employee, a receipt for the same must be taken, and the time that delivery is given must be shown on the receipt.

CARE OF GLAZED ADVERTISEMENTS.

The attention of Station staffs is directed to the need for supervision over the glazed advertising frames exhibited on Station buildings by the Railways Advertising Division; it is in the power of the staff, largely, to protect these frames from damage, or, in the event of wilful breakage, to secure the name and address of the offender.

RUNNING OF SPECIAL TRAINS.

(Attention is directed to Clause (m) of Regulation 1, and the supplementary instructions on page 4 of this Book, which prescribes that the word "train" includes "Light Engine.")

Issue and Distribution of Notices.

1. A Printed or Written Notice must, when practicable, be given of the running of every Special Train, and must be regarded as current until cancelled or until the train to which it refers has run. Every such Notice must be issued in sufficient time to permit of all concerned being duly advised.

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2. Every Light Engine or train not scheduled to run, and every Light Engine or train scheduled to run as required, must, when put on, be treated as a Special Train, but except in respect of its first trip, this will not apply to a Light Engine or train put on to "run until further notice."

3. (a) Every Locomotive Officer and Station-master is responsible for the proper distribution of the Special Train Notices to the employees under him as soon as possible after receipt; and the Station-master must obtain a receipt, showing the time of delivery, for every such notice forwarded to him for delivery to the Locomotive Officer, Foreman, or other responsible employee in another Branch.

(b) Outside the area defined in clause 11 of these instructions, every Works Foreman, Road Foreman, Track Ganger, Electrical Fitter-in-charge, Signal Adjuster, and Overhead Linesman, will be supplied direct from the Head Office of his Branch with copies of every current Notice issued in connection with the running of any Special train with which he is concerned. Should a Repairer be deputed by the Ganger to assist in the examination of the length of Line (vide Regulation 281), the Ganger will be responsible for supplying him with a copy of every such Notice received, and the Ganger or Repairer, when patrolling the length, will be responsible for verbally informing all employees (including Gatekeepers) at work on or near the Line, of the running of the special train. When advising employees, the Ganger or Repairer must make sure that his verbal communication is properly understood. The employees referred to in this clause, within the area specified in clause 11, will not be supplied with Special Train Notices, except in the case of special train scheduled to run beyond that area, in which case officials whose districts extend beyond such area will be supplied with the special Train Notices.

4. Every Station-master, Inspector, Train Control Officer, Train Running Officer, Foreman, Engine-driver, Motorman, Train-examiner, Guard, Signalman, Yard Foreman, Shunter, Porter, and (within the electrified area) Overhead Linesman, must, subject to the following exceptions, be supplied with a copy of every current Notice issued in connection with the running of any Special Train with which he is concerned:—

(a) Only one copy of each Notice need be supplied for all the men employed at any Signal-box.

(b) At any Station where the Porters or other employees connected with the working of the traffic have ordinary access to the Station-master's office, it is not necessary to supply each employee with a copy, but a copy must be kept in such office so as to be readily accessible for reference by such employees. At any Station where the employees do not have ordinary access to the Station-master's office, a copy must be kept in a convenient place accessible to all engaged in the working of the traffic.

(c) It is not necessary to supply any Fireman with a copy of any such Notice, but he must be allowed to peruse every such Notice issued to his Engine-driver.

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Every Engine-driver, Fireman, Motorman and Guard, must also examine all Special Train Notices at every Changing Station or Depot at which he remains for any time beyond that occupied in his ordinary duties.

5. Any employe to whom a Notice should be supplied, and who does not receive one, must at once report the omission to his Superior Officer.

When a Printed or Written Notice is not Issued.

6. (a) When it is not practicable to issue a Printed or Written Notice in sufficient time to permit of all concerned being duly advised of the running of a Special Train, particulars of its running must be sent by means of a telegraph or telephone message to the necessary Stations in advance. Immediately on receiving any such message, the Station-master must—

- (i.) See that every employe under him connected with the working of the traffic is duly advised.
- (ii.) See that a copy is delivered to the Officer in charge of the Locomotive Depot, if one be at the Station, and to the Office of any Works Foreman or Road Foreman which may be at the Station, whether such Officer, Works Foreman and Road Foreman are specifically mentioned in the message or not.
- (iii.) See that particulars of the running of the Special Train are promptly exhibited on the Notice Board, as provided in clause 14.
- (iv.) Telephone a copy of the message to the Caretaker at any Station supervised by him in the Section over which the Special Train will run. If a telephone be not available, he must send the message by any train which will run ahead of the Special; or, if no train will run ahead of the Special, but one will run in the contrary direction over the same section before the Special, he must arrange for the Station-master at the other end of the Section to send the message.
- (v.) Furnish the Guard of any preceding train which is timed to stop (or arrange with the Station-master at the other end of the section for him to do so), with copies of the message, and instruct him to affix a copy to the Notice Board at each No-one-in-charge Station under the supervision of the Station-master, which the Special train will arrive at or pass.
- (vi.) Send a copy of the message, by the first convenient train preceding the Special, to any other Station which has neither telegraph nor telephone communication, or arrange for the Station-master on the other side of such Station to do so.
- (vii.) Advise any Way and Works Branch employe, Electrical Fitter, or Overhead Linesman, who may be at work on the Line, in the immediate vicinity of his Station, or whom he may see before the train has arrived or passed. See clause 16.

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(b) No Code word, such as "Aerne," "Aclo," "Abuz," etc., must be included in the copy of any telegraph or telephone message exhibited on a Notice Board, or sent to a Caretaker or a No-one-in-charge Station, either by train or otherwise; the Phrase of the code words, as shown in the Telegraph Code Book, must be always substituted.

7. Every Officer in charge of a Locomotive Depot who receives a message as to the running of a Special Train, must see that the information is communicated to all employes under him who will be affected by the running of such train.

8. The Station-master or other responsible officer at the starting point of a Special Train of the running of which no previous Printed or Written Notice has been given, and which is also expected to return as a Special, must confer with the Station-master at the destination Station, and, in the case of a Ballast Train, with the Road Foreman or Ganger in charge of the train, as to the most suitable time to run and return the train, having regard to the work to be performed by the train on Up and Down journey; the responsible officer at the originating Station must then make out a schedule for both the forward and return journeys if such a course be practicable, so that the running of the train in each direction will be made known by one advice.

Train Signals for Special Trains.

9. (a) When practicable, the running of any Special Train of which Printed or Written Notice has not been given must, in addition to being telegraphed or telephoned as required by clause 6, be denoted by Special Train Signal as prescribed in Regulation 153.

(b) No such Signal, however, will be carried on any of the Lines between Melbourne and Port Melbourne, Williamstown, Newport South, Sunshine, Essendon, Coburg, Reservoir, Heidelberg, Sandringham, St. Kilda, Box Hill, Kew, Darling, and Oakleigh, with the exception (i.) that such a Signal will, if necessary, be carried on the last Suburban Passenger Train for the day, and (ii.) that such a Signal may also be carried by a train which will run beyond any of such Stations to indicate the running of a Special Train which will also proceed beyond such Station.

(See instructions on page 120 respecting the running of Special Train or Relief Engine in Metropolitan area whilst the Signal-boxes are closed on Sundays.)

10. The Station-master or other responsible employe at the starting point of a Special Train must, except as provided in clause 13, arrange for any additional Tail Signal required under the provisions of Regulation 153, to be affixed on the rear of the last vehicle of the preceding train (in whichever direction it runs), and he must inform the Guard of the description and destination of the Special Train. The Guard of the train which carries the additional Tail Signal must inform the person in charge of each Station at which he stops of the description and destination of the train that is following, and must remove the additional Tail Signal when it is no longer required.

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11. The duty of seeing that the Special Train Signal is carried in respect of any Special Train running beyond Newport South, Sunshine, Essendon, Coburg, Reservoir, Heidelberg, Box Hill, Caulfield (for the Frankston Line), or Oakleigh, will devolve upon the respective Station-masters or other responsible employes at such Stations, or upon the Signalman in the case of Newport South. The Signalman at these places must also see that the additional Tail Signal is carried. If it be necessary, however, for the last Suburban Passenger train for the day to carry an additional Tail Signal, the Station-master or other responsible employe at the starting point of the train must see that it is affixed.

12. Every Station-master and other responsible employe must be on the alert to see that the proper Special Train Signals are carried. Any employe who notices that a Special Train Signal is not carried when one should be, must take any steps that are reasonably practicable to have the attention of the Guard called to the matter, and, in addition, he must promptly report the matter in writing to his Superior Officer.

Exhibition of Notices on Notice Board.

13. A Special Train Notice Board, of ample size for requirements, and distinctly described as such, must be placed in a suitable position sheltered from the weather, at every Station, excluding any Suburban Station within the area defined in clause 11, and any Suburban Station specified in that clause which is a dead-end terminal, but including any Suburban Station specified in that clause which is not a dead-end terminal. The Special Train Notice Board must not be used for any purpose other than that for which it is supplied.

14. (a) For the purposes of acquainting all concerned, particularly Gangers and Repairers, of the running of a Special Train, the Station-master at any Station at which a Special Train Notice Board is provided (and including both Newport Station and Newport South Signal-box in respect of Special Trains required to run on the South-Western Line) must, in addition to seeing that Notices are distributed and exhibited as required by clauses 3 and 7, see that a copy of the Notice is exhibited on the Notice Board on the morning of the day prior to that on which the Special is to arrive at or to pass his Station, or as soon thereafter as he shall be advised; and if the Station-master has no other advice of a Special train than a Signal attached to a preceding train, he must exhibit the Notice from the time the preceding train arrives at or passes his Station. When the Special train arrives or passes, the Notice relative to it must be removed. In the case of a Light Engine or a train scheduled to run until further notice, the Notice must remain exhibited until the Station-master is satisfied that it has been seen by all concerned.

(b) At Caretaker Stations these duties must be carried out by the Caretaker, but where it is reasonably practicable the supervising Station-master must remind the Caretaker of such duty.

15. (a) Every Ganger, Repairer, Fitter, Signal Adjuster, and Overhead Linesman is reminded that it is essential in the interests of his own safety to examine the Special Train Notice Boards at Stations, and if any Notices be exhibited to note carefully the particulars, and whenever

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possible, furnish the employe in charge of any special gang that may be working in his own length, and the Ganger in charge of any adjoining length (if there be no Station on such adjoining length), with the information. The Boards must be examined whenever it is reasonably practicable, not only in the morning and evening, when the employe is going to and returning from work, but during working hours, whenever a favourable opportunity occurs. At No-one-in-charge Stations, the Ganger must see that out-of-date Notices are removed from the Board.

(b) Employes in charge of Hand-cars, Trolleys, Tricycles, or other machines used for conveying employes on the Line, are referred to the instructions on pages 493-498 as to the precautions which must be taken by them before entering a Section with any such vehicle.

Driver of Special Train to be Warned when Notice is Not Given.

16. (a) When it is necessary to run a Special Train at short notice on any Double Line beyond Sunshine, Essendon, Box Hill, Caulfield for the Frankston Line, or Oakleigh, and time does not permit of the Notice being exhibited on the Notice Board on the preceding day, as required by clause 14, and the last train due to run over the section prior to the running of the Special has passed without carrying the proper Tail Signal to indicate that a Special Train will run, the Driver of the Special Train must be notified by the Station-master in writing that the Trackmen have not been advised as to the running of his train, and he must be directed to keep an extra good look-out for hand-cars, trolleys, tricycles, or similar vehicles, and for any men who may be working on or near the Line.

(b) On a Single Line the Driver must be so advised before his train is allowed to enter upon the Staff or Tablet Section in advance.

In the event of a Special train being run on any Section where a Mail Motor service is in force, the Officer-in-Charge at Staff Stations must (if the Mail Motor be running) be careful to arrange for both the Motorman of the Mail Motor and the Train Crew of the Special to be informed.

Driver of Special Train to Keep a Good Look-out.

17. The Driver of every Special Train must be specially vigilant in keeping a good look-out for men who may be working on or near the Line. The whistle must be sounded on entering a tunnel to warn all employes who may be working inside, and it must be repeated occasionally when passing through any long tunnel, and when entering and passing through any deep cutting situated on a curve. It must also be sounded when nearing any other place where, from the nature of the approach, the workmen have not a good and distant view.

Correspondence.

18. (a) The Station-master must see that correspondence addressed to any employe of the Way and Works Branch (particularly that relating to Special Trains) is placed in the proper box without delay, and when correspondence is on hand, he must call the attention of any employe of the Way and Works Branch, who may be about, to the fact. At a Caretaker Station the Caretaker must act in like manner to the Station-master. The responsible employes of the Way and Works Branch must arrange for the boxes to be cleared at regular intervals.

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(b) At a No-one-in-charge Station the Guard must place correspondence addressed to any employe of the Way and Works Branch in any box provided for the purpose, and, when practicable, must advise any employe of the Way and Works Branch who may be in the vicinity.

(c) Where a length does not extend to a Station on either side the Road Foreman must arrange for the correspondence for the men employed thereon to be cleared from the Station box and placed in the box provided at the place where the lengths adjoin. He must also instruct the Ganger as to the clearing of such box:

Road Foreman to Enquire as to Distribution of Notices.

19. The Road Foreman must from time to time enquire as to whether the arrangements in regard to the distribution of Special Train Notices on his section are working satisfactorily, and, if not, he must bring under notice any suggestion for improvement. He must promptly report any neglect to examine the Notice Boards or to clear the correspondence boxes.

20. Employees are reminded that, although every effort will be made to convey information as to the running of Special Trains in accordance with these instructions, it is frequently required to run Special Trains without previous Notice of any kind; it is necessary, therefore, at all times to be prepared for such extra trains. Gangers and Repairers are specially enjoined to look for Signals indicating the running of Special Trains. (See Regulation 283).

SWEEPING OF PLATFORMS, ETC.

The sweeping of dust, or rubbish of any kind, on to the Lines is prohibited. Station-masters and Officers-in-charge must see that this instruction is strictly observed.

EXAMINATION OF POINTS, ETC.

1. The Station-master or person in charge must, unless otherwise arranged, and immediately prior to the passing of any Passenger, Mixed, or Goods train, personally examine every set of Facing Points secured by hand locking bar and padlock, or bolt and padlock, which leads to or from a Running Line, and see that they are properly secured for the passage of the train. If any work is being carried out at or in the vicinity of the Points, the Station-master must notify the employe in charge of the work that the train is approaching, and when the Points have been secured they must not be again unlocked without the permission of the Station-master. All Hand Points, Points fitted with a hand locking bar and padlock, or bolt and padlock, must be kept locked when not in actual use, and the keys must be kept in the Station-master's office.

2. The Station-master must make a daily inspection of the condition of all locking-bars, bolts, and Scotch Blocks, and, if any be found out of order, the Road Foreman or Ganger must be at once advised.

3. (a) Inspectors, Yard Foremen, and Shunters, as well as Station-masters, Road Foremen and Gangers, are expected to examine Hand Points and Plunger Locking at intervals, and, after having defects attended

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to, must report every case in which the Hand Points, from any cause, fail to work properly. Guards, Shunters and others when engaged in shunting must see that the Hand Points are properly cleaned, lubricated and reliable, and that ballast, ashes and litter of every description are kept clear of the blades. The attention of Enginemen is also directed to Regulation 178, which prohibits the cleaning of fire-boxes or throwing out cinders when in the vicinity of Points.

(b) On Lines where sand-drifts or dust-storms are prevalent, Station-masters, Guards, Shunters, Gangers, and others concerned must take care to see that, after such occurrences, all Points and Point Boxes are clear of sand.

4. (a) At a Caretaker or No-one-in-charge Station or Siding where the Main Line Points are secured by Hand Locking Bar and Padlock, the Supervising Station-master must satisfy himself by frequent personal inspection when practicable, or if this cannot be done, by obtaining an assurance from the Guard of any train that works at any such Station or Siding, that the Points and connections are in good working order and properly cleaned.

(b) The Station-master must have a proper understanding with consignors or consignees at intermediate Stations or Sidings under his supervision, and satisfy himself that they and their employees or agents engaged in loading or unloading operations have a proper knowledge of the functions of Catch Points and Derails, and of the importance of truck doors and lashings being properly fastened.

(c) The Guard must promptly bring under the notice of the Station-master any defect that he may observe in the equipment of the Points or Scotch Blocks at any of these places.

PADLOCKS OF FACING POINTS AND SCOTCH BLOCKS

If unnecessary force be used to open the padlocks (Brooke's, Miller's or V.R. locks), which are used for securing Facing Points and Scotch Blocks, the locks will be damaged; employees who have to use these locks should note:—

- (i.) That the keys can only be withdrawn after the bow of the lock is fastened in the keep.
- (ii.) That if the locks cannot be opened by finger and thumb pressure on the top of the key, something has probably interfered with the mechanism, and an examination should be made to ascertain the cause before resorting to additional force.
- (iii.) That the most likely cause of any derangement is an accumulation of dirt or lack of lubrication. If the lock be stiff to open, it should be filled with oil, and, usually, in about a minute afterwards it can be opened. If kerosene be used for filling the lock for cleaning purposes, it should afterwards be emptied and lubricating oil introduced to make the lock work easily.

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LOADING MILK, EGGS, ETC., AND PARCELS IN BRAKE-VANS.

1. (a) In order to prevent delay to Passenger or Mixed trains in connection with the carriage of milk, the following instructions must be observed:—

(b) Immediately the cans are received at a Station, they should be either loaded direct into a Milk truck (where one is provided), or placed, if possible, upon trollies, which should, before the train is due, be wheeled to a position on the platform, as nearly as can be judged, opposite the spot where the Van into which the cans are to be loaded will come to a stand. In the event of there not being sufficient trollies, the cans must be placed on the platform where they will cause the least possible delay in loading. Care must be taken to stand the trollies in such a position that they will be well clear of any open door on an incoming or outgoing train, and so secured as to prevent their moving.

(c) Outwards Parcels are to be taken, just before the train arrives, to where the Van usually stops; this does not necessarily apply to a small parcel, which may be handed to the Guard.

(d) When loading milk, care must be taken to keep together in one part of the Van all cans for one Station, so that the staff at the Receiving and Transfer Stations may be able to readily unload the cans; in every case, the waybills should accompany the milk.

(e) In all cases milk cans, parcels, etc., must be stowed in such a manner as to permit of the Guard or Motorman having free access to the door on each side of the Van; the Motorman or Guard, as the case may be, must see that this instruction is observed.

(f) **Conveyance of Milk, etc., in Motorman's Compartment.**—Except as shown hereunder, and where specially authorised by the General Superintendent of Transportation, milk cans, parcels, etc., must not be placed in the leading Van of an electric train; in exceptional cases the Guard may place such goods in an intermediate Brake-van, but the doors must not be left unlocked:—

ST. KILDA LINE.—Boxes of eggs may be forwarded from Flinders-street in leading Van of Down St. Kilda Trains for discharge on Up journey at Albert Park.

PORT MELBOURNE LINE.—Boxes of eggs may be forwarded from Flinders-street in leading Van on Down Port Melbourne Trains for discharge on Up journey at Graham.

UPPER FERNTREE GULLY LINE.—Meat and perishable parcels for Stations on Ferntree Gully and Gembrook Lines may be forwarded in leading Van of Down Ferntree Gully Trains.

FRANKSTON LINE.—Newspapers for Frankston and beyond are to be loaded in leading Van of the first Down Train from Flinders-street.

(g) In the event of the Van accommodation being insufficient or the quantity usually despatched from one Station being sufficient to fully load a truck, the attention of the Metropolitan or District Superintendent, as the case may be, must be at once directed to the matter, so that the existing arrangements may, if necessary, be altered.

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2. (a) Parcels and Barrows on Platforms.— Goods and parcels put out of trains must not be allowed to lie in the centre or near the edge of platforms; in all cases they must be at once moved back to the wall or fence, or to some recognised safe place, for which the Station-master must arrange.

The Guard or other responsible employe must leave them at least six feet from the edge of the platform, and draw the attention of an employe to them when handing over the waybill. See instructions re Guards discharging Parcels from passing trains, pages 480-481.

(b) Barrows and platform trollies must, when not in use, be kept back close to the building or to the wall or fence, at the back of the platform, and left secured in such a position as to prevent them from moving. The handles of barrows and trollies which are left unattended on a platform must, when practicable, be left in an upright position, in order to avoid risk of injury to passengers.

(c) Porters or others, when wheeling barrows or trollies, or moving articles of luggage, must be very careful to avoid colliding with any person on the platform, and, in all cases, must give timely and efficient warning.

(d) The utmost vigilance must be observed by employes generally in preventing newspaper vendors or other unauthorised persons from wheeling or interfering with trollies, barrows, etc., on the platforms.

RAMPS AND STEPS OF PLATFORM, ETC., TO BE SANDED WHEN REQUIRED.

Ramps and steps of platforms, bridges and subways, must, when necessary, be strewn with sand, ballast or ashes, or otherwise treated so as to avoid any cause of accident to passengers by slipping. If Station-masters have not sufficient ashes or sand for the purpose, application should be made to the Road Foreman for the district for a supply of suitable material.

STATION YARD GATES.

(Regulation 112.)

1. Every Station-master is held responsible for the Station and Siding Gates being properly attended to, and closed (except when it is necessary that they should be open) to prevent cattle straying on the Line. He will require to proceed by summons against the owner in any case of trespass after obtaining authority to do so from the General Superintendent of Transportation.

2. (a) The Gates through which carts and other road vehicles enter the Station Yard are to be fastened back to the fence or catch when opened during the day, so as to prevent them being blown across the roadway. If it be found that the Gates have warped, or that they have dropped too low to permit of the catch being fastened, the Works Foreman must be promptly notified.

(b) Except where special Instructions are issued to the contrary, all Gates giving access to Goods Yards or Sidings must be closed and locked at 5 p.m., except on days on which the weekly half-holiday is observed, when the Gates must be closed and secured at 1 p.m.

CONTROL AND WORKING OF STATIONS.**LIGHTING OF STATIONS, DEPOTS, ETC.**

1. Platform Lamps.—(a) Platform lamps must, when required, be lighted at dusk and be kept burning until after the departure of the last Passenger or Mixed Train, when the lights must, unless otherwise ordered, be extinguished. When there is a Man in charge, the lamp or lamps in the urinal must be kept burning until after the arrival or departure of the last Passenger or Mixed train, as the case may be. Special arrangements regarding the lighting of lamps at Caretaker, No-one-in-charge and Flag Stations will be made as required.

(b) After the last Passenger or Mixed Train has been dealt with on Lines where Goods trains run during the night, one platform lamp may be kept burning as long as may be required at Stations where there is a Man in charge.

(c) At Stations where early morning Passenger or Mixed Trains are due to arrive or depart during darkness, all platform lamps must be lighted prior to the arrival or departure of the first Passenger or Mixed train, and kept burning until clear daylight. In the case of Country Stations where there is a long interval between trains, the platform lamps should, unless otherwise ordered, be extinguished after the passage of the first train, and if required, re-lighted in good time before the arrival of the following train.

(d) In all cases when Passenger or Mixed Trains are being dealt with during darkness, the lamps nearest the ends of the platform must be lighted.

2. Control of Electric Power for Stations.—(a) The electric supply for Electric Motors, Lifts and Cranes, Electric lighting and heating of Stations, etc., within the area of Electric traction, is under the control of the Chief Electrical Engineer; failures of Electric supply within the area mentioned above must be reported by the most expeditious means to the Electric Superintendent, Electrical Depot, Spencer-street. Telephone: Auto 257.

(b) **FAULTS IN ELECTRICAL EQUIPMENT.**—The Electrical Superintendent, Electrical Depot, Spencer-street, must be promptly advised when a breakdown of an Electric lamp, motor, lift, or other piece of Electrical Equipment occurs. A mechanic is on duty throughout the night for the purpose of attending to emergency repairs.

Reports received by telegraph respecting electric light or power fault and failures must be promptly transmitted by telephone to the Depot concerned by the official in charge of the Telegraph Office receiving the message.

(c) Incandescent Electric Lamps must be kept clean, and dusted at least once a week.

(d) Irrespective of what system of lighting is in force at a Station, the Station-master is responsible for proper lighting.

3. (a) The installation and maintenance of Electric lighting outside the area of Electric traction; the installation and maintenance of gas, lux or kerosene lightings at Stations, Depots, Crossings, etc., and the erection and maintenance of gas-holders and pipe-lines, except within Pintsch Gas Works, are under the control of the Chief Engineer of Signals and Telegraphs.

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(b) Reports of failure of gas or other lights, and any irregularity, etc., must be sent direct to the Lighting Overseer, Signal and Telegraph Branch; in the case of a defective signal-lamp the Signal Adjuster also must be notified.

(c) Every care must be taken to see that due economy is observed in the consumption of oil and gas; unless otherwise ordered, lamps must not be allowed to remain burning in clear daylight.

(d) **PETROL GAS MACHINES.**—At Stations where Petrol Gas Machines are in use, a Notice containing the following instructions must be exhibited adjacent to the machine:—

- (i.) This machine must be supplied with Petrol or Benzoline in daylight only.
- (ii.) No light of any kind must be allowed in the machine-house. When necessary to wind up machine at night a light **must not** be used.
- (iii.) Smoking is extremely dangerous, and is strictly prohibited, whilst handling Petrol or Benzoline. The residue from the machine is also highly inflammable, and care must be taken that no spark or flame is allowed to come near it.
- (iv.) The whole of the contents of the Benzoline tins when opened must be placed in either the machine tank or the storage drum.
- (v.) Partially filled tins of Benzoline are extremely dangerous, and must not be kept on hand.
- (vi.) Care must be taken that the waste liquid from the Gas Machine, drips into the receptacle provided, and not on to the floor of the Gas Plant Shed.
- (vii.) No material of an inflammable nature should be allowed to remain inside the Shed enclosure.
- (viii.) The door of the Shed enclosure must be kept locked when not otherwise required.
- (ix.) A suitable box or barrel, containing a sufficient amount of sawdust, must be kept on hand near the machine. In the event of fire, the sawdust must be thrown on the flames so as to smother them.

4. (a) Small electric lighting faults at country Stations should be attended to by a local Company's electrician and the account rendered to the Department. The Chief Electrical Engineer or the Chief Engineer of Signals and Telegraphs, as the case may be (see clauses 2 and 3), must be advised (by telegram if necessary) respecting general maintenance and lamp renewals. Requisitions for lamps must show for what purpose they are required, and must be accompanied by the butts of broken or burnt-out lamps. Lamps branded "V.R." are supplied for Departmental purposes only; unbranded lamps may be supplied at cost price for Station-master's quarters.

(b) Every pole carrying a light has a distinguishing number, and when reporting a defect by telephone or telegraph or by memo., the distinguishing number and locality of the light must be stated, in order that the Repairman may proceed direct to the defect.

CLEANING, TRIMMING, AND LIGHTING OF CARRIAGE ROOF LAMPS.**(Regulation 112.)**

The following instructions must be adhered to in connection with the cleaning, trimming and lighting of Carriage Roof Lamps:—

1. Oil Lamps must be refilled after every time of using, and also after they have been standing unlighted for any length of time (say, about two days in hot weather and about a week in cold).

2. When filling a lamp, the screw side of the holder should be tilted up from the bench about three inches, and gradually lowered as the holder fills, so as to work out all the air. The holder must, in every case, be filled to the top of the filling screw hole, and the filling screw must then be screwed down tightly to prevent air from entering.

3. A little tallow should be put on the leather washer under the filling screw, in order to keep it soft—say, about once a week. When a washer becomes hard a new one should be put in, care being taken to first remove the old one.

4. At any Station where Roof Lamps are trimmed, a sufficient stock of corks, wicks and leather washers must be kept. The wicks must be cut in such a manner as to give an even or slightly rounded flame, care being taken to trim the wicks in such a way as will prevent points of flame from running up at the sides near the glass.

5. The Chimney must be placed on the burner before the Lamp is lighted, and be raised just sufficient to allow of the insertion of a lighted match or taper. If the wick be lighted before the chimney is put on, the glass is liable to become smoked.

6. When the Lamp is lighted the chimney should be properly pressed down in its place, and the flame must be kept low until the glass is well heated. The light should then be turned up and kept burning for at least 15 minutes, after which it should be examined and the flame regulated if necessary prior to placing the Lamp in position in the car.

7. Every air hole must be kept clean and open. This applies especially to the Cosmo burners in the ABL Carriages, which must be taken apart once a month at least, and thoroughly cleaned.

8. The Lamp cover on the roof must not be closed when the Lamp is in position, it must be laid back on the top of the carriage.

9. Every Station-master and Guard must examine the Lamps in the carriages at each Station, and should any defect, such as a broken chimney or oil leaking, etc., be noticed, the defective Lamp must be removed as soon as practicable.

10. Only employes specially authorised are to be allowed to go on to the roof of any vehicle within the electrified area.

11. The Station-master, or other responsible officer, must satisfy himself that these instructions are observed, that the employes who are responsible for the cleaning and trimming of the Lamps understand their work, and are performing it properly.

HAND SIGNALS USED DURING SHUNTING OPERATIONS.**(Regulation 71, Sub-clause (v), Clause (d).)**

1. An additional Hand Signal (specified hereunder) must be used for a signal to Hit-up at night—

HIT UP—"KICK SIGNAL" ..

White light waved quickly and so displayed that the light shall not be visible to the Driver except when it is below the waist and above the shoulder of the person giving the Signal.

2. In every case the "Kick" Signal at night must be preceded by the "Move Back" Signal, vide sub-clause (ii.), clause (e), Regulation 71, and the "Kick" Signal must not be displayed until the Driver is moving back.

SHUNTING, ETC., AT STATIONS AND IN STATION YARDS.

Note.—See also Instructions re Shunting Empty Trains, pages 442-444.

1. (a) In order to reduce the heavy loss involved in repairs to damaged wagons, and also to ensure that the maximum number of trucks shall be available for public requirements, employees should co-operate in the exercise of due care to avoid damage to wagons, buffer-stops, etc., in shunting operations. It is readily recognised that errors in judgment shall occasionally occur, but if every employee observed the principles governing the safe and effective handling of trucks and train movements, the desired results would be obtained, and the interests of employees and the Department would be conserved. It is also recognised that many shunters perform the maximum work with the exercise of proper care, but as the general results reflect alike on the careful and the careless, it behoves the former to correct the latter; leading hands are expected to co-operate with the supervising officers and Yard Foremen in a united effort to maintain the highest standards of efficiency.

(b) Before any Shunting operations are commenced, Guards, Shunters and others must see that the Signalmen, Drivers and all concerned clearly understand what is about to be done; the Signalsman will be held responsible for reporting every case of omission on the part of any Shunter or Guard to comply with this. The Signalsman must satisfy himself that the Points and Signals are set in the proper position for shunting operations, as well as for the safe passage of trains; the Fixed Signals and Locking-bars must be used whenever practicable during shunting operations.

(c) At a Station where there is a Signal-box at each end of the Yard, the Signalmen at both Signal-boxes must consult each other so that they shall not foul or permit any train or engine to enter upon any Road from opposite ends of the Yard at the same time; this will not, however, apply to movements governed by a Fixed Signal controlled from the Box at the opposite end, and such movements are described by electric bell signals.

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(d) Care must be taken to see that vehicles left in Sidings are clear of fouling points of all adjacent Lines, and properly secured to admit of Shunting operations being carried on without risk of injury to the staff.

2. (a) A train, or portion of a train, must never be shunted in a Yard (except where the Points are close to the Signal-box) unless a Shunter, or some competent person, accompanies it for the purpose of seeing that the last vehicle is over the Points, and to give a Hand Signal to the Signaller to move the Points; the Signaller must not move the Points until he has received a Hand Signal from the Shunter to indicate that the whole of the train is over them, nor must the Driver move his engine or train until he has received a Signal from the Shunter that he is to do so.

(b) If there be no Shunter or Porter available, this duty must be performed by the Guard of the train.

(c) In the case of a Light Engine, not accompanied by a Shunter, the Driver must satisfy himself that the Points are in the proper position before moving his engine over them.

(d) The employe conducting the shunting must, whenever it is reasonably practicable, see that the Points are in the proper position before giving the Signal for the train to move in either direction, and, in like manner, such employe and both the Driver and Fireman, must see that the train or trains employed are protected by the Fixed Signals.

(e) At night the signal exhibited by the Shunter, Guard, or Driver must be given by a Green Light held steadily in the hand.

(f) If two engines or trains be standing in such a position that the Driver of one might mistake a Hand Signal intended for the Driver of the other engine or train, such Hand Signal must not be given, but the Shunter or other person acting as a Shunter must convey his instructions to the Driver verbally. Before making any movement in response to a Hand Signal, the Driver must satisfy himself that such Hand Signal is intended for him.

(g) When an engine or train is shunting between a Siding and a Running Line, the Signaller must not reverse the Points unless he has had an understanding with the employe in charge of the shunting; and in the event of there being no one in charge, then an understanding must be arrived at with the Driver.

3. (a) Where a Fixed Signal is not provided to control a shunting movement over Interlocked Points, the authority for the movement is as under:—

(i.) Where the Points lead from one Siding to another or from a Running Line to a Siding—an All Right Hand Signal from the Signaller by means of a Green Light or a Green Flag held steadily in the hand.

(ii.) Where the Points lead from a Siding to a Running Line, or from one Running Line to another—by verbal authority from the Signaller, as provided in the instruction **"Fouling the Running Line Inside or Outside the Home Signal"** (see page 655-656).

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(b) The Signalman must be careful to exhibit the Green Hand Signal outside the Box, and, as far as possible, in such a position that it will be taken only by the employe or employes for whom it is intended.

(c) Whenever it is reasonably practicable, the Signalman must, when exhibiting the Green Hand Signal, advise the employe in charge of the shunting movement how the Points lie.

(d) No vehicle must be shunted past a Fixed Signal at the Stop position.

4. Regulation 69.—(a) When a Signal applies from more than one Siding and there is an engine under steam in any of the Sidings, or where any such Siding forms an exit from an engine depot, no train (Light Engine excepted) or vehicle must (except as provided in clause (b) of this Instruction) be shunted into any of the Sidings until a competent man has been sent by the Shunter-in-Charge to protect the shunting operations at the fouling points in the Sidings.

(b) If a competent man be not readily available, the following precautions must be adopted before any vehicle or train is shunted into any of the Sidings:—

- (i.) The leading Shunter or other employe in charge of the shunting movement must first see that the Line on which the movement is to be conducted is not obstructed at any of the fouling points.
- (ii.) If there be an engine under steam in any of these Sidings, the employe in charge of the shunting movement must verbally instruct the Driver that he is to keep his engine clear of the Line on which the shunting is to be performed, and the Driver must not foul such Line until notified by the same man that the shunting operations have been completed.
- (iii.) Should any of the Sidings form an exit from an engine shed or depot, the employe in charge of the shunting operations must, in addition to carrying out the provisions of sub-section (i), inform the Loco. Foreman or Chargeman of the character of the shunting movement, and the latter must take the steps necessary to prevent any engine from fouling a Line on which the shunting is to be performed until he has received verbal permission from the same employe in charge of the shunting operations.
- (iv.) If, before the shunting operations have been completed, the Shunter-in-Charge be relieved from duty, the man who takes his place must, before commencing work, go to the Loco. Foreman or Chargeman and to the Driver of any engine under steam in the Siding and inform him that the shunting is to be performed under his supervision.

5. In Loco. Yards where there is a separate road for incoming and outgoing movements, shunting must not be allowed in the wrong direction if it can be reasonably avoided; trains or engines moving in the wrong direction must be properly protected.

6. (a) The Shunter must be careful not to move any Passenger or Mixed train for the purpose of taking it out of running, or any carriage, from a platform, without first obtaining permission from

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the person in charge of the platform, or if no person in charge at the time without first satisfying himself that all the passengers have alighted, and that the doors of the carriages and other vehicles are properly closed and fastened. No Passenger or Mixed train or carriage must be moved whilst any Lampman or other employe is on the roof, unless a warning has been previously given and acknowledged.

(b) When pushing vehicles, the Driver must be careful not to push the front vehicle past any Fixed Signal which applies to the Road or Siding on which the operation is being conducted when such Signal is at Stop. The Guard or Shunter whose duty it is to ride in the leading vehicle must be prepared to apply the brake should the necessity so arise, in order to prevent the leading vehicle passing the Signal at Stop.

(c) In those cases where the Fixed Signal is controlled by a Track Circuit and such Signal has been placed to the Proceed position, the Signal will be reversed from the Proceed to the Danger or Stop position when the leading pair of wheels enters the section of the Line to which the Signal applies. In such circumstances the Driver may continue to proceed, unless he receives a Hand Danger Signal to stop, in which case the train or vehicles must at once be brought to a stand.

7. Working of Turn-tables.—(a) When, owing to defect or other similar cause, the Driver and Fireman require assistance in working the Turn-table, the Guard, or one of the platform staff appointed by the Station-master, must promptly render such assistance; this will not apply where an Engine Cleaner or other employe of the Rolling Stock Branch is available. Enginemen before bringing their engines on to a Turn-table must, as laid down below for Guards and Shunters, see that the Turn-table is properly set and secured, and the necessity of keeping the engine cowcatchers adjusted to the standard height, is impressed upon all concerned.

(b) When a Motor Coach is to be turned on a Turn-table where Overhead electrical equipment is installed, the Driver of the Motor Coach must lower the Pantograph, close the Pantograph Isolating Cock, and securely apply the Brakes before the turning movement of the Turn-table is commenced; the Pantograph must not be raised nor must the Pantograph Isolating Cock be opened, or the Brakes released, until the movement is complete. The Shunter, or other employe, in charge of the movement of the Turn-table must also see that the Pantograph is lowered before the turning movement of the Turn-table is commenced.

(c) Before any train or vehicle is allowed to pass on to a Turn-table, the Guard, Shunter, or other employe in charge of the shunting movement must see that the Turn-table is in the right position, i.e., that it is level or "down" at the end the vehicle is approaching, and properly secured by the Pawls or other appliances provided for the purpose. The train or vehicle must be moved cautiously when crossing the table.

(d) Where a Fixed Signal is provided to work simultaneously with the Turn-table, the Signal must be lighted according to requirements, and Drivers must report any case in which this order is not observed.

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8. (a) When any vehicle or vehicles are being shunted against a train or carriage containing passengers, or when being shunted on to high level stages, the Air Brake on such vehicle or vehicles must be in good working order, and be connected through to the engine.

(b) The doors of loaded or empty trucks must be properly fastened before shunting is commenced; and when trucks are partially discharged, care must be taken to see that the loads are also secured before the trucks are moved. Vehicles must not be roughly shunted, and careful attention must be given to the proper application of the necessary Hand Brakes in order to avoid violent collisions of vehicles with other vehicles, or with buffer stops.

(c) Except in cases where it is unavoidable, "Q" Gas Cars must not be loose shunted. In any case where it is necessary to loose shunt such a car, or to loose shunt some other vehicle against a Gas Car, a competent employee must be in attendance to apply the Hand Brake, as required by the clause immediately foregoing.

Supervising officers must see that Gas Cars, whether charged or empty, are given the most expeditious despatch; if any delay should occur, the Superintendent of Goods Train Service must be immediately advised by telegram stating the cause of the delay.

In order to avoid damage to fittings, etc., of "Q" Gas Cars, these cars must not be kept unnecessarily attached to an engine performing shunting operations; on arrival at a Gas Depot, the Car must be promptly placed in the Gas Siding.

(d) Oil tank trucks are frequently found to be damaged, due, evidently, to rough shunting; employees concerned are, therefore, enjoined to use more than ordinary care when dealing with these vehicles.

9. When persons are engaged in removing goods into or out of trucks, or any employee is engaged in repairing trucks, the Driver must give notice to all such persons by whistling once before moving trucks that are standing in Sidings, or which may be under repair; and the Shunter or other employee before giving the Signal to the Driver to move such trucks, must always walk the whole length of the trucks, and personally caution each individual who is engaged in or about the vehicles, and, at the same time, make him understand what time it will be safe to resume his work.

10. Vehicles must not be hand shunted by placing a piece of timber through the spokes of one of the wheels and levering it against the "W" guard, as this causes the guard to become damaged. If any leverage is required to move the truck, a Pinch Bar must be used.

11. (a) When a horse is used for Shunting movements a competent employee must be always in attendance to supervise the movements and, unless the man in charge of the horse is an employee, he must be instructed by the officer in charge that no vehicle must be moved without the permission of the authorised employee.

(b) Every Shunter or other employee in charge of a horse that is used for shunting purposes must exercise special care in the movement of trucks into or out of Goods Sheds or about Piers. Trucks must not be moved until it has been ascertained that the doors are securely fastened, and that persons working in, about, or between such trucks have been duly warned.

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(c) Station-masters, Signalmen, Shunters and other employees must clearly understand that Rules, Regulations and other instructions applicable to work ordinarily performed by engine power, shall, so far as they are consistent, apply with equal force when such work is performed with a horse.

12. Where there are Hand Points worked by a Reversible Lever such lever must not be released during shunting operations until the last vehicle or the Light Engine, as the case may be, is clear of the Points.

13. Hand Brakes.—(a) White squares are painted on trucks to assist Shunters and others in promptly ascertaining the position of the Hand Brake Handle on moving vehicles.

The White squares are 9in. x 9in., and are painted on the trucks as shown hereunder:—

One on lower corner of truck immediately above Brake handle.

One at each corner of truck on same side as Brake handle.

(b) Hand Brakes on "Q" and "R" Trucks.—It should be noted in connection with the Hand Brakes on "Q" and "R" trucks that, unlike those on "QR" trucks, they do not operate on both bogies simultaneously. If the Brake be required on both bogies the brake lever at each end must be dropped.

14. Every Guard is cautioned to see that the doors of all the vehicles forming his train are securely fastened before commencing the journey.

15. Loose shunting of vehicles containing explosives or Live Stock is strictly forbidden, see Regulation 232; for definition of Loose Shunting, see page 440 of this Book.

16. Regulation 156.—An Engine-driver, when engaged in Shunting, must not leave his engine in charge of the Fireman whilst away attending to Departmental business, but, when necessary, must send his Fireman to deal with any urgent correspondence or telegrams; if at any time it should become necessary for the Driver to leave his engine, he may leave his engine in the charge of his Fireman, but the engine must not be moved during the Driver's absence.

17. The Station-master or other responsible employee is enjoined to see, as he goes about the Station Yard, that the instructions herein laid down are strictly observed by the employees concerned.

SECURITY OF WATER CRANES, HOSES AND TROUGHS, ETC.

(Regulations 135 and 182.)

1. (a) The attention of Enginemen, Station-masters, Yard Foremen, Guards and Shunters, is directed to Regulations 135 and 182, which prescribe that they are required to see that water cranes, etc., are secured clear of the tracks.

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(b) Full responsibility for securing the jib, hose, or trough rests with the Engine-driver, and although the other employes referred to are expected to see that the jibs, etc., are clear of the tracks, it is not expected that the latter should examine the fastenings immediately after use, but Station-masters and Yard Foremen must give occasional attention to that aspect and report every case in which jibs, etc., are not properly secured.

2. (a) Trackmen, when patrolling the section, or when working in the vicinity of water cranes, must see that the jibs, etc., are secured clear of tracks, and that the approved fastenings are provided and in proper order.

(b) Enginemens must also report every case in which the fastenings are not adequate for requirements.

3. **Economy in Use of Water.**—(a) Due care must be exercised by Enginemens to prevent waste of water when filling the tender tanks; the water must be promptly and properly shut off when a sufficient supply has been obtained.

(b) In the event of leakage at cranes, or a defect in the water supply equipment being noticed, the Works Foreman must be promptly notified, or if that officer be not available, either the Depot Foreman, Rolling Stock Branch, or the local Station-master, who must immediately advise the Works Foreman, and the latter must arrange for repairs to be effected as promptly as possible, and communicate with the District Engineer as to the action taken, together with the nature of the repairs and the approximate amount of water wasted.

SHUNTING OPERATIONS AT SUBURBAN STATIONS DURING THE NIGHT.

Complaints are frequently made by persons who live in the neighbourhood of Suburban Stations where Goods trains work at night time, regarding the noise that is made during shunting operations, and it has been specially mentioned in some instances that the disturbance created has been more than usual.

It is realised, of course, that work of this kind cannot be performed without some noise, but all concerned are urged to keep the extent of disturbance to the lowest possible limit, so that householders who live in the vicinity shall have as little cause as possible for complaint. The sounding of the engine whistle should be kept down to a minimum.

TRUCK WEIGHBRIDGES WITH RELIEF ROADS.

1. (a) Truck weighbridges at some Stations and Sidings are provided with Relief Roads, which permit of engines and other rolling stock not requiring to be weighed to pass over without in any way interfering with, or imposing weight upon, the weighing centres and bearings of the weighbridges.

(b) The lever working the Points at each end of the weighbridge at each place is in the weighbridge office, and under the control of the person attending to the weighing, who must, immediately the weighing has ceased, arrange to have all trucks placed clear of the Points, which must then be set for the Relief Road. The normal position of the Points is for

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the Relief Road, and the Shunter must see that they are in that position before permitting any engine, or truck not requiring to be weighed, to pass over.

2. Except where a Relief Road is provided, vehicles must not be allowed to pass over any weighbridge at a speed exceeding four (4) miles per hour; where a Relief Road is provided the speed of any engine or vehicle when passing over the weighbridge on the Relief Road must not exceed eight (8) miles per hour.

3. Serious damage is likely to be caused to the undergear of a weighbridge by shunting movements. Whenever possible in marshalling operations or other shunting movements, trucks must be kept clear of the weighbridge; and (except in weighing operations), when it is necessary for a truck to pass over the weighbridge it must be run on the Relief Road, where a Relief Road is provided. Trucks, after weighing, must not be bumped off the weighbridge, but a pinch-bar must be used when necessary to start the trucks.

STATIONS WITH SIDINGS CLOSE TO THE RUNNING LINES.

(Regulation 128.)

1. At North Brighton, Burnley, Clayton, Spring Vale, and North Williamstown, the Sidings are close to the Running Lines, and long articles that cannot be discharged without projecting over the side of the truck towards the Running Line are not to be sent there.

At other Suburban Stations, such as Graham and Newport, which have one Siding close to the Running Line and another at a distance, long articles must be loaded or unloaded at the Siding farthest from the Running Line.

2. Loading or Unloading Long Articles.—(a) The Station-master or other responsible employe at any Station having a Siding adjacent to a Running Line, must, prior to such work commencing, satisfy himself as to the character of anything to be loaded or unloaded, and, if any work in connection with loading or unloading is likely to foul the Running Line, must take special care to see that all persons connected with such work are warned that it must not be commenced until authorised by him; when practicable, the work must be personally supervised by the Station-master or other responsible employe, and he must arrange for the work to be suspended prior to the approach of any train.

(b) Whenever a Crane is to be used, whereby the jib may obstruct or foul the overhead electrical equipment of any Line, or whenever, by any possibility during the loading or unloading of Timber, Angle Iron, or other articles, the overhead electrical equipment may be fouled, the person in charge of the Crane or of the loading or unloading must, unless the work has been previously arranged for between the Electrical Engineering and Transportation Branches, communicate with the Station-master, and the latter must not allow the work to proceed until authorised by and in the presence of the Overhead Superintendent or his representative.

3. Opening Truck Doors.—Station-masters and other responsible employes must, at all times, have a clear understanding with each person

having business at the Siding, to the effect that **Swing Doors on the side nearest the Running Line must not be opened** without their permission, and, before giving permission, such employe must take the steps necessary for the safety of passing trains.

CONTINUOUS BRAKE AND OTHER COUPLINGS.

Stationmasters at Intermediate Stations must, as far as practicable, observe the state of the Air Brake and other couplings, and cause any that require it to be adjusted.

ENGINE-MEN UNDER TRANSPORTATION ORDERS.

1. At the undermentioned Stations the times at which engines are brought under Transportation orders and released therefrom are to be recorded on Forms T.R. 71 or T.R. 71a. The time of engine crews is computed from the information supplied on these returns, and care should, therefore, be taken to see that they are correctly compiled. The following Stations will furnish the required information daily on Form T.R. 71:—

Ararat	Hamilton	State Mine
Ballarat	Korong Vale	Stawell
Benalla	Korumburra	Traralgon
Bendigo	Lilydale	Wallan
Camperdown	Maryborough	Wangaratta
Castlemaine	Murtoa	Warragul
Cressy	Nyora	Wodonga
Dimboola	Seymour	Woodend
Geelong		

Stations enumerated hereunder will furnish the required information daily on Form T.R. 71a:—

Bairnsdale	Kerang	Ultima
Beech Forest	Maffra	Upper Ferntree Gully
Cohuna	Marnoo	Walhalla
Colac	Mildura	Warburton
Deniliquin	Moe	Warracknabeal
Donald	Numurkah	Warrnambool
Echuca	Ouyen	Williamstown
Elmore	Sale	Woomelang
Goroce	Serviceton	Wychebrook
Hopetoun	Shepparton	Yea
Horsham	Swan Hill	

2. At Stations not provided for in the preceding clause, shunting dockets must be used, in accordance with the following instructions, and a copy of each docket issued with respect to engines of Goods Trains must be promptly forwarded to the Superintendent of Goods Train Service.

- (i.) All shunting performed before the departure of a train, and all shunting performed after the arrival of a train, shall be covered by docket, the times being shown under item 1 or 2.

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- (ii.) If the engine, after being temporarily released from the Station Yard, is detained over the "pit" or elsewhere, waiting orders that may be delivered later, the engine must be regarded as being under Transportation orders as "stand by," until such time as it may be definitely released, or has commenced other work for the Transportation Branch.

3. For work performed at the Stations enumerated in clause 1, and also at North Melbourne and Port Melbourne, it will not be necessary for Enginemen to attach shunting dockets to their running-sheets, but for work performed and for "stand-by" time occupied at Stations other than those enumerated, shunting dockets must be attached to the running-sheet, or the time will not be recognised.

4. At Ballarat a Telephone is provided in a Sentry-box at a point near where the Loco. Roads converge on the Up side of the Humfray-street crossing, so that Drivers may communicate with the Signalman at Box "A."

When an outward engine arrives at that point the Driver is to notify the Signalman, giving him all necessary particulars, and the Signalman will enter the time on T.R. 71 as soon as he receives the message. The time of recording engines going inwards to Loco. Depot to be the time of passing Box "A."

POINTS OF CARRIAGE DOCKS SPIKED OVER.

The Carriage Dock Points at a number of Single Line country Stations have been spiked over, but the Dock may be used in cases of emergency (such as for Live-stock loading), provided the Points are released by the Ganger, and are promptly respiked by him when the necessary work is completed, and before the next train is due. Every instance of such use must be reported to the General Superintendent of Transportation. Except as provided in the foregoing, Carriage Docks where the Points are spiked must not be used without permission is first obtained from the General Superintendent of Transportation, or the District Superintendent.

LOUVRE TRUCK DOORS.

Louvre truck doors, when opened, project outside the minimum structure clearance at Station platforms, and in order to avoid damaging the ironwork of verandahs, these doors must not be opened whilst trains are being moved at platforms, nor at places where they will foul existing structures.

DOORS OF "QR" TRUCKS.

The hinges and top boards on the doors of "QR" trucks are liable to be damaged if the doors are allowed to drop unchecked. Station-masters and others concerned must, therefore, see that proper care is exercised when the doors of these trucks are being opened. If only one man is available to open the door, the following method should be adopted:—

- (i.) Secure the end of a rope to the tension rod of the under frame.

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- (ii.) Throw the rope over the truck to the other side, and take a turn round the tension rod on that side, and secure.
- (iii.) Remove the pins from the door to be opened, and lower by slackening out the rope from the opposite side.

CARRIAGE FOOTWARMERS.

1. Footwarmers are in use during the Winter months, and must be placed only in such trains as are specified in the Schedule issued from time to time as may be necessary by the Chief Time Tables Officer.

2. Footwarmers are vessels charged with acetate of soda, and sealed. They do not require recharging or replenishing while the shells remain in good order. When required for use they must be placed in a vat or tank of boiling water, and left in it for at least one hour and a quarter, when they may be removed and are ready for use. After removal, they will remain hot for 8 or 10 hours, and when such period has elapsed they should be taken by the handle, or placed in the machine provided for the purpose, and violently shaken vertically, when they will again become hot, and remain so for a slightly less period than that already mentioned, and they must then again be shaken as before. By these repeated shakings, at greatly reduced intervals, they will retain their heat for a considerable period. Footwarmers are charged in a vacuum, and their manipulation is confined wholly to heating and subsequent shaking. The joints must not be tampered with.

3. When equipping compartments with Footwarmers, care must be taken to place them under the seats, with the ends projecting a little, so as to be readily seen, but not far enough to trip passengers entering the compartment.

4. They must, when in use, be always on the floor of the carriage, and must not be roughly handled either by the staff or by passengers.

5. As an auxiliary to ensure the Footwarmers retaining their heat for a longer period, they are covered with canvas (lined with blanketing), secured by straps and buckles. The covers must be removed prior to the Footwarmers being put into the boiling water, and be replaced at once after they are taken out of the vat or tank.

6. When in use the following orders are to be observed:—

- (a) **Adelaide Expresses.**—(i.) The Footwarmers and covers provided for this service are marked "V. & S.A., J.S." (Victorian and South Australia Joint Stock), and must not, unless otherwise ordered, be used on any train, except the Adelaide Expresses. (Through Cars only.) Two (2) Footwarmers must be placed in each first class compartment, and one (1) in each second class compartment in the Joint Stock Cars, and as many as required in the Sleeping Cars.

(ii.) Special attention to Footwarmers must be given by Train Conductors in the Down and Up Expresses, and, as far as circumstances permit, the Footwarmers must be shaken at least twice between Ballarat and Serviceton; the Conductors in Sleeping Cars must shake the Footwarmers in these Cars

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as required. When Footwarmers are being shaken by Conductors, every care must be taken to avoid inconvenience to passengers.

(iii.) At Dimboola, Footwarmers must be provided in cars attached to Up Express at that Station.

- (b) **Sydney and Albury Expresses.** — Two (2) Footwarmers to be placed in each 1st class compartment, and one (1) in each 2nd class compartment. The Footwarmers in the Down Expresses must be returned in the Up Expresses next morning. Fifteen are specially covered with green carpet slips over the ordinary brown canvas covering, and these are to be reserved for the **Parlor Car** on the Sydney Express, and are to be distributed by the Conductor as may be required.

- (c) **Other Trains.** — Two (2) Footwarmers to be placed in each 1st class compartment, and one (1) in each 2nd class compartment.

7. (a) At Stations where both boiling plants and shaking machines are provided, the Footwarmers should be boiled, if time will permit, in preference to shaking.

(b) Boiling plants are provided at the undermentioned Stations:—

Spencer-street	Ararat	Numurkah
Castlemaine	Murtoa	Yarrawonga
Bendigo	Dimboola	Bright
Echuca	Hamilton	Tallangatta
Korong Vale	Portland	Flinders-street
Ultima	Hopetoun	Walhalla.
Sea Lake	Geelong	Sale
Kerang	Queenscliff	Bairnsdale
Swan Hill	Cressy	Leongatha
Daylesford	Beech Forest	Yarram
Maryborough	Port Fairy	Wonthaggi
Donald	Seymour	Upper Fern Tree
Mildura	Wangaratta	Gully
Murrayville	Wodonga	Healesville
Ballarat	Yea	Warburton

(c) At Terminal Stations where there are no boiling plants, the Footwarmers must be shaken on arrival and afterwards stacked together in one compartment of a carriage, and covered up till next morning, when they must be shaken again before being placed in the compartments.

(d) In cases where trains terminate at different points on different days of the week, the Footwarmers must be shaken up at the Station where the train terminates for the return trip.

8. (a) When carriages in which Footwarmers are used are detached at Roadside Stations, and other carriages are substituted, the Footwarmers must be transferred to the latter; but if no other carriage be put on, the Footwarmers must be placed in the remaining carriages on the train, or in the Van.

(b) When trains are reduced en route, and the carriages detached are intended to be attached to return trains, the Footwarmers must remain in the compartment, and, if necessary, be shaken up to set free the heat.

9. Employees who handle Footwarmers must watch for leakage, and should any be detected, or if the contents are liquid when cold, or light in weight, the Footwarmers must be sent up for repair, plainly addressed to the Chief Foreman of the Car and Wagon Shops, North Melbourne. The number of the Footwarmer (which will be found on each pan) to be given, and also the Station from which it is despatched. In telegraphing advice regarding Footwarmers the code word "Soda" must be used; this means, "Sending for Repair Footwarmer No."

10. At Stations where a supply of fuel for the purpose of heating Footwarmers is required, the Station-master must apply by memo. to the Transportation Stores Officer.

11. **Care of Footwarmers.**—Great care must be taken in the handling of the Footwarmers, and when being shaken by hand they must on no account be knocked on the bottom. The covers must be fastened with the buckles and straps provided, and Footwarmers must be lifted by the handle, which is to be passed through the slit in the cover. The Footwarmers when removed from compartments must be **lifted out and not dragged**, as the latter practice results in the covers being unduly worn.

12. When Footwarmers are not required for use they must be wiped clean, placed in the covers, and put away in a dry place.

13. (a) The Car and Wagon Inspector of the Rolling Stock Branch, when on his periodical tours of inspection of the Cars and Trucks in the various districts, must take every opportunity of testing the condition of the Footwarmers in the trains by which he travels. If he find that the Footwarmers are becoming cold, he must call the attention of the Station-master to them at the first stopping place so that they may be shaken, and, in addition, the equipping Station must be informed of the circumstances by wire. It is desirable that the Car and Wagon Inspector keep in touch with the employees who are immediately responsible for the work at the places where the boiling and shaking is done, and also with the District Officers of the Rolling Stock and Transportation Branches.

(b) He must send a weekly report to the Chief Mechanical Engineer through the Superintendent of Locomotive Running, showing the trains he has travelled by and the condition of the Footwarmers therein, together with any suggestions he may have to offer for the improvement of the service or the greater comfort of the passengers. Any urgent matter must be dealt with in a special report.

(c) He will require to see that these instructions, and any others that may be issued from time to time, are duly observed, and generally endeavour to see that the best results are obtained.

Employees of the Transportation and Rolling Stock Branches must render every possible assistance to the Car and Wagon Inspector in carrying out his duties.

CONTROL AND WORKING OF STATIONS.**PASSENGER ROLLING STOCK.**

1. When a Special Train Notice in regard to the running of a Special Passenger train is issued, the Station-master at the Station shown to provide the train must take steps in ample time to have the required vehicles on hand by requisitioning the Depot for them, and also see, if necessary, that cars properly "gassed," or with roof lamps, are provided.

2. All cars sent by Depots in response to requisitions should be way-billed, the number and class of each vehicle being shown. Should any of the vehicles be diverted en route to Stations other than the original destination, fresh waybills must be made out for the vehicles so diverted; the first waybill must be amended, and sent to the Station for which it was issued, and a note of the circumstances endorsed thereon. The Station-master at the Station from which the cars are to be supplied must advise the receiving Station by wire of the train by which the cars will be sent.

3. When Special trains, for which extra cars are required, are timed to run from Stations other than Spencer-street, early application by wire must be made to the proper Depot to supply the extra cars, stating for what purpose they are required. If the cars cannot be supplied from the Depot, the Station-master there must apply by wire to the Chief Time Tables Officer, and, at the same time, a copy of the wire must be sent to the Station-master, Spencer-street or Flinders-street, as the case may be.

4. The Station-master who requisitions for cars and vans for any Special trains must keep himself posted up as to the train or trains by which it is expected that the vehicles will arrive.

5. The Station-master at the Station to which the vehicles are sent will be responsible for seeing that they are duly returned. If, however, there is a probability of their further use in the same district within a few days, they should be retained and the Chief Time Tables Officer advised.

6. When necessary in connection with the V.R.C. Races at Flemington, V.A.T.C. Races at Caulfield, or Williamstown Races, spare first-class cars must be sent up from Country Depots to Melbourne on the Friday preceding the Saturday on which the races are to be held. The cars so sent will, in most cases, be available for return to Stations by Down trains on the following Monday. When an order is issued from the office of the Chief Time Tables Officer for carriage stock to be worked up to Melbourne, the matter must receive immediate attention.

7. Empty Cars returned to Melbourne and other depots:—

(a) Empty cars returned to Melbourne should, as far as possible, be worked up on Passenger or Mixed trains, as it is inconvenient to

deal with them in the Melbourne Goods Yard. When sent to Melbourne by a Goods train, the Station-master, Geelong, Ballarat, Woodend, Seymour, or Dandenong, as the case may be, must wire the Station-master, Spencer-street, the number and class of cars, and the latter must notify the Passenger Yard Foreman, who, in turn, will require to see that the cars on arrival are promptly transferred to the Passenger Yard.

(b) When empty cars are worked back to Depot Stations on Passenger or Mixed trains, the doors must be kept locked, and passengers must not be allowed to travel in them unless there is insufficient accommodation in the ordinary cars. Should it be necessary at night time to place passengers in cars that are being worked back, each compartment used must be lighted.

(c) Special, Vice-Regal, State and Inspection Cars, also 71ft. cars, i.e., AE, BE, ABE, BDSE, Observation Cars, Dining Cars, Sleeping Cars, 64ft. and 58ft. Cars, viz., AW, BW, or ABW Cars, must not be attached to Goods Trains.

8. Passenger Brake Vans.—The use of "YZ" car-vans on Goods trains is prohibited, except in cases of special emergency, and if one of these vans is so used, a report of the circumstances must be furnished to the General Superintendent of Transportation in each instance. The use of "XYZ" Car Vans and Bogie Vans on Goods trains is permitted only in cases where such vehicles may be used in this manner without withholding them from their usual Passenger or Mixed train running.

9. Spare Car Report, T.R. 58.—Before 8 a.m. on week-days, the Station-master at every Station where, at 7 a.m., there are cars on hand in excess of the fixed minimum composition of ordinary trains, must wire the particulars of such on Form T.R. 58 to the Chief Time Tables Officer; the class and number of each car to be shown, spare Brake Vans, Carriage Trucks and Hearse trucks to be also included in the Report.

10. Car Movement Record, T.R. 59.—(a) Form T.R. 59 must be filled in by the Station-master, and the particulars wired to the Chief Time Tables Officer from any Roadside or Terminal Station where any car or cars in excess of the fixed minimum load are detached from or attached to any ordinary Passenger or Mixed train. If any car or cars be attached to or detached from a Special Passenger train or a Goods train all the cars so attached or detached must be included. The class and number of each vehicle to be shown.

(b) Form TR 59 must also be filled in, and the particulars wired from Geelong, Ballarat, Bendigo, Seymour, and Warragul for every through Passenger or Mixed train to or from Melbourne, irrespective of whether any alteration has been made in the composition of any such train or not, and particulars must also be wired in respect of any through Goods train to which Passenger Cars have been attached or from which they have been detached.

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11. The following are the Depots for Passenger Rolling Stock:—

Depot.	Line or Section.
Spencer-street ..	All Stations to Geelong, Ballarat, Bendigo, Daylesford, Lancefield, Whittlesea, Seymour, Mansfield, Traralgon, Noojee, Thorpdale, Korumburra, Wonthaggi.
Princes Bridge ..	All Stations to Hurstbridge.
Flinders-street ..	Stony Point Line and Branches, Healesville Line and Branches, and Suburban Lines.
Geelong	Port Fairy Line and Branches, and Queenscliff Line
Ballarat	All Stations to Stawell, Daylesford, Skipton, Buntingong, Waubra, Ballan, and Maryborough (as required).
Ararat	Portland Line and Branches, Avoca and Navarre Lines.
Stawell	All Stations to Serviceton, and Branch Lines.
Maryborough ..	Mildura Line and Branches, Avoca Line.
Castlemaine ..	Maryborough Line (as required), Maldon Line.
Bendigo	Kulwin, Robinvale, Kooloonong, Echuca, Cohuna, and Heathcote Lines; Castlemaine (as required).
Kyneton	Redesdale Line.
Seymour	Goulburn Valley Line and Branches, Avenel to Benalla.
Benalla	All Stations to Wodonga and Branches, Yarrowonga and Tatong Lines.
Wodonga	Cudgewa Line.
Traralgon	Maffra, Orbost, Sale, and Mirboo Lines.
Korumburra .. .	South-Eastern Line beyond Korumburra, and Outtrim Line.

Note.—It is not intended that Carriage Stock should remain on hand at all the foregoing Depots. With the exception of Spencer-street, Princes Bridge, and Flinders-street, they are to be regarded only as Stations to which application for cars should first be made. Station-masters at Depots requiring cars should make enquiries from the Depots on either side before sending a requisition to Melbourne.

LOADING AND ALLOTMENT OF CARRIAGE TRUCKS.

1. The following are the only Suburban Stations that Carriage trucks may be loaded at or forwarded to:—

Broadmeadows	Frankston,
Carrum,	Ringwood,
Cheltenham	St. Albans,
Dandenong,	Werribee.

Carriage trucks must not be sent to Flinders-street. At Werribee vehicles can only be unloaded over the side of the truck.

CONTROL AND WORKING OF STATIONS.

2. The following is the allotment of Carriage trucks, and all trucks in excess of this must be worked up to Melbourne without delay:—

Depot.	Allotment.
Bendigo	2
Ballarat	2
Stawell	1
Seymour	1
Wodonga	1
Traralgon	1
Spencer-street	All others

3. Carriage trucks Nos. 51, 54 and 59 are fitted with Canopies, and must only be held at Spencer-street. They must be returned without delay to that Station from any Station to which they are loaded.

4. After a Carriage truck has been unloaded, all straps, fittings, and packings, etc., must be replaced and securely fastened.

Station-masters and Officers-in-Charge must arrange to have the equipment of these trucks inspected prior to despatch and immediately on arrival at destination, also daily while standing in Station yards; the employe taking the daily stock return should note the condition of the equipment of all Carriage trucks and make a record of same.

Where straps are missing or damaged a report shall be furnished.

5. Carriage trucks arriving at Spencer-street by Goods train must be promptly transferred to the Passenger Yard.

6. Unless specially authorised by the General Superintendent of Transportation, Carriage and Hearse trucks must not be forwarded by the first up or the mid-day Passenger train from Bendigo. Consignors should be advised to load for other trains.

7. **Carriage Truck, No. 1 G.**—Carriage truck No. 1 G has a revolving floor, which can be turned at right angles to the train, thereby forming a bridge for unloading the vehicle carried upon it. Short blocks of wood, in the shape of ramps, are carried on the truck as conveniences to be used when heavy vehicles are being unloaded. Station-masters must be careful to see that the ramps are returned to the truck, and that all fastenings are complete.

PRIVATE SIDINGS.

The following instructions must be observed in connection with the special services rendered in respect of Private Sidings:—

1. Unless otherwise authorised by the General Superintendent of Transportation, all consignments to or from a Private Siding must be in full truck loads and consigned to or by the Siding Holder only.

2. (a) When the service is performed by a shunting engine the Guard or Shunter in charge must enter upon his Truck Sheet (TR. 44), the distinguishing number and class of every truck placed at, or removed from, the Siding, and also the number of covers and lashings, whether

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they are covering and securing loads, or in empty trucks. The Truck Sheet must be made out in duplicate; one copy must be handed to the Yard Foreman or Shunter at the supervising Station, who must enter the necessary particulars from it in a Truck Book kept for the purpose, and file the Sheet for reference; if, however, the Shunter who goes to the Private Siding keeps the Truck Book, he must enter in such Book the necessary particulars and must file the Truck Sheet. The second copy of the Truck Sheet, together with the Truck Book, must be handed to the Station-master or person in charge for the purpose of compiling Form TR. 95.

(b) The Station-master or person in charge must see that the record in the Truck Book is accurately kept, he must show on the TR. 95 Form the Siding charges and forward it, together with a copy of the Truck Sheet, to the Superintendent of Goods Train Service on the day following that on which the special service was rendered.

3. (a) When a shunting engine is not employed and the Private Siding is worked by a passing train, a special Truck Book must be kept by the Supervising Station-master or person in charge, and the full particulars of any trucks, tarpaulins and lashings left at or removed from the Siding must be entered into that Book; he must also compile Form TR. 95, which must be dealt with in the way laid down in clause 2. The number of the TR. 95 Report must be shown against the entries in the Truck Book in respect of which it is compiled.

(b) Covers and lashings received with inwards trucks must, if not required for outwards loading, be returned and placed at the disposal of the depot. They must not be held in anticipation of requirements; the covers must be folded and the lashings coiled by the Siding Holder.

(c) If covers and lashings are not on hand for outwards loading they should be requisitioned for when the trucks are ordered.

4. Unless otherwise ordered the shunting charge must be made in respect of trucks placed into the Siding for the Siding Holder; no such charge shall be made for removing trucks.

5. (a) Form TR. 95 (report of charges imposed for special services) must be compiled by the Station-master or person in charge who supervises a Private Siding. In addition to showing the required particulars, it must show the distinguishing number and class of each truck placed at and removed from the Siding.

(b) Where there is a daily service the usual demurrage charges must be imposed in regard to trucks (empty or loaded) which are delayed over the regulation time.

6. Attention is directed to the Instructions under the heading of "Loading of Trucks," shown on pages 454-460.

7. The foregoing instructions do not relieve District Officers or Station-masters of responsibility for the inspection of Private Sidings.

CARETAKER STATIONS.

The following instructions must be observed in connection with the working of Caretaker Stations:—

1. The Proceed Signal must, unless instructions are issued to the contrary, be kept exhibited at the Fixed Signals (where such Signals are provided), except when it is necessary that they be placed at Stop for the protection of a train which has to stop at any such Station, or for the protection of any other obstruction that may exist on the Running Line which the Signals are intended to protect, see sub-clauses (f) and (g), page 210.

2. (a) On Single Lines worked under the Train Staff and Ticket System, when a train is travelling on a Staff Ticket, and on Double Lines, the Guard will be held responsible for the proper working of the Signals, and, if he be aware when his train arrives, or become aware after it arrives, that it will stop for more than 30 seconds, all necessary Signals must be immediately placed at Stop, and must be kept at that position until the train is quite ready to proceed on its journey. See also clause (8), page 214.

(b) In the case of a Light Engine, the Driver, and in the case of two or more light engines coupled together, the Driver of the leading engine, must arrange for his Fireman to act in the way prescribed for the Guard.

(c) In accordance with clause 5 of the Train Staff and Ticket Instructions, page 551, the Guard, or, where there are two Guards, the Head Guard, must ascertain from the Station-master or person in charge of the Staff Station in the rear whether his train will travel on the Train Staff or on a Train Staff Ticket.

Note.—See pages 113-114 for Instructions in regard to the protection of trains at Stations on Single Lines worked under the Train Staff and Ticket System where Fixed Signals are not provided.

3. Except where special instructions are issued to the contrary, the Signal Lamps must be lighted in accordance with the practice laid down on pages 137-140.

4. (a) The Caretaker is responsible for the cleanliness of the office, ladies' waiting room and closets.

(b) The Caretaker's husband must, in his own time, oil and keep clean the working parts of Points and Signals; clean the Signal and other lamps and light them when necessary; sweep and keep clean the men's closets and urinals and all other buildings; fold up tarpaulins, coil lashings, collect truck standards, machine frames, packing material and dunnage, and place them on the platform, where they can be readily picked up by the Guard. He must also in his own time examine all trucks standing in the Station yard, and see, when required, that they are properly covered, and empty out any accumulated water that may be lying in the hollows of covers. Lashings of trucks and covers must also be tightened when necessary in order to ensure that the loading in such trucks shall be properly protected. Any damageable goods lying on the platform must be placed in the Station office, waiting room, or van goods shed; other goods must be placed under suitable shelter.

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The instructions to the guards contained in clause 6 will not in any way relieve the Caretaker's husband from the performance of these duties.

(c) The working parts of Points should, as far as possible, be cleaned and oiled without unlocking them, and when opportunity offers, that is, when trains are working at the Station, or when the Signal Adjuster is inspecting the Points, the Repairer must thoroughly clean and oil them.

5. Where the Caretaker is a widow or unmarried, the Ganger must arrange for the work specified above to be performed by a Repairer during the ordinary working hours, the cost to be charged to the Transportation Branch. The Ganger in charge of the length of Line in which the Station is situated will be responsible for seeing that the Points are properly attended to.

6. (a) The Guard must examine the loaded trucks put off his train as they are placed in the Station yards, and when time permits tighten the lashings and tie ropes of covers when necessary, and empty any accumulated water out of the covers. The Guard must see that all damageable goods, other than those which it is necessary to leave effectively covered in trucks, are placed in the Station office, waiting room or van goods shed, and that all other outside goods are properly disposed of. He must arrange the removal from the Station of all surplus tarpaulins, lashings, truck standards, machine frames, packing material and dunnage. He must see that all parcels and mail bags are placed in safe custody, and initial all waybills, date them, and show particulars of any discrepancies. Particulars should be endorsed on the waybills. When reasonably practicable, he should note the contents of any loaded truck put off his train, particularly if it be loaded with machinery, and endorse the waybill to show whether in good order or otherwise.

(b) The Guard will be held responsible for the proper security of the Points and Scotch Blocks, and for securing the vehicles left in the Siding. The keys of the Points and Scotch Blocks must, when not in use, be kept in the Office, and the Caretaker must not allow any unauthorised person to have possession of them; after shunting operations are completed, the Guard must, himself, return the keys to the Caretaker. See page 217 for list of places where trains are not allowed to shunt between sunset and sunrise.

7. The Guard must promptly report to the Supervising Station-master any case where padlocks are missing or damaged, or where Points, Locking bars, Scotch Blocks, or other equipment is out of order; and the supervising Station-master must satisfy himself, by personal inspection, or (where unable to make a personal inspection during his ordinary hours of duty), by frequently obtaining an assurance from the Guard, that the Padlocks, Locking Bars, Points, and Scotch Blocks are in good order, and that the Points are kept properly clean. This clause, however, does not in any way relieve the Way and Works Branch employe from the proper performance of his duties as laid down in Regulation 281.

8. The Caretaker must arrange for particulars of trucks ordered to be sent to the Supervising Station-master, who will arrange the supply. As far as is reasonably practicable the orders taken should be in writing.

The Guard must, unless otherwise instructed, arrange for loaded and empty trucks to be cleared without undue delay, and he must also see, before taking on outwards loaded trucks, that the loads and truck doors are perfectly safe and secure. The Station-master at the Station where the trucks are waybilled must arrange for them to be carded, and must himself inspect the loading, or if this be not practicable, then the Superintendent of the District must make satisfactory arrangements for the loading to be inspected.

9. When trucks are not unloaded within the regulation time (see General Condition, No. 29, Goods Rates Book), the work of unloading must be done after the completion of the ordinary day's work by the husband of the Caretaker, or, should the Caretaker be unmarried or a widow, by one of the Repairers for the section. The charge for unloading must be collected from the Consignee, before delivery is given, and paid to the man who does the work.

10. Where there are Fixed Signals, the Ganger must arrange for them to be tested daily in order to see that they are working properly. If necessary, the Signal wires must be properly adjusted.

11. Should the Caretaker be relieved by a lad, the Guard will not be relieved of his responsibilities as laid down herein, but in the event of a competent adult male employee being placed temporarily in charge, such employee will be responsible for the proper working of the Station, and, where Fixed Signals are provided, of the Fixed Signals.

12. Attention is directed to the Instructions, under the heading "Loading of Trucks," pages 454-460; see also sub-clause (b), clause 9, of the Instructions shown under the heading of Conveyance of Explosives.

NO-ONE-IN-CHARGE STATIONS.

(No-one-in-Charge Stations are indicated in the Working Time-table by the letters "N.C." opposite the Station name).

The following instructions must be observed in connection with the working of No-one-in-charge Stations:—

1. The Proceed Signal must, unless instructions are issued to the contrary, be kept exhibited at the Fixed Signals (where such Signals are provided), except when it is necessary that they be placed at Stop for the protection of a train which has to stop at any such Station, or for the protection of any other obstruction that may exist on the Running Line which the Signals are intended to protect.

2. (a) On Single Lines worked under the Train Staff and Ticket System, when a train is travelling on a Staff Ticket, and on Double Lines, the Guard will be held responsible for the proper working of the Signals, and, if he be aware when his train arrives, or become aware after it arrives, that it will stop for more than 30 seconds, all necessary Signals must be immediately placed at Stop, and must be kept at that position until the train is quite ready to proceed on its journey.

(b) In the case of a Light Engine, the Driver, and in the case of two or more light engines coupled together, the Driver of the leading engine, must arrange for his Fireman to act in the way prescribed for the Guard.

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(c) In accordance with Clause 5 of the Train Staff and Ticket Instructions, page 551 of this Book, the Guard, or where there are two Guards, the Head Guard, must ascertain from the Station-master or person in charge at the Staff Station in the rear whether his train will travel on the Train Staff or on a Train Staff Ticket.

3. Except where special instructions are issued to the contrary, the Signal Lamps must be lighted in accordance with the practice laid down on pages 137-140.

4. The Ganger in charge of the length of Line in which the Station is situated must oil and keep clean the working parts of Points and Signals. He must arrange for the Signal Lamps to be cleaned and lighted when necessary, and for tarpaulins to be folded and lashings coiled, collect truck standards, machine frames, packing material and dunnage, and place on the platform where they can be readily picked up by the Guard. He must keep the Station premises clean.

The Ganger must examine all trucks standing in the Station yards at No-one-in-Charge Stations in his length, and see that they are properly covered, and empty out any accumulated water that may be lying in the hollows of the covers. Lashings of trucks and tie ropes of covers must also be tightened when necessary, in order to ensure that the loading in such trucks shall be properly protected, and any goods found lying on the platform must be placed in the Station office, shed, waiting room, or other suitable shelter. If no other shelter is available, the goods must be covered with a yard tarpaulin.

The instructions to Guards contained in clause 6 will not relieve the Ganger of the duty of carrying out all or any of the above instructions.

5. The working parts of Points should, as far as possible, be cleaned and oiled without unlocking them, and when opportunity offers, that is, when trains are working at the Station, or when the Signal Adjuster is inspecting the Points, they must be thoroughly cleaned and oiled.

6. (a) The Guard must examine the loaded trucks put off his train as they are placed in the Station yard, and when time permits tighten the lashings and tie ropes of covers when necessary, and empty out any accumulated water that may be lying in the hollows of covers. He must initial all waybills, date them, and show particulars of any discrepancies. When reasonably practicable, he should note the contents of any loaded truck put off his train, particularly if it be loaded with machinery, and endorse the waybill to show whether in good order or otherwise. He must remove from the Station all surplus tarpaulins, truck standards, machine frames, packing material, and dunnage.

(b) The Guard will be held responsible for the proper security of the Points and Scotch Blocks, and for securing the vehicles left in the Siding. The keys of the Points or Scotch Blocks must not be handed over to any unauthorised person.

7. The Guard must promptly report to the Supervising Station-master any case where Padlocks are missing or damaged, or where Points, Locking Bars, Scotch Blocks, or other equipment is out of

order; and the Supervising Station-master must frequently satisfy himself, by personal inspection, or, if this cannot be done, by obtaining an assurance from the Guard, that the Padlocks, Locking Bars, Points, and Scotch Blocks are in good order, and that the Points are kept properly clean. This clause, however, does not in any way relieve the Way and Works Branch employe from the proper performance of his duties, as laid down in Regulation 281.

8. If a train run after dusk, the Station-master at the adjoining Station in the direction from which the train runs, must send a lighted platform lamp to the Flag Station, or, if so arranged, a Repairer must light one. The lamp must be placed in such a position that the Driver of an incoming train can clearly see it on approaching the Station. The cleaning and trimming of the platform lamp, or lamps if more than one be provided, must be done either at the adjoining Station, or by the Repairer, as may be arranged.

9. The Guard must enquire at the previous stopping Station whether there are passengers on the train for the Flag Station, and if so, verbally instruct the Driver to stop. He must collect the tickets from the passengers leaving the train, and, if there be no Conductor on the train, excess any requiring to be excessed. The collected tickets must be handed to the Station-master at the Supervising or Depot Station, who must forward them to the Auditor of Receipts in the usual course.

10. (a) A Red Flag for use by day and a Lamp with a Red Glass for use by night, and a Notice Board are provided. The latter intimates to intending passengers that they must during the day exhibit the flag, and after dusk light the Lamp and, where necessary, adjust the glass so as to exhibit a Red light, to stop the train. The Driver must accept such Red light as a Signal to stop. Before leaving the Station, the Guard must replace the Flag in its fixture, or, if it be night time, extinguish the Light.

(b) The Guard must sight the tickets of all passengers joining his train, and any without tickets must be booked by excess fare ticket, or by ticket where tickets are specially provided. The Station-master at the Depot or other authorised Station must arrange for the Guard to be supplied with an Excess Fare Ticket Book, in which he must account for the fares collected from passengers en route to the re-booking Station. Single or Return Excess Fare Slips to be issued as required.

(c) If a Conductor be with the train, he must perform the booking duties.

11. A Notice Board is provided intimating to Consignees that they can only obtain delivery of Inwards goods or parcels from the Guard while the train is at the Station. If a Consignee is not in attendance when the train arrives, the Guard must see that the consignments are placed in the Shed, Station Office, or Waiting Room, or, if a Shed, Office, or Waiting Room is not provided, place them under suitable cover. Goods, such as Tobacco, Spirits, Explosives, etc., must not, however, be left, but must be taken on or returned to the Supervising or other Station, where there is an employe in charge, and left there until such time as the Guard can arrange with Consignees to meet the train. Where a local resident is authorised to receive and deliver goods, the District Superintendent must make satisfactory arrangements with regard to the safe custody of the Key or Keys of the Shed.

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12. The Guard must arrange for particulars of trucks ordered to be furnished to the Supervising Station-master, who will arrange the supply. As far as is reasonably practicable, orders taken for trucks should be in writing. The Guard must, unless otherwise instructed, arrange for loaded and empty trucks to be cleared without undue delay, and he must also see before taking on outwards loaded trucks that the loads are perfectly safe and secure. The Station-master at the Station where the trucks are waybilled must arrange for them to be carded, and must himself inspect the loading, or, if this be not practicable, then the Superintendent of the District must make satisfactory arrangements for the loading to be inspected. See page 217 for list of places where trains are not allowed to shunt between sunset and sunrise.

13. When trucks are not unloaded within the regulation time (see General Condition, No. 29, Goods Rates Book) the work of unloading must be done by one of the Repairers for the section after the completion of his ordinary day's work. The charge for unloading must be collected from the Consignee, before delivery is given, and paid to the man who does the work.

14. Any Guard (other than a Guard-in-charge) who may be required to deliver consignments at any Station where there is no one in charge shall be supplied by his Station-master with a Parcels Delivery Book. Particulars of all such consignments (Goods and Parcels) shall be entered in such book, and the consignee's signature obtained therein. (For other arrangements with regard to the Goods business, etc., see the "General Orders and Accounts Instruction" Book.)

15. Where Fixed Signals are provided, the Ganger must arrange for them to be tested daily in order to see that they are working properly. If necessary, the Signal wires must be properly adjusted.

16. Should a competent adult male employe be placed temporarily in charge of a Station classed as "No-one-in-charge," he will be responsible for the proper working of the Station, and, where Fixed Signals are provided, of the Fixed Signals.

17. Attention is directed to the instructions, under the heading "Loading of Trucks," pages 454-460.

INSTRUCTIONS FOR WORKING STATIONS WHERE THE GUARD ACTS AS STATION-MASTER FOR CERTAIN TRAINS, OR WHERE THE CARETAKER IS NOT ON DUTY WHEN THE TRAIN ARRIVES.

1. (a) At Stations (see list in Working Time-table) where, by special permission of the General Superintendent of Transportation, the Station-master or other qualified person in charge is allowed to be absent on the arrival or during the passage of one or more trains, he must (unless instructions are issued to the contrary) before going off duty—

- (i.) Place the keys of the Points and Scotch Blocks, and written instructions for the Guard, in the Waiting Room or such other convenient places as may be arranged, and lock the door.

CONTROL AND WORKING OF STATIONS.

- (ii.) See that trucks loaded out are properly loaded and carded, and that the waybills for them and for any Van Goods or parcels are left in the Waiting Room.
 - (iii.) If necessary, light the Fixed Signal Lamps and the Platform Lamp.
 - (iv.) Leave all necessary Signals at the Proceed position.
 - (v.) Make any other arrangements necessary for the proper conduct of the Station business for the time that he will be absent.
- (b) When the train arrives, the Guard, who will be furnished with a duplicate key of the Waiting Room or such other place as may be arranged, must—
- (i.) If his train be the last for the day, immediately place all necessary Signals to the Stop position, and unless otherwise ordered (see clause (f)), leave them at that position.
 - (ii.) If his train be not the last for the day, and the Station be on a Single Line worked under the Train Staff and Ticket System, and his train be travelling on a Staff Ticket, or the Station be on a Double Line, the Guard, if he be aware when his train arrives, or become aware after it arrive, that it will stop for more than 30 seconds, must immediately place all necessary Signals to the Stop position, and keep them at that position until the train is quite ready to proceed on its journey, when he must place such Signals to the Proceed position.
 - (iii.) Attend to the Passengers and collect the tickets from those who alight, and, if there be no Conductor on the train, book by Excess Fare Ticket those who wish to join, or sight the tickets of those who already have them.
 - (iv.) Before leaving the Station the Guard must see that all Points used when shunting and the Scotch Blocks are set and secured in the normal position; he must replace the Keys of Points and Scotch Blocks in the appointed place, and leave a note with them, specifying the time of arrival and departure of his train.
- For directions which, in addition to the foregoing, must be carried out at Staff Stations working under these arrangements, see clauses 2 to 7 (inclusive) of these instructions.*
- (v.) Place in the Waiting Room, or such other place as may be arranged, any ordinary Goods, Parcels, Collected Tickets, and Correspondence, and lock the door.
 - (vi.) If there be any trucks to leave, or to pick up, have them shunted off or on as the case may be, and see to the proper security of the Points and Scotch Blocks.
 - (vii.) If the train be the last for the day, extinguish the platform lamps, but if any passengers remain on the platform leave one platform lamp alight.
- (c) Explosives and Dangerous Goods, Tobacco, Spirits, etc., must not be left, but must, unless the Station be a Terminal, be taken on to the next Station, where there is an employe on duty, and be returned from there at a suitable time on the next train day.

CONTROL AND WORKING OF STATIONS.

(d) The Station-masters concerned must make the necessary arrangements with regard to the key of the Waiting Room, or such other place, and also for an Excess Fare Book, should one be required.

(e) When extra trains are put on, or trains run out of course, the Station-master or person in charge must, if necessary, remain on duty for all trains.

(f) **Caretaker Stations.**—At any Caretaker Station, where the Caretaker is not on duty for one or more trains, so much of the foregoing instructions as are necessary for the safe and proper working of the Station during the Caretaker's absence must be carried out by all concerned, and, when the train is the last for the day, the Guard must, if the necessary Signals have been put to Stop, put them again to the Proceed position when the train is quite ready to proceed on its journey.

(g) In the case of a Light Engine, the Driver, and in the case of two or more such engines coupled together, the Driver of the leading engine, must arrange, as regards the working of the Signals, for the Fireman to act in the way prescribed for the Guard.

2. WORKING OF STAFF, AND STAFF TICKET, EXCHANGE BOXES BY GUARDS ON SINGLE LINES.—(a) At Staff Stations that are worked under these arrangements, a Staff Exchange Box or a Staff Ticket Exchange Box (or both) is fixed near the door of the Station-master's Office; these Exchange Boxes must only be used when specially authorised, and then only in accordance with the following directions.

(b) Authority to use the Staff Exchange Box does not include permission to use the Staff Ticket Exchange Box; specific authority is issued in respect of the particular Stations and Trains for which the Staff Ticket Exchange Box may be used. For list of such Stations and Trains, see clause 7.

(c) When, under these instructions, any train is required to work at a Staff Station, the official in charge of the adjoining Staff Station in the rear must verbally inform the Driver and Guard, and specify whether the Train Staff or Staff Ticket (with or without Master Key or Notice of Train Ahead Book) has been left at the unattended Staff Station for the train. The Station-master at the Stations where the Guard is to act in charge must furnish these particulars to the official at the adjoining Staff Station in the rear; but the Guard will be responsible for ascertaining such particulars before leaving the Staff Station in the rear and must satisfy himself that his Driver has also been informed.

(i) The ordinary Staff Exchange Box is normally secured closed, by a Staff Lock, which is operated by the Train Staff, or by means of a Special Key, provided for the use of the Station-master, who is responsible for its safe custody. For illustrations of Miniature Staff Exchange Box, see clause 10.

(ii) The Staff Ticket Exchange Box is normally secured, closed, by means of a standard padlock, duplicate keys for which are located as follows, viz.:—One at the Station at which the Exchange Box is fixed, one at the Staff Station on

CONTROL AND WORKING OF STATIONS.

one or each side of such Station, and one in possession of any Guard, that will be required to make use of the Staff Ticket Exchange Box.

- (iii.) The Station-master must be especially careful to remove his key from the Exchange Box after inserting the Train Staff therein.

3. (a) When it is necessary that the Driver shall travel with the Train Staff, the Station-master, before leaving that Station, must, in addition to carrying out the provisions of clause 1, place the Train Staff into the Staff Exchange Box, together with a note, stating that the Driver will travel with the Train Staff.

(b) On arrival at the unattended Staff Station, the Driver must hand the Staff to his Fireman, and instruct him to take it to the Guard, and the latter must, provided the train has arrived complete, insert it, lettered side out, in the lock of the Exchange Box, and give it at the same time a half turn to release the Staff for the forward Section, which, when withdrawn, must be handed to the Fireman, who must then deliver it to the Driver; the Driver must not proceed until he has received the Staff for the forward journey.

If the Station be a Terminal, the Guard must obtain the Staff, and, provided the train has arrived complete, place it in the lock of the Staff Ticket Box, in Signal-box, or the Station-master's office, or in the pocket of the Electric Staff Instrument, as the case may be, or dispose of it as may be otherwise arranged.

In the case of the Staff Exchange Box for the Miniature Staff, a small handle is provided under the Box for the purpose of actuating the mechanism. To withdraw the Staff from the Box, the Guard must place the Inward Staff (lettered end outwards) in the Box, and, while pressing the Staff well home, give the small handle alongside the Inward Staff a turn to the Right, which will secure the Inward Staff and release the Staff required for the train. (See page 215.)

3A. (a) When it is necessary that the Driver shall travel on a Train Staff Ticket (see sub-clause (b) clause 2), the Station-master, before leaving, must, in addition to carrying out the provisions of clause 1, fill in the Train Staff Ticket, which, together with the Train Staff for the Section, he must place into the Staff Ticket Exchange Box.

- (i.) If at the time at which the Station-master is authorised to go off duty, he has not received the regular intimation of the arrival of the preceding train at the Staff Station in advance, he must, unless he has reason to believe that such train has been stopped by accident or disablement, fill in a **Notice of Train Ahead** Form, including the butt of the Form, to which he must attach the Train Staff Ticket, and place with the Train Staff and Staff Ticket into the Staff Ticket Exchange Box.

The Station-master must make proper inquiries if the preceding train is on the Section longer than the ordinary running time of the Section, and if he has reason to believe that it has been stopped by accident or disablement, he must not leave his Station until he receives the regular intimation that the Section is clear.

CONTROL AND WORKING OF STATIONS.

- (ii.) Should it be necessary for the train to work at any intermediate Siding, where the Points are secured by special locks, and the Master Key for the Section ahead is in possession of the Station-master, he must place the Master Key in the Staff Ticket Exchange Box and endorse the Staff Ticket with the words "Master Key."

Whenever it is necessary that a train working under these instructions should require the use of the Master Key, the Station-master having authority to be absent when the train arrives, must, before leaving duty, have a complete understanding with the Staff Stations on each side in respect of the train carrying the Master Key, and the places at which it is to be used.

- (iii.) A memorandum, signed by the Station-master, containing the necessary instructions for the Trainmen, and setting out that the train is to travel on the Train Staff Ticket, and directions respecting the use and disposal of Notice of Train Ahead, or of the Master Key or Keys, must be placed in the Staff Ticket Exchange Box, which must be left securely locked; the key of the padlock must be placed in its usual position of safety.

- (iv.) A card containing a copy of (b) and (c), hereunder, must be attached under the lid of the Staff Ticket Exchange Box, and must be renewed by the Station-master when necessary.

(b) On arrival at the unattended Staff Station, the Driver must take the Inward Staff or Staff Ticket, and, if he possess one, the Master Key, or instruct his Fireman to take it, or them, to the Guard.

It will generally be found more expeditious for the Driver to go to the Guard when the train is to travel on the Staff Ticket, and thus avoid the loss of time involved in the Guard having to go to the engine to show the Train Staff to the Driver; whenever it is practicable to do so, that course must be adopted.

(c) On receipt of the Inward Train Staff or Staff Ticket, etc., and provided the train has arrived complete, the Guard, in addition to carrying out the provisions of clause 1, must then open the Staff Ticket Exchange Box and carefully read the written instructions left for his guidance by the Station-master; he must retain and attach the Station-master's memorandum to his Statement of Running, but if the Driver be personally concerned in the Station-master's instructions he must be allowed to peruse them.

- (i.) The Guard must hand the Staff Ticket for the Section ahead to the Driver, personally, and at the same time show him the Train Staff for that Section; the Train Staff must then be replaced into the Staff Ticket Exchange Box by the Guard.

- (ii.) If a Notice of Train Ahead be left by the Station-master, the Guard must hand the Form to the Driver, obtain his signature on the butt of the Form, and replace the Book in the Exchange Box.

- (iii.) If a Master Key be required for use in the Section ahead, the Guard must remove and hand it to the Driver, and the Master Key for the Section in the rear, if carried by

CONTROL AND WORKING OF STATIONS.

the Driver, must be placed into the Exchange Box; if, however, the Master Key received from the Driver be also applicable to the Section in advance (in which case there will not be one in the Exchange Box), it must be returned to the Driver if required for use—if, however, it be not required for use, the Guard must deal with it as directed in the Station-master's written instructions.

- (iv.) The Guard must finally see that the Train Staff, the Notice of Train Ahead Book, if used, and the Inward Master Key (see sub-section vii.), are secured in the Staff Ticket Exchange Box, and that his Key of the Box is removed.

4. (a) Where permission is given by the General Superintendent of Transportation for the Staff or Staff Ticket Exchange Box to be used for a Rail Motor Train (without a Guard) or for a Light Engine, it will be the duty of the Driver or, in the case of two or more such engines coupled, the Driver of the leading engine, to act as laid down in these instructions for the Guard.

(b) Train crews working under these arrangements must be careful to see that the proper Staffs and Tickets for the Sections are carried and exchanged.

5. At the Staff Station adjoining that at which a Staff Exchange or Staff Ticket Exchange Box is to be used, the Station-master must verbally inform Drivers and Guards concerned, of the arrangements regarding the Station or Stations in advance.

6. On resuming duty, the Station-master must unlock the Box, and remove the Train Staff or Staff Ticket left in the Box, also the Notice of Train Ahead Book, if used, and the Master Key, if one be left by Guard. He must then obtain the "Acre" message from the Station in advance, and send it to the Station in the rear, entering the times in the Train Register Book, with particulars regarding the working of the train during his absence.

7. Authority is hereby granted for the Staff Ticket Exchange Box to be used in accordance with clause 3a, at the Stations and for the trains specified hereunder:—

LINE.	STATION.	TRAIN.
Maryborough-Ararat	Avoca	For first or last train for the day.
" "	Elmshurst	
" "	Ben Nevis	
Benalla-Yarrawonga	Goorambat	
" "	Devenish	
" "	St. James	See Special Instructions, page 757.
" "	Tungamah	
Murtoa-Hopetoun	Brim	

CONTROL AND WORKING OF STATIONS.

8. (a) Working of Electric Staff Instruments where the Guard acts as Signalsman for a specified Train.—Where specially authorised by the General Superintendent of Transportation, a Guard of a specified train may be utilised to perform the Train Signalling duties at an Electric Staff Station for the purpose of working his train through such Station, provided the train is not being shunted for a following train to pass, or is not crossing a train running in the opposite direction, and the Officer-in-Charge of the Staff Station will not be on duty for the passage of the train. In every such case, the following Instructions must be observed:—

- (i.) Before leaving duty the Officer-in-Charge of the Station must, in addition to carrying out the instructions contained in clause 1, leave the Train Register Book in a conspicuous position in the Office known to the Guard or Guards concerned, and write out full Instructions for the Guard, and pin such Instructions to the Train Register Book.

If where authority is given for more than one train to be worked through under these arrangements during the absence of the Officer-in-Charge of the Staff Station, separate instructions must be written out for, and addressed to, the Guard of each train.

- (ii.) On arrival of the train the Guard must place the Home Signal to Danger, and obtain the Staff from the Driver; the Guard must then carefully peruse the written instructions referred to in the previous clause, and deal with the Staff for the rear Section as laid down in such instructions. In the event of a Staff not being withdrawn for the forward Section, he must peruse the Train Register Book and note whether or not the Train Arrival Signal for the previous train had been received; if no entry to that effect appears in the Train Register Book, he must call the Signalsman at the Staff Station in advance to the telephone and ascertain whether the Signal was sent, and, if so, the Signal must be repeated and acknowledged, when the Guard must then withdraw a Staff for the forward Section, hand it to the Driver, and, prior to the train departing, send the Departure Signal to the Staff Station in advance. If a Staff has been withdrawn for the forward Section before the Officer-in-Charge goes off duty, such Staff, if it be of the Miniature type, must be placed in the Carrier and hung on the proper Instrument; if the Staffs in use are of the large type, the Staff withdrawn must be left in the pocket of the proper Instrument, but reversed so that it cannot be inadvertently inserted.
- (iii.) If the following train is due to pass through before the Officer-in-Charge of the Staff Station is due to resume duty, the Guard must, before his train departs, place the Home Signal for such train to "Proceed."
- (iv.) All Signals sent or received on the Staff Instrument by the Guard must be recorded in the Train Register Book.

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(b) If any emergency with which the Guard cannot deal should arise, he must call the Station-master or other competent employe, who must at once come on duty and take charge.

(c) It must be distinctly understood that only Guards who have qualified in the Electric Staff system are to be permitted to take charge of trains which are being dealt with as laid down in these instructions.

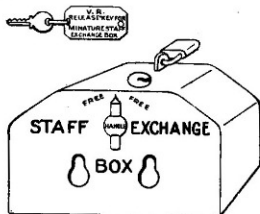
(d) Guards and Drivers of trains working under the above conditions must be informed at the last Staff Station at which there is a Station-master or person in charge of the arrangements in force at the Staff Station in advance, and that written instructions will be found pinned to the Train Register Book which will clearly set out the Guard's duties.

(e) The Guard must be supplied with a duplicate key of the Office at the Staff Station, where he is to perform the foregoing duties.

9. Particulars of the Stations and trains worked under the foregoing Instructions will be specified in the Special or Working Time Tables.

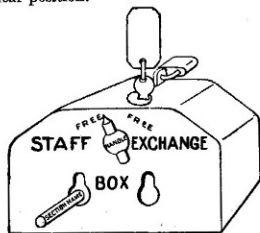
10. **Miniature Staff Exchange Box.**— (a) Where the Miniature Electric Train Staff System is in operation, the Staff Exchange Box illustrated hereunder is in use.

ILLUSTRATION
No. 1.



(b) Illustration No. 1 shows the Exchange Box in its normal position, with the Releasing Key withdrawn and the Actuating Handle locked in the vertical position.

ILLUSTRATION
No. 2.

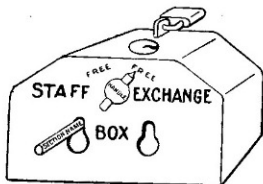


CONTROL AND WORKING OF STATIONS.

(c) The mode of operating the Exchange Box is as follows:—See Illustration No. 2. To bring the Exchange Box into operation—

- (i.) Insert the Releasing Key and unlock the handle, then turn the handle so that it will be pointing to "Free" on the side where the Staff is to be inserted.
- (ii.) Insert the Staff, lettered end out, press well home, then turn the handle to the vertical position, re-lock the box, and withdraw the Releasing Key.
- (iii.) After the Staff has been inserted and the Releasing Key withdrawn, the handle must then be turned so that it will be pointing to "Free" on the side where the Staff is to be inserted by the Guard or Driver of the train or engine requiring to use the Exchange Box. The Staff Exchange Box is then set for the specified train.

ILLUSTRATION
No. 3.



(d) To effect an exchange the Guard of the train, or Driver in the case of a Light Engine, must note the position of the handle and see that it is pointing to "Free" on the side where the Staff is to be inserted. He must then insert the Staff, lettered end out, press well home, and reverse the position of the handle, then withdraw the forward section Staff.

(e) To remove the Staff left in the Exchange Box, the handle must be returned to the vertical position (see position of handle in Illustration No. 1), the Releasing Key inserted, and the handle unlocked and turned so that it will be pointing to "Free" on the side from which the Staff has to be withdrawn, remove the Staff, and return the handle to the vertical position, re-lock and remove the Releasing Key.

NOTE.—The Releasing Key, when not required for use, must always be kept in the same safe position in the Station-master's Office.

CONTROL AND WORKING OF STATIONS.

SHUNTING DURING DARKNESS AT PLACES WHERE FIXED SIGNALS ARE NOT PROVIDED.

Unless specially authorised by the General Superintendent of Transportation, no train is allowed to shunt between sunset and sunrise at the places shown hereunder:—

Alvie Ballast Siding	Gravelside
Angliss's Siding (see exception clause 4, pages 827-828)	Head's Siding (Down Trains)
Austral Coal Co.'s Siding (Korumburra)	Grampians Line
Bairnsdale Wharf Line	Irvine's Siding
*Bendigo Brick and Tile Co.'s Siding	Jumbunna Coal Co.'s Siding
*Bendigo Gas. Co.'s Siding	Knott's Siding
Bennett's Siding	Langi Logan South
Buloke	Lightwood
*California Gully	Lignite Siding (Lal Lal)
Cave Hill Siding	Mayfield's Sand Siding
Collin's Siding	McCulloch's Siding
Consol's Sidings	McKay's Private Siding
Coal Creek Lines (Korumburra)	Mitchell's Siding
Crystal Sand Siding	Monea
Deer Park (Sandringham Quarry Siding)	Musk
Driver's Siding.	New Langi Logan Siding
Dysart.	O'Shea's Siding
Dennington (Low Level Siding)	Platina
*Epsom	Ripon Ballast Siding
Eureka	Sale Wharf Line
Fitzroy Line	Tunstall; see page 858
Forsyth's Siding	Wedge's Siding (Frankston)
Gippsland Blue Metal Co.'s Siding	*White Hill's Siding
	White Rock Siding
	White's Siding (North Ballarat)

* Unless accompanied by not less than two Shunters; see Special Instructions, pages 736-73

Level Crossings.

LOCATIONS OF LEVEL CROSSINGS.

The locations of Level Crossings are shown in the Book of Gradients and Curves, a copy of which every Driver and Guard must have with him when on duty.

WORKING OF LEVEL CROSSINGS FOR NIGHT GOODS TRAINS ON THE COBURG AND RESERVOIR LINES.

The attention of all concerned is directed to the Special Instructions respecting the above, on pages 682-683.

LEVEL CROSSING ACCIDENTS.

While the staff concerned should continue to make every effort to lessen the number of level crossing accidents by keeping a sharp look-out when approaching crossings, and by strictly complying with the Regulations 137 to 148, and other instructions, the Commissioners direct that every instance where the staff observe drivers of vehicles failing to heed the warnings displayed for their protection, or attempting to cross over in front of trains and thereby narrowly averting accidents, should be promptly reported so that the owner of the vehicle may be communicated with; the exact time and location where the incident occurred, with the name or licence number on vehicle, should, if possible, be furnished.

WORKING OF LEVEL CROSSING GATES.

1. Every Gatekeeper, Assistant Gatekeeper, or other employe in charge of Level Crossing Gates is responsible for seeing that no unauthorised person is allowed to work the Gates, even under the Gatekeeper's direct supervision; the Gates must, in every instance, be worked by the employe who is appointed to attend to them.

2. (a) Station-masters and Signalmen, Gatekeepers, Trackmen and other employes at Level Crossings, must be on the look-out for and take steps to prevent traction engines or vehicles conveying loads of exceptional height, width or weight from passing on to the Level Crossings.

(b) In the event of seeing a vehicle or contrivance approaching with a load or projection, the height of which exceeds or appears to exceed that specified in By-law 35, viz., 14 feet, the Signalman, Gatekeeper, or other employe must close the Gates, to prevent such conveyance from passing on to the Crossing, unless proper measures have first been taken to permit the load to pass over the Crossing in safety and without touching the overhead wires or structures.

(c) On any Line where overhead wires for Electric Trains are provided, the Station-master, or (where a Station-master is not in attendance) the Signalman or Gatekeeper or other employe must not allow any

WORKING OF LEVEL CROSSINGS.

traction engine or conveyance to pass on to the Level Crossing, unless the projections and load of such engine or conveyance shall, when passing over the Crossing, be at least 18 inches clear of the Contact Wires and structures. If the load will not permit of this clearance the employee at the Crossing must, unless there is a bridge in the vicinity, communicate the circumstances to the Overhead Superintendent, who will arrange for a qualified employee to supervise the passage of the load, etc., over the Crossing; if, however, there is a bridge within reasonable distance from the Crossing, the person in charge of the conveyance must be directed there.

(d) The standard height of the Contact Wire at Level Crossings is 18 feet from the level of the rails; these wires must not be lifted or interfered with in any way to permit a conveyance to cross.

(e) Pedestrians seen carrying banners, lengths of piping, spouting, etc., or poles in a vertical position must be warned not to allow such articles to touch the overhead wires or structures.

The attention of employees in charge of Level Crossings is directed to the instructions respecting overhead electrical wires, etc. (See pages 35-48.)

3. (a) Signalmen, Gatekeepers and other employees in charge of Level Crossings must, as far as practicable, carefully watch loaded road vehicles passing over Level Crossings, and, in the event of any portion of the loading falling on to the Permanent Way, the Crossing must be protected in accordance with the Regulations until the obstruction is removed and the Line or Lines, are clear.

(b) In all instances in which Gates are damaged, by road motor cars or other vehicles, every available means must be used in each case to obtain the name and address of the person driving, and, in the case of a motor vehicle, of the owner of the vehicle, together with the registered number; a full report of the occurrence, including the above particulars, must be promptly forwarded through the Supervising Officer to the Head of the Branch.

4. (a) Where separate sets of Lines are laid over a Level Crossing and two sets of Gates are provided—one for each set of Lines, the Gatekeeper, when closing the Gates, must exercise due care to prevent any vehicle, horse or cattle to be enclosed in the space between the inner Gates; when all Gates are to be closed, the outer Gates of each set must be closed first. See also Regulation 142.

(b) Employees in charge of Level Crossings must prevent animals from trespassing through the Gates under their control.

(c) Gatekeepers must open the Road Gates when necessary for the passage of Motor Cyclists; the latter are prohibited from using the foot crossings.

5. Regulation 137.—(a) Gate Lamps for Level Crossings are supplied and maintained by the officials specified hereunder:—

Interlocked Gates—By the Signal Adjusters for the district.

Non-interlocked Gates—By the district Road Foreman.

(b) Particulars of any defect in a Gate Lamp must be sent by the most expeditious means to the responsible official named above.

LEVEL CROSSINGS AT WHICH TRAMWAY TRAFFIC IS REGULATED BY FIXED SIGNALS.

1. (a) At a Level Crossing where Disc Signals are provided to regulate Tramway traffic over the Crossing, the Disc Signals work in conjunction with Derail Points or other safety appliances in the Tramway, clear of the Level Crossing Gates.

(b) The normal position of the Tramway Disc Signal is at Stop, and a Disc Signal must not be turned off for a Tram to pass over the Level Crossing unless the Signalman is satisfied that the Tram can proceed over the Level Crossing without causing delay to a train.

(c) The signalman must test and closely observe the working of the Tramway Disc Signals in order to see that they work well and show properly, and, as far as is reasonably practicable, he must also observe the working of the Derail Points; the Derail Points must be cleaned once at least on each shift, or if necessary, more frequently.

(d) During the time the Signal-box is closed, or when it is necessary for the Signalman to leave his Box whilst on duty, the Gates must be left open for road traffic, and the Tramway Disc Signals turned off.

(e) Consistent with the safe and proper working of Trains, the working of the Tramway and other public road traffic over the Level Crossing must be conducted by the Signalman with the least possible delay.

(f) The Signalman must not reverse a Disc Signal against an approaching Tram except in case of urgency.

(g) In the event of a derailment or accident, from any cause, to a Tram Car at a Level Crossing, the Station-master or other responsible employe must obtain the name of the Driver in charge of the Tram Car, the distinguishing number of the Car and time of Car-trip, which, with full particulars of injuries or damage, must be specified in his report.

2. Level Crossings at which the Railway and Tramway are equipped with overhead electrical conductors.—Where the Railway and Tramway are equipped with overhead electrical conductors, the Instructions and arrangements described hereunder are in force, in addition to those prescribed under the preceding clause 1:—

(a) The Contact Wires over the Level Crossing for the Railway and Tramway are interconnected, and the supply of power to these wires from the respective systems is controlled by a Two-way Switch mounted on an adjacent overhead structure, and operated by the interlocked lever governing the Gate Stops and the wheel with which the Gates are opened or closed. The arrangements are such that when the Gates are closed, and the lever of the Gate Stops is in the normal position, i.e., set for Railway traffic, the Two-way Switch is closed in the position in which it supplies the Contact Wires of the Crossing with current at 1500 volts from the Railway system; when the lever of the Gate Stops is placed to the reverse position, the Two-way Switch is operated and closed in the position in which it supplies the Contact Wires over the Crossing with current at 600 volts from the Tramway system. When opening the Gates for Tramway traffic the operation of the wheel will

WORKING OF LEVEL CROSSINGS.

not alter the position of the Two-way Switch, but after the lever of the Gate Stops has been placed in the special notch, and whilst the Gates are being closed, the Switch is moved to a neutral position until the lever of the Gate Stops is put to the full normal position, when the Two-way Switch becomes closed in the position to supply current from the Railway system.

- (i.) At some places a Clearance Bar, the interlocked lever of which works in conjunction with the lever of the Gate Stop, is provided on each side of the Crossing; after having exhibited a Signal for an Up or Down train to pass over the Level Crossing, the lever of such Signal must not be replaced to the normal position, until the whole of the train has passed beyond the Clearance Bar, and when the lever of the Gate Stops has been reversed to permit of a tram passing over the Crossing, the lever must be kept in such position until the tram has passed clear of the Crossing and the Trolley has passed clear of the Section Insulator.

Where a Clearance Bar is not provided, the Signal, after being taken off for a train, must not, except in case of emergency, be replaced to the Stop position until the whole of the Train has passed at least thirty (30) feet clear of the Level Crossing.

- (ii.) If, owing to defect or other cause, an Up or Down train is required to pass the Home Signal protecting the Gates, at the Stop position, the Signalman, before giving authority for the Driver to pass the Signal, must see that the Gates are closed against the Tramway, and kept fully secured in that position by the lever of the Gate Stops until the whole of the train has passed clear, as laid down in sub-clause (i.) hereof. In order to secure the interlocking the Signalman must, if practicable, work the lever of the Home Signal, even though the Signal may remain at the Stop position.

(b) An Indicator is provided in the Signal-box to indicate to the Signalman whether current is on from the Railway or from the Tramway system. When the Railway current is on, the Indicator shows "RAILWAY," and when the Tramway current is on, the Indicator shows "TRAMWAY." The respective indications "RAILWAY" and "TRAMWAY" are governed by the Two-way Switch referred to in clause (a).

- (i.) If at any time the Indicator show "TRAMWAY," when in accordance with sub-clause (a) hereof, Railway current should be on, the Signalman must exhibit the Signals to prevent any Electric train from passing on to the Level Crossing until the circumstances have been explained to the Driver, and he has been instructed to coast over the Crossing with all Pantographs lowered, as laid down in sub-clause (ii.) of clause (e).

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- (ii.) If at any time the Indicator show "RAILWAY," when Tramway current should be on, the Signalmán must exhibit the Signals to stop any tram from passing on to the Level Crossing until the circumstances have been explained to the Motorman and Conductor, and they have been instructed to coast over the Crossing with the Trolley lowered, as laid down in sub-clause (iii.) of clause (e).
- (iii.) If no indication be shown on the Indicator, when in accordance with sub-clause (a) hereof, Railway current should be on, the Signalmán must act as laid down in sub-clause (i.) hereof. If no indication be shown on the Indicator when Tramway current should be on, the Signalmán must act as laid down in sub-clause (ii.) hereof.
- (iv.) If when a train is passing over the Crossing the Motormán should have reason to believe that there is no power on the Contact Wire of the Crossing, he must—except as provided in clause (e)—notify the Signalmán as soon as possible, and the Signalmán must act as laid down in clause (g).
- (e) If any obstruction, such as a wire or fitting hanging down, be observed by the Signalmán, he must at once—
 - (i.) Close and keep the Gates closed against Tramway and vehicular traffic, and secure them by means of the lever of the Gate Stops;
 - (ii.) Exhibit the Signals to prevent any train from passing on to the Crossing, see sub-clause (d); and
 - (iii.) Open the Branch Section Switch, that supplies current to the Contact Wire of the Level Crossing, thereby cutting off Railway current from the overhead equipment of the Crossing.
- (d) If, however, the obstruction be such that trains can coast over the Crossing with lowered Pantographs, as laid down in clause (e), trains may be dealt with accordingly, the Drivers being instructed in accordance with sub-clause (i.) of clause (b), but the gates must be kept secured against Tramway and vehicular traffic until the Overhead Superintendent or his representative has intimated that such traffic can be conducted in accordance with clause (a).

The men in charge of trams or vehicles must be informed of the circumstances, when, from any cause, the Crossing is to be kept closed against Tramway and vehicular traffic.

(e) When, in accordance with the foregoing, it is necessary for trains or trams to coast over the Level Crossing, the Station-master, or in the Station-master's absence, the Signalmán, must, as soon as possible, appoint one or more competent Hand-signalmen, equipped with Hand Signals, to verbally warn Drivers of trains, and (in the case of trams) Motormen and Conductors of the necessity for coasting over the Level Crossing.

- (i.) When a Hand-signalman is appointed to warn Drivers, or Motormen and Conductors in accordance with the foregoing, he must, after having a proper understanding with

WORKING OF LEVEL CROSSINGS.

- the Driver, or Motorman and Conductor, exhibit a Green Hand Signal to the Signalman, as an intimation that the Driver, or Motorman and Conductor has been instructed to coast over the Level Crossing, and the Signalman must not exhibit the Signal for any train or tram to pass over the Crossing until receipt of the Green Signal from the Hand-signalman. The Signalman must see that the Hand-signalman understands the duties he is required to perform.
- (ii.) When the Driver of an Electric train has been instructed that it is necessary to coast over the Level Crossing, he must lower all Pantographs before the train reaches the overhead equipment mast on the approach side of the Crossing, and the Pantographs must not be again raised until the whole of the train has passed clear of the overhead equipment mast on the leaving side of the Crossing.
 - (iii.) When the Motorman and Conductor in charge of a tram have been instructed by the Signalman, or by the Hand-signalman, that it is necessary to coast over the Level Crossing, the Conductor must lower the Trolley before the tram reaches the Section Insulator on the approach side of the Crossing, and must keep the Trolley lowered clear of all overhead equipment until the tram and Trolley have passed clear of the Section Insulator on the leaving side of the Crossing.
- (f) The Signalman must, as far as practicable, watch the passing of Electric trams over the Level Crossing, and, in the event of the Conductor neglecting to hold the cord of the Trolley-pole so as to keep the Trolley-wheel on the Contact Wire when passing over the Crossing, or any instance in which a tram passes over a Crossing at a speed of more than four (4) miles per hour, the number of the car and time of occurrence must be noted, and the Signalman concerned must immediately telephone such particulars to the Overhead Superintendent and Block and Signal Inspector, Flinders-street, and the latter will immediately repeat the message to the office of the General Superintendent of Transportation, in order that the circumstances may be promptly brought under the notice of the Tramway Board; in addition to the telephone message, the particulars must also be reported by the Signalman through his superior Officer to the Block and Signal Inspector, who in turn must forward reports, when complete, to the Head Office, through the Metropolitan Superintendent.
- (g) The Signalman must at once advise the Overhead Superintendent and the Electrical Fitter, of any failure of any part of the electrical apparatus. If, when a train or tram is passing, the Signalman become aware of any excessive or unusual sparking or flashing at a Pantograph or Trolley, or of any Trolley leaving the Contact Wire at, or adjacent to, the Crossing, or of any disarrangement of the overhead equipment, he must report the circumstances by the most expeditious means to the Overhead Superintendent.
- (h) The Station-master, also, must be promptly advised of all irregularities.

WORKING OF LEVEL CROSSINGS.

3. Disc Signals for regulating Tramway traffic are provided at the Level Crossings shown hereunder:—

Station.	Street or Road.	Remarks.
Footscray	Nicholson-street	Electric Tramway.
North Carlton	Lygon-street	
Fitzroy	St. George's-road	
Kooyong	Glenferrie-road	Cable Tramway.
Gardiner	Burke-road	
Riversdale	Riversdale-road	
Glen Huntly	Glen Huntly-road	
Elsternwick	Glen Huntly-road	Electric Tramway.

DEEPDENE (Whitehorse Road).

At Whitehorse Road Crossing—Up side of Deepdene Station—the Electric Tramway crosses the Railway Lines. There is no one in charge at the Level Crossing, and every train and tram must be brought to a stand before reaching the Crossing. See Special Instructions, pages 871-872.

LEVEL CROSSINGS WHERE THERE ARE FIXED SIGNALS.

(Signals worked from Signal-boxes with Interlocked Gates are not included in this list.)

Fixed Signals are provided as shown hereunder for the Level Crossings mentioned:—

Line.	Nearest Station.	Up or Down Side of nearest Station.	Name of Crossing.	Class of Signal.
Northern	Echuca	Down	Pakenham-street	Down Home; controls Echuca Up Home
Deniliquin	Moama	Up	Meninya-street	Controls Moama Down Home
Inglewood	Bendigo	Down	McCrae-street	Up Home; controls North Bendigo Down Starting Signal
"	"	Down	Bridge-street	Down Home; controls Thunder-street Up Home
"	"	Down	Thunder-street	Up Home; controls Bridge-street Down Home
"	California Gully	Up	Holdsworth-road	Up Home
"	"	Down	Nelson-street	Up Home
Swan Hill	Myer's Flat	Down	Down end of Station	Up and Down Homes
Castlemaine-Maryborough	Guildford	Up	Newstead-road	Down Home
North-Eastern	Moonee Ponds	Down	Park-street	Controls nearest Up and Down Three-position Signals
"	North Essendon	Down	Pascoe Vale-road	Down Distant and Up and Down Homes
"	Pascoe Vale	Down	Gaffney-street	Controls Pascoe Vale Up Home
"	Glenroy	Up	Murray-road	Up Home
"	Broadford	Down	Sydney-road	Up and Down Homes

WORKING OF LEVEL CROSSINGS.

LEVEL CROSSINGS WHERE THERE ARE FIXED SIGNALS—*continued.*

Line.	Nearest Station.	Up or Down Side of nearest Station.	Name of Crossing.	Class of Signal.
North-Eastern	Seymour ..	Down	Sydney-road ..	Up Home
" ..	Tocumwal ..	Up ..	Murray River..	Down Home
Western ..	Millbrook ..	Down	Melbourne-road	Controls Millbrook Up (and Down Homes
Sunshine ..	MiddleFootscray	Down	Victoria-street	Controls Middle Footscray Up Home
Coburg ..	Macleay ..	Up ..	Arden-street ..	Controls North Melbourne Down Starting Signal; controls Macleay Up Starting Signal
Coburg ..	South Brunswick	Up ..	Park-street ..	Down Home
" ..	" ..	Up ..	Brunswick-road	Controls Park-street Down Home
" ..	Coburg ..	Up ..	Reynard-road..	Down Home; controls Coburg Up Starting Signal
Whittlesea ..	North Carlton	Up ..	Bowen-crescent	Down Home
" ..	Croxton ..	Up ..	Beaver-street	Controls Northcote Down Starting Signal, which is also controlled by Croxton
" ..	Preston ..	Up ..	Cramer-street..	Controls Preston Down Home
" ..	" ..	Down	Murray-road ..	Controls Preston Down Home
Heidelberg ..	Dennis ..	Down	Victoria-street	Down Home; controls Fairfield Park Up Starting Signal, which is also controlled by Dennis
" ..	Alphington ..	Up ..	Grange-road ..	Controls Alphington Up and Fairfield Park Down Starting Signal
" ..	" ..	Down	Yarra-street ..	Controls Alphington Down Departure Signal and Alphington Up Home
" ..	Ivanhoe ..	Down	Marshall-street	Controls Ivanhoe Down Departure Signal and Ivanhoe Up Home
Daring ..	Glen Iris ..	Up ..	York-road ..	Up and Down Homes
Healesville ..	Mont Albert	Up ..	Mont Albert-road	Controls Mont Albert Up Starting Signal
" ..	Box Hill ..	Up ..	Elgar-road ..	Up and Down Homes
" ..	Ringwood ..	Up ..	Heatherdale-road	Down Home
" ..	Blackburn ..	Up ..	Middleborough-road	Up and Down Homes
Oakleigh ..	Caulfield ..	Down	Grange-road ..	Up Home; controls Caulfield "B" Box Down Starting Signal
" ..	Hughesdale ..	Up ..	Posth-road ..	Controls Hughesdale Up and Down Homes
Stony Point ..	Glen Huntly..	Up ..	Neerim-road ..	Down Homes; controls Glen Huntly Up Starting
" ..	Moorabbin ..	Up ..	South-road ..	Controls Moorabbin Down Home and Up Departure Signal
" ..	Highbett ..	Up ..	Wickham-road	Down Home Controls
" ..	Bonbeach ..	Down	Down end of Station	Bonbeach Up and Down Homes

WORKING OF LEVEL CROSSINGS.

LEVEL CROSSINGS WHERE THERE ARE FIXED SIGNALS—*continued.*

Line.	Nearest Station.	Up or Down Side or nearest Station.	Crossing.	Class of Signal.
Sandringham —	North Brighton	Down	William-street	Controls Up and Down Three-position Automatic Signals B.401 and B.404
"	Brighton Beach	Up ..	Kinane-street	Controls Up and Down Three-position Automatic Signals B.453 and B.458
" ..	"	Down	New-street ..	Controls Automatic Signals—Up B.498, Down B.497
" ..	Hampton ..	Down	Linaere-road ..	Controls Automatic Signals—Up B.558, Down B.533

THREE-POSITION SIGNALS AT LEVEL CROSSINGS.

At Level Crossings where Three-position Signals are controlled by the Signalman or Gatekeeper the Gates must be closed across the roadway, and the control taken off the Signals in good time, so as to avoid an unnecessary check to an approaching train by the Signal protecting the Gates, or by the second Signal in the rear of the Gates.

When the control has been taken off and the Signal exhibited for the train to approach, the Signal must not (except in case of accident or obstruction) be put to the Stop position until the train has passed the Signal, after which the Signal must be kept at the Stop position until it is again necessary to take off the control for the passage of a train.

TRACTION ENGINES OR HEAVY LOADS PASSING OVER
LEVEL CROSSINGS.—By-Law 35.

1. When a Station-master receives written notice that a traction engine, road engine, or any vehicle or contrivance that is of exceptional weight, height, or width, or when any vehicle or contrivance is to be used for the purpose of conveying a load that is exceptional, requires to cross the Line, he must see that the time stated in such notice is not within 30 minutes prior to the time that any train is due to pass, and, if otherwise, must, unless instructions are issued to the contrary, request the person to alter it.

2. The Station-master must at once telegraph to the Road Foreman of the section concerned, the full particulars of weight of engine or vehicle, etc., and time of crossing.

WORKING OF LEVEL CROSSINGS.

3. When the written notice is left at a Station other than the one adjacent to the Crossing, the Station-master at the Station adjacent to the crossing must be informed, in addition to the Road Foreman.

4. Where the Crossing is not protected by Fixed Signals, the Road Foreman must, in order to secure the safety of trains and to protect the Crossing, arrange for a competent employe, with Hand and Detonating Signals, being sent out at least 1200 yards from the Crossing in each direction, such employe to remain there during the passage of the traction engine or vehicle across the Railway, and until it has been found that the Line has been left clear and safe.

When the Crossing is within the Home Signals, the Station-master must arrange for it to be protected by such Signals.

5. Where the Level Crossing Gates are worked from an interlocking apparatus, should a Steam Roller, Traction Engine or any other heavy road vehicle be working in the immediate vicinity, or require to pass over the Crossing, the Signalman or Gatekeeper must warn the person in charge to keep clear of the Gate Stops.

LEVEL CROSSINGS AT STATIONS.

1. Where a Level Crossing is near the Station Platform, and passengers have to cross the rails to get from one platform to another, employes must exercise the utmost possible supervision to prevent accident.

2. (a) Shunting.—Should it be necessary for a train to be set back over a Level Crossing where Gates are not provided, the Guard must ride in the leading vehicle, keep a good look-out and be ready to apply the Brake or to signal to the Driver, as may be necessary.

(b) During darkness or foggy weather the Station-master must take steps to see that the Crossing is properly protected, before intimating to the Guard that the train is to be set back; if there is a Conductor with the train it will be his duty to protect the Crossing.

(c) The rate of speed when the train is setting back must not exceed 5 miles per hour, and both the Driver and the Fireman must keep a good look-out for any Hand Signal that may be exhibited.

LEVEL CROSSINGS BLOCKED BY SHUNTING.

1. (a) Vehicular traffic must not be stopped longer than five minutes by Goods trains or shunting operations, at any Level Crossing, and, when necessary, trucks must be uncoupled and drawn clear of the Crossing or shunting operations suspended; this applies also to footcrossings.

WORKING OF LEVEL CROSSINGS.

(b) **Fire Brigades.**—Employees in charge of Level Crossings must see that no unnecessary delay occurs to Fire Brigades requiring to cross the Line.

2. (a) Where wicket gates are controlled by Levers, the employee in charge of them must keep such Gates locked during shunting operations until he has had a proper understanding with the Shunter and has received his permission for them to be opened.

(b) Where, ordinarily, there is not a man in charge of the Crossing, the Station-master must, if necessary, place a man there during shunting operations to warn pedestrians. When vehicles which have been uncoupled are being brought together the employee conducting that movement must stand at the Crossing to warn pedestrians, unless another man is stationed there for that purpose.

3. At a Station where a footbridge or subway is not provided the footcrossings must, as far as practicable, be kept clear, in order that intending passengers may cross the Line when necessary in good time to join the Passenger trains; Station-masters, Drivers, and Guards must give attention to this when Goods trains are required to stop, or when performing shunting operations that may unduly detain intending passengers.

GATE STOPS AT INTERLOCKED CROSSINGS.

1. At any place where the Level Crossing Gates are worked from the interlocking apparatus, the Signalman must, once a day, and more frequently when necessary, sweep the dirt and dust clear away from the Gate Stops.

2. There are two types of Gate Stops in use, viz.:—

(i) Type "A."—(a) This type, which is in general use, is raised above the ground, and set for the Gates when the Gate Stop Lever is moved from its normal position towards the first notch.

(b) This type of Gate Stop, if run over by a vehicle when raised, is likely to be damaged, which Signalmen must be careful to avoid.

(c) After sweeping these stops the Signalman must pour a bucketful of water over each set of Stops to prevent clogging.

(ii) Type "B."—(a) This type of Gate Stop will not rise above the ground until the Gates are almost closed across the public roadway.

WORKING OF LEVEL CROSSINGS.

(b) This type of Gate Stop must not be cleaned with water; the interior must be cleaned and lubricated regularly by the Signal Adjuster.

USE OF TRAIN WHISTLE, WHISTLE POSTS AND WARNING SIGNALS AT LEVEL CROSSINGS.

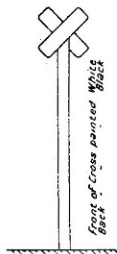
1. (a) When a train is approaching any Level Crossing, the Driver must sound the train whistle; the whistle must be sounded at such a distance back from the Crossing as will give ample warning of the approach of the train; Drivers must also make use of their whistle during shunting operations at Level Crossings.

(b) Where two trains approach any Level Crossing at or about the same time, each Driver must sound the whistle continuously until his train has reached the crossing.

(c) The sound of the whistle should be distinct, with intensity, duration, or repetition, proportionate to the distance at which the warning is required to be heard, and the circumstances under which it is used.

2. **Whistle Posts.**—(a) Whistle Posts (see diagram in the margin) are erected (as shown hereunder) ten (10) feet from the Line on the approach side of Level Crossings not provided with Gates:—

- (i.) At places where there is only one Crossing two Whistle Posts are erected, one for each direction, at a distance of 440 yards from the centre of the Crossing.
- (ii.) At any place where the distance between adjacent Crossings does not exceed 220 yards, two Whistle Posts are erected, each post being 440 yards from the centre of the nearer Crossing (and consequently not more than 660 yards from the further Crossing).
- (iii.) At any place where the distance between adjacent Crossings exceeds 220 yards, each Crossing is dealt with as an isolated Crossing.
- (iv.) Where a Crossing is adjacent to a Station, Whistle Posts are erected at the distances specified in sub-clauses (a), (b), and (c), or as near thereto as practicable.



(b) Every Driver must sound the train whistle when passing a Whistle Post in the direction to which it applies; after passing the Whistle Post, the Driver must again sound the whistle when near the Level Crossing.

WORKING OF LEVEL CROSSINGS.

(c) When starting from a place at which there is an open Crossing ahead, the Driver, in addition to giving the starting whistle, must again sound his whistle when approaching the Crossing.

(d) If in the vicinity of a Station, the Driver must sound his whistle whether he is required to stop or not.

3. (a) Wig Wag Warning Signals at Level Crossings.—These Signals are provided to warn the public of an approaching train. Whenever a train is approaching the Level Crossing, the Warning Indication will be given by a swinging Red Disc and Red Light, and the ringing of a Bell.

As soon as the train clears the Crossing, the Disc and Light will remain stationary, and the Bell will cease ringing.

If the apparatus be defective a banner with the inscription "Out of Order" will drop from behind a shield to below the Disc; this "Out of Order" Indication will be displayed until the apparatus is attended to by an Electrical Fitter.

(b) Drivers and Guards on observing any irregularity in the working of these Signals must report the circumstances at the first Station where there is a man in charge, and the latter will be responsible for notifying the Electrical Fitter in charge of the district, and for reporting the matter by memo. in the usual manner.

(c) The Track Force, when in the vicinity, must also, as far as practicable, observe the working of these Signals and report any irregularity to the nearest Station-master.

(d) Wig-wag Signals are provided at the Level Crossings specified hereunder:—

Line.	Level Crossing.	Mileage.
Northern	Anderson-street	8 miles 8 chains
Castlemaine-Maryborough	Rowe-street	78 miles 41 chains
South-Western	Melbourne-road	93 miles 54 chains
"	"	94 miles 40 chains
North-Eastern	Sydney-road	137 miles 14 chains
Yackandandah	Worabee	180 miles 40 chains
Bright	Myrtleford	175 miles 40 chains
Coburg-Fawkner	Baker's-road	7 miles 27 chains
Royal Park-Clifton Hill	Amess-street	4 miles 52 chains
Heidelberg-Eltham	Plenty-road	9 miles 8 chains
"	Greensborough-road	12 miles 23 chains
"	"	12 miles 53 chains
Richmond-Healesville	Mitcham-road	13 miles 20 chains
Ringwood-Upper Ferntree Gully	Bedford-road	15 miles 64 chains
Lilydale-Warburton	Launching-place (down end)	41 miles 11 chains
"	" (up end)	40 miles 64 chains
Melbourne-Stony Point	Mordialloc-Aspendale	16 miles 71 chains
"	Hastings-road	32 miles 28 chains
Baxter-Mornington	Point Nepean-road	38 miles 38 chains

WORKING OF LEVEL CROSSINGS.

GATES WHICH WHEN OPEN FOR ROAD TRAFFIC DO NOT CLOSE ACROSS THE LINE.

Hereunder is a list of the Level Crossing Gates which when open for road traffic do not close across the Line. Due care is to be exercised in the working of these Crossings.

Line.	Situation.	Locality.
Woodend-Creswick	63 miles 67 chains ..	Trentham
"	99 miles 28 chains ..	Rocklyn
Western	Doveton-street ..	Ballarat
North-Eastern	66 miles 27 chains ..	Gravelside
"	67 miles 79 chains ..	Mangalore
"	75 miles 68 chains ..	Monea
Eastern	Hallams-road ..	Hallam
"	" ..	Narre Warren
"	31 miles 4 chains ..	Officer
Sandringham	Kinane-street ..	Between Middle Brighton and Brighton Beach

ELECTRIC BELL COMMUNICATION AT LEVEL CROSSINGS.

1. At certain Level Crossings electric bells are provided by means of which the Signalman or other designated employee must announce to the Gatekeeper each train proceeding in the direction of the Level Crossing; the Bell Signal must be given in time to give the Gatekeeper warning of the approaching train.

2. (a) Unless otherwise ordered, trains (including Light Engines) must be described as follow:—

	Long.	Short.
Down Train	1	—
Up Train	2	—
*Close Gates for Shunting operations	3	—
†Repeat previous signal	—	5
Cancel previous signal	—	7
Telephone signal	—	4

* This signal must be sent in regard to any shunting operation that is likely to foul the Level Crossing.

† This signal must be acknowledged by repeating the Bell Signal previously given.

(b) A Long ring is produced by holding the Key down whilst counting four, and the interval between rings should be equal to the time occupied in counting two.

(c) The Gatekeeper must acknowledge all Bell Signals by repeating them back to the Signalman.

(d) If a train should approach the Level Crossing without the prescribed Bell Signal being received by the Gatekeeper, the latter must, after the passage of such train, test the Bell by giving the Signalman four Long rings, which the Signalman must at once acknowledge; every such case, and the result of the test, must be reported. In the event of

WORKING OF LEVEL CROSSINGS.

a failure of the Bell, which will be indicated by the absence of an acknowledgment, the Signalman must report the failure by the most expeditious means to the Fitter.

(e) Electric Bells are provided at the Level Crossings specified hereunder:—

Line.	* Level Crossing.	Trains Announced by Signalman at:—
Northern	Mundy-street	Bendigo "C"
Inglewood	Macrae-street	Bendigo "D"
"	Bridge-street	"
"	Thunder-street	"
"	Holdsworth-road	Eaglehawk
"	Nelson-street	"
North-Western	Maddingley-road	Bacchus Marsh
"	Forrest-street	Ballarat "C" and "D"
"	Creswick-road	"
"	Havelock-street	Beaufort
South-Western	Victoria-street	North Geelong "B"
"	McKillop-street	(Down trains) Geelong "B"
"	"	(Up trains) South Geelong
"	Maud-street	" " "
"	Kilgour-street	" " "
North-Eastern	Park-street	Emmendon
Eastern	Grange-road	Caulfield "B"
"	Posh-road	Oakleigh "A"
Coburg	Park-street	Royal Park
"	Brunswick-road	"
Clifton Hill-Royal Park	Bowen-crescent	"
"	†Bennett-street	†Northcote Loop Junction
Whittlesea	Beavers-road	Northcote
"	Cramer-street	Bell
Ringwood	Mont Albert-road	Mont Albert
"	Heatherdale-road	Mitcham
Glen Iris	Madden-grove	(Down trains) Burnley
"	"	(Up trains) Heyington
"	Toorak-road	(Down trains) Heyington
"	"	(Up trains) Tooronga
"	"	(Down trains) Tooronga
"	"	(Up trains) Darling
Frankston	Neerim-road	(Down trains) Caulfield "B"
"	"	(Up trains) Glenhuntly
"	South-road	Moorabbin
"	Wickham-road	"
Sandringham	South-road	Brighton Beach

* Classified Signal-boxes are not included in this list.

† For the purpose of these instructions all trains proceeding from Clifton Hill or Northcote to North Fitzroy will be described to Bennett-street as Down trains, and trains from North Fitzroy (on either line) as Up trains.

PRIVILEGED GATES.

(Regulation 139.)

Hereunder is a list of Privileged Gates, i.e., Level Crossing Gates that are closed across the Line after the last Time-tabled train has passed at night, and until 30 minutes of the first train being due in the morning.

NON-INTERLOCKED GATES.—Unless otherwise specified non-interlocked Gates must be locked when closed across the Line during the time that they are privileged.

WORKING OF LEVEL CROSSINGS.

INTERLOCKED GATES.—At places where there are Interlocked Gates, chains and padlocks are provided for the purpose of securing the Gates across the Line, when necessary, during stormy weather, and when the Signalmen are off duty; before closing, the signalmen must see that the gates are secured.

"T" indicates Transportation Branch, and "W. & W." indicates Way and Works Branch.

Line.	Branch, under control of—	Through Mileage from Melb. mils. chs.	Nearest Station.	Up or Down Side.	Name of Street or Road.
Footscray Jn. to Echuca	W. & W.	101 14	Bendigo	Down	Mundy-street
"	T.	118 02	Goornong	"	Murray-road
"	W. & W.	155 44	Echuca	"	Pakenham-street
"	"	155 70	"	"	Murray Bridge
"	"	158 14	Moama	Up	Murray Bridge
Echuca to Deniliquin	T.	156 35	"	"	Perrioota-road
"	"	156 57	"	"	Francis-street
Clarkefield to Lancefield	W. & W.	40 55	Romsey	Down	Barry-street
Maldon Jn. to Shelbourne	"	79 11	Castlemaine	"	Graham-street
"	T.	99 17	Shelbourne	Up	Laanecoorie-road
Heathcote Jn. to Bendigo	"	42 57	Kilmore	Down	Footc-street
Bendigo to Sea Lake	W. & W.	102 27	Bendigo	"	McCrae-street
"	"	102 43	"	"	Bridge-street
"	"	102 57	California Gly	Up	Thunder-street
"	"	104 05	"	"	Holdsworth-street
"	"	104 51	"	Down	Nelson-street
"	"	105 34	Eaglehawk	Up	Victoria-street
Eaglehawk to Swan Hill	T.	107 62	Myer's Flat	Down	Sydney Flat-road
"	"	179 52	Kerang	"	Wyndham-street
"	"	190 29	Lake Charm	"	Lake Charm-road
Ballarat to Maryborough	"	85 44	Creswick	"	Victoria-street
"	W. & W.	96 39	Clunes	Up	Boundary-road
Carlsruhe to North Creswick	"	57 48	Tylden	Down	Chanter's-road
"	"	69 65	Bullarto	"	Glenlyon-road
"	T.	72 18	Musk	"	(Not named)
"	W. & W.	109 21	Daylesford	"	Patterson-street
Sunshine to Serviceton	"	11 73	Bacchus Msh.	"	Maddingley-road
Ballarat to Linton	T.	79 23	Cardigan	"	Burrumbet-road
Geelong to Port Fairy	W. & W.	95 00	Colac	Up	Queen-street
"	T.	123 42	Camperdown	Down	Church-street
"	W. & W.	149 43	Panmure	Up	Lings-road
"	T.	165 66	Warrnambool	"	Gillies-street
"	"	166 21	"	Down	Wellington-street
Ararat to Portland	"	250 56	Portland Nth.	"	Hird-street
Branxholme to Casterton	W. & W.	241 45	Sandford	Up	Begalla Bridge-road
"	T.	242 22	"	"	Church-street
Tallaroak to Mansfield	W. & W.	61 31	Trawool	"	Yea-road
"	"	65 12	Granite	Down	Yea-road
"	T.	79 46	Yea	Up	Oliver-street
"	"	79 77	"	Down	Murrundindi-road
"	W. & W.	118 41	Bonnie Doon	"	Dry Creek-road
Mangalore to Tocumwal	T.	78 15	Nagambie	Up	Goulburn-street
"	"	91 27	Murchison E.	"	Violet Town-road
"	W. & W.	119 11	Congupna Rd.	"	Yarrowonga-road
"	"	155 56	Tocumwal	"	Murray Bridge
Numurkah to Picola	W. & W.	133 71	Numurkah	Down	Quinn-street
"	"	134 03	"	"	Saxton-street
Toolamba to Echuca	"	110 26	Tatura	"	Hogan-street
Benalla to Yarrowonga	T.	134 27	Nooramunga	"	(Not named)
"	W. & W.	137 40	Devenish	Up	Dookie-road
Bowser to Yackandandah	T.	157 56	Tarrowingee	Down	Eldorado-road
"	"	171 26	Beechworth	"	Camp-street
Springhurst to Wahgunyah	"	169 13	Rutherford	Up	Brown's Plains-road

WORKING OF LEVEL CROSSINGS.

PRIVILEGED GATES—continued.

Line.	Branch, under control of—	Through Mileage from Melb. mils. chs.	Nearest Station.	Up or Down Side.	Name of Street or Road.
South Yarra to Orbot	T.	138 32	Stratford	Down	Hobson-street
"	"	170 76	Bairnsdale	Up	McArthur-street
Traralgon to Stratford	"	131 11	Maffra	"	Bundalaguah-road
Dandenong to Port Albert	"	77 67	Leongatha	"	McCarton-street
Caulfield to Mornington	W. & W.	7 28	Glenhuntly	"	Neerim-road
"	"	9 03	McKinnon	Down	McKinnon-road
"	T.	10 48	Moorabbin	Up	South-road
"	W. & W.	11 34	Highett	"	Wickham-road
"	"	13 03	Cheltenham	Down	Tulip-road
"	"	13 59	"	"	Latrobe-street
"	"	14 02	Mentone	Up	Patty-street
"	T.	14 40	"	Down	Mitchell-street
"	"	16 29	Mordialloc	Up	McDonald-street
"	W. & W.	20 60	Bon Beach	Down	Bondi-street
"	T.	31 52	Baxter	"	Scotts-road
"	W. & W.	39 08	Mornington	Up	Barkly-street
Melbourne to Williamstown	"	8 37	W'town Beach	Down	Clifford-street
Newport to Sunshine	"	7 07	Newport	"	Melbourne-road
N. Melbourne to Fawkner	"	3 67	S. Brunswick	Up	Park-street
"	"	3 72	"	"	Brunswick-road
"	"	3 78	"	"	Barkly-street
"	"	4 23	"	Down	Dawson-street
"	"	4 29	Brunswick	Up	Phoenix-street
"	"	4 38	"	"	Albert-street
"	"	5 09	Nth. Brunswick	Down	Tinning-street
"	"	5 70	Moreland	"	Reynard-road
"	"	6 31	Coburg	"	Bell-street
"	"	6 51	"	"	O'Hea's-road
"	"	6 72	Batman	Up	Gaffney-road
Royal Park to Whittlesea	"	3 79	Nth. Carlton	"	Bowen-crescent
"	"	5 32	Merri	"	Bennett-street
"	"	6 48	Croxton	"	Reavers-road
"	"	6 78	"	Down	Woolton-avenue
"	"	7 08	Thornbury	Up	Normanby-avenue
"	"	7 18	"	"	Smith-street
"	"	7 62	Bell	"	Oakover-road
"	"	8 35	Preston	"	Cramer-street
"	"	8 49	"	Down	Murray-road
"	"	9 09	Regent	Up	Regent-street
North Fitzroy to Fitzroy	T.	5 17	North Fitzroy	Down	Park-street
"	"	5 21	"	"	St. George's-road
"	"	5 31	"	"	Scotchmer-street
"	"	5 44	Fitzroy	Up	Alfred-crescent
Hawthorn to Kew	"	4 32	Barker	"	Hawthorn-grove
"	"	4 40	"	Down	Barker's-road
Camberwell to Ashburton	W. & W.	6 31	Riversdale	"	Prospect Hill-road
Glen Iris Line	"	2 74	Burnley	Down	Madden-grove
"	"	4 45	Kooyong	"	Avenal-road
"	"	4 55	"	"	Elizabeth-street
"	"	4 68	Tooronga	Up	Toorak-road
"	"	6 14	Glen Iris	"	York-street
"	"	6 78	Darling	Down	Moir-street
South Yarra to Sandringham	"	7 64	Brighton	"	William-street
"	"	9 48	Brighton Bch.	"	New-street
"	"	10 49	Hampton	"	Linsere-road

Train Signals.

REGULATIONS 151 AND 152.

1. (a) Drivers and Guards must bear in mind the importance of giving constant attention to their Train Signals when on any Running Line at night, and at all times during foggy weather or when stopped in a Tunnel. On Lines where Automatic Signalling is in force, it may be the Signaller is depending on Head Signals, alone, to indicate the class or destination of trains; although the Driver of a second train entering a Section must travel with the greatest care, it is important that Head, Tail and Side Lights of any Train or Light Engine on the Running Line should be showing properly, and any omission on the part of the Trainmen to comply with these requirements must be regarded as implying neglect. At the commencement of each trip the Driver should satisfy himself that his train is carrying the prescribed Head Signals, and the Guard should make it a practice to inspect the Tail Signal and Side Lights when changing ends at terminal Stations; the Driver of a Light Engine must exercise similar care in respect of its Head and Tail Signals.

The prescribed Train Signals must be lighted as soon as it commences to be dusk, and in foggy weather or during falling snow. Guards are, however, responsible for seeing that their Van, Roof, Side and Tail Lamps are not kept burning longer than is necessary, in accordance with the Rules, Regulations or other Instructions, and Drivers must similarly attend to their lamps.

(b) On Lines where Automatic Signalling is in force, Signalmen and Employees at Stations between Signal-boxes must, as far as practicable, watch each train as it passes and satisfy themselves as to whether it is complete. See Regulation 248.

(c) On trains where Side Lamps are provided at both the front and rear end of the trailing van, the rear Side Lamps must be lighted when such is necessary, and not the front ones. Signalmen on observing that the Side Lights are not showing properly on a passing train must at once communicate the fact to the Officer-in-charge at the Station next in advance, and the latter must instruct the Guard of such train to comply with the above Regulation; the Signaller must make an entry of every such case in the Train Register Book, and the Station-master receiving advice from the Signaller must promptly report the circumstances.

Should a train with two engines in front, or two Light Engines coupled together, arrive at a Crossing Station after sunset or during foggy weather, the leading engine must not be uncoupled to go ahead until the prescribed Head Light has been placed in position on the second engine. The Engine-driver of the leading engine will be held responsible for seeing that his engine is not uncoupled until this is done.

SPECIAL TRAIN SIGNALS (Regulation 153).

Except in the case of the last Suburban Passenger train for the day, it will not be necessary for a "Special Train" Signal to be carried to indicate the running of a Special train between Melbourne and the following Stations, viz.:—Port Melbourne, Williamstown, Newport South, Sunshine, Essendon, Coburg, Reservoir, Heidelberg, Sandringham, St. Kilda, Box Hill, Kew, Darling, and Oakleigh. A "Special Train" Signal may, however, be carried by a train which will run beyond any of these Stations, when the Special train will also run beyond.

The Staff must at all times be prepared for extra trains. See instructions in regard to the running of Special trains, pages 172-178.

DISTINGUISHING HEAD SIGNALS.

1. (a) The object of the Distinguishing Head Signals is to ensure prompt and sufficient advice being given to Stations in advance, in order that trains may be dealt with according to their importance, and also, in the case of Suburban trains, that Signalmen may be aware of the destination of the train.

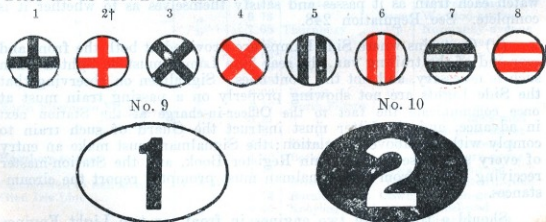
(b) Except where otherwise shown, White Lights only must be used; and where not otherwise specified, one White Light must be carried in front of every train or engine in the direction in which it is travelling.

Unless instructions are issued to the contrary, Special trains must carry the same Head Signals as the corresponding regular trains.

Drivers are held responsible for the proper Head Signals being carried on their engines, and if in doubt as to what Signals should be carried, they must refer to the Guard or other Transportation Branch employe in charge.

(c) Discs are used as Head Signals on Suburban Passenger Trains by day; at night or in foggy weather, lights are used.

The distinguishing numbers and respective symbols* of the Head Discs are as shown hereunder:—



* These Discs must not be used nor accepted as Tail Signals.

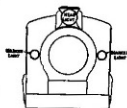
† Symbol No. 2 must not be used unless specially authorized by the General Superintendent of Transportation.

(d) In the case of Electric Trains, every Driving Compartment is equipped with two Discs, which, when not actually in use, must be kept in the box provided for them in their respective Compartments. Two

sockets are provided in each Disc, so that symbol No. 1 or No. 3 may be shown according to the socket used; the Red symbols are on the reverse side to the Black, so that the symbols 1 to 4 may be shown by one Disc and 5 to 8 by the other. Motormen when examining their train equipment before leaving Shed or Siding must see that each Driving Compartment on their train is furnished with both classes of Disc.

Drivers of Suburban trains will be responsible for the full complement of Discs being available for their use, and in the event of a Disc being lost after leaving Shed or Siding a duplicate must be obtained as soon as possible. If a Disc is found on or near the Line, it must be handed to the nearest Station-master, who must waybill the Disc, with particulars, to the Station-master, Flinders-street.

2. Head Signals on Engines.— (a) Some locomotives are equipped with three Electric Lamps for use as Head signals as shown in the diagram on the margin hereof. The Upper light, which is a long range light, must be used on all trains worked by any such locomotive or when it is running as a Light Engine; the two smaller lights (Marked Lights) are provided to indicate the class of trains; see page 239. The tenders of these locomotives are similarly equipped with these electric lamps.



(b) The Lamp for the long range light is fitted with a Dimming Apparatus, by means of which the power of its light must be dimmed in the circumstances mentioned hereunder:—

- (i.) When passing through the Suburban area between Melbourne and the following Stations:—Newport, Caulfield, Sunshine, Box Hill or Essendon.
- (ii.) In Yards where shunting engines are employed.
- (iii.) Approaching Stations where other trains are to be crossed.
- (iv.) Approaching Stations where the train is required to stop.
- (v.) Exchanging Staffs or Tablets by hand.
- (vi.) Shunting in Station Yards; see clause (e).
- (vii.) When standing within Station limits.
- (viii.) When approaching trains running in the opposite direction on a Double Line or other parallel track.

When a locomotive equipped with Electric Head Lights is engaged shunting, during darkness, in a Yard, the long range light must be dimmed, and a Red and White Marker Light must be exhibited both in front and rear.

Locomotives having oil Head Lamps, when shunting, during darkness, in Yards, must carry on the buffer beam, on front and rear, a White and a Red Light.

(d) When a train is drawn by two locomotives, the Head Lamps on the second, or Train engine, must not be lighted. When the Head Lamps are lighted, the distinguishing Discs must be removed.

(e) When an engine is travelling tender or bunker first, the Lights or Discs, as the case may be, must be carried in the same relative position as when travelling funnel first.

Shunting engines in Station Yards must, during the night, carry on the Buffer beam, both in front and rear, a White Light and a Red Light.

TRAIN SIGNALS.

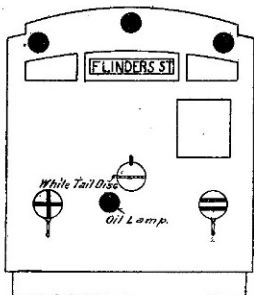
3. Electric Trains are fitted with four lamps to serve the requirements of Head Lights.

Where trains are coupled or uncoupled, or taken out of service, the Driver must see that the Head Signals are properly arranged and that Discs not at the time required for use are placed into the box provided for them.

When the Head Lamps are lighted, the distinguishing Discs must be removed and placed in the box.

In addition to the Distinguishing Head Signals, Electric Trains are provided with a Destination Sign on the front of each train. At night the Destination Sign is illuminated.

The Lamps and Discs on Electric Trains are fixed as per diagram hereunder.



The Lamps shown in the above diagram are fixed to the Car.

The Upper Centre Lamp and Side Lamps are lighted electrically. The Upper Centre Lamp shows a White Light only, and is used as a Head Light. The Side Lamps may be used either as White Head Lights, or as Red Side Lights in the rear of the train.

The Lower Centre Lamp is an Oil Lamp, and may be used either as a White Head Light, or as the Red Tail Light.

Each of the electric lights may be switched in, or out, by means of switches in the Motorman's Compartment; but the light of any lamp may be changed or obscured as required by means of a revolving interior operated in the usual manner.

The White Tail Disc is fixed to the car, but hinged across the centre, so that the White face is obscured, when necessary, by covering the lower with the upper section; the back of the upper section being painted in the same colour as the car. The White Tail Disc must only be showing on the rear of the last vehicle of the train.

Brackets are provided for the Head Discs; these Brackets also serve for an extra Tail Lamp when necessary to denote the running of a Special Train.

4. All Lamps should be cleaned and the Oil Lamp should be trimmed and ready for use when the train leaves the Shed or Siding to be put into running. In case of any failure or defect in the Tail Lamp when running in traffic, a duplicate of the defective portion must be obtained as soon as possible, and the Station-master or other responsible person who receives the defective portion must examine it and furnish a report to the Superintendent of the District as to its condition and the cause of its failure.

5. (a) On arrival at the Terminal Station, the Guard must apply the Hand Brake, and on his arrival at the opposite end of the train, he must alter the Destination Sign and arrange the Train Signals at that end. The Motorman will be responsible for setting the Destination Sign and Head Signals on the front of the train.

(b) For trains proceeding from the North to South Suburban Lines, or vice versa, the Head Signals must not be changed (if a change is necessary) until arrival at the platform Flinders-street.

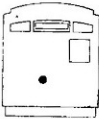
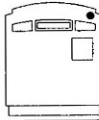
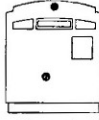
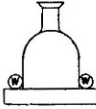
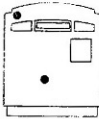
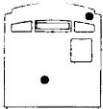
(c) The Code of Head Signals is as shown on the following pages:—

ENGINE HEAD LIGHTS, MAIN LINE TRAINS, AND LIGHT ENGINES.

Description of Train.	Head Lights.*	
	Electric.	Oil.
1. Express Passenger train, Fast Passenger train, or Breakdown Van train going to clear the Line, or Light Engine going to assist disabled train		
2. Ordinary Country Passenger or Mixed train		
3. Live Stock train, Goods or Ballast train, or Empty Country Passenger train, Light Engines or Engines Coupled		

*Except where otherwise provided, White Lights must be used.

TRAIN SIGNALS.







Suburban Passenger Trains, empty or loaded, between—	Distinguishing numbers of disc symbols. *		Head Lights.
	Over right- hand buffer. †	Over left- hand buffer.	
Williamstown Line— Flinders-street and North Wil- liamstown or Williamstown	—	5	
Flinders-street and Newport ...	—	6	
Altona Line— Newport and Altona ...	—	4	
Werribee Line— Spencer-street and Werribee ...	4	—	
St. Albans Line— Flinders-street and West Foots- cray, Sunshine, or St. Albans	3	—	
Coburg Line— Flinders-st., Coburg and Fawkner	—	3	

* For disc symbol specified in these columns, see page 235.—† The terms "right-hand" and "left-hand" are to be understood as referring to the Driver's "right" or "left" hand when facing in the direction in which the train is to run.


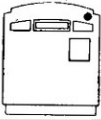



"W" signifies White Head Light, "P" denotes Purple Head Light, and "R" signifies Red Head Light.

TRAIN SIGNALS.

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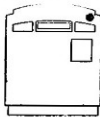

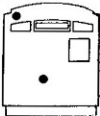

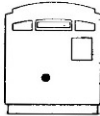
Suburban Passenger Trains, empty or loaded, between—	Distinguishing numbers of disc symbols.		Head Lights.
	Over right- hand buffer.	Over left- hand buffer.	
Sandringham and Broad- meadows Line— Flinders-st. to Essendon, Elstern- wick or Brighton Beach ... Race Specials excepted.	—	4	
Sandringham and Broadmeadows	—	1	
Port Melbourne Line— Flinders-street & Port Melbourne Station ...	—	3	
Flinders-street and Prince's Pier, Port Melbourne	4	—	
St. Kilda Line— Flinders-street and St. Kilda ...	5	—	
Oakleigh and Dandenong Line— Flinders-street and Oakleigh ...	—	5	

TRAIN SIGNALS.

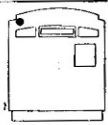




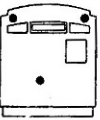
Suburban Passenger Trains, empty or loaded, between—	Distinguishing numbers of disc symbols.		Head Lights.
	Over right- hand buffer.	Over left- hand buffer.	
Flinders-street and Dandenong ...	5	—	
Flinders-street and Spring Vale Cemetery	—	7	
Frankston Line—			
Flinders-street and Glen Huntly ..	—	6	
Flinders-street, Moorabbin, and Mordialloc	6	—	
Flinders-street, Carrum and Frankston	—	8	
Box Hill and Ringwood Line—			
Flinders-street and Camberwell	—	4	
Flinders-street and Box Hill ...	—	1	

TRAIN SIGNALS.

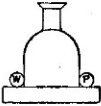

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Suburban Passenger Trains, empty or loaded, between—	Distinguishing numbers of disc symbols.		Head Lights.
	Over right- hand buffer.	Over left- hand buffer.	
Flinders-street and Ringwood...	—	5	
Flinders-street, Croydon and Lilydale	—	8	
Flinders-street and Upper Fern Tree Gully	—	6	
Glenn Iris Line— Flinders-street, Burnley & Darling	3	—	
Kew Line— Flinders-street, Hawthorn & Kew	—	3	
Outer Circle Line— Flinders-street, Riverdale, and Ashburton	4	—	

TRAIN SIGNALS.

Suburban Passenger Trains, empty or loaded, between--	Distinguishing numbers of disc symbols.		Head Lights.
	Over right- hand buffer.	Over left- hand buffer.	
Eltham Line-- Prince's Bdg., Alphington, Heidel- berg, and Hurst Bridge ...	—	4	
North Fitzroy Line-- Prince's Bridge and North Fitzroy, North Carlton or Royal Park..	—	1	
Reservoir Line-- Prince's Bridge and Reservoir ...	5	—	
Flinders-street and Essendon-- Moonee Valley Race Trains ...	1	8	
Show Trains, Metropolitan Race Trains not otherwise specified-- First Class Trains, also First and Second Class combined ...	9	8	
Second Class Trains ...	10	8	

TRAIN SIGNALS.

Suburban Passenger Trains, empty or loaded, between—	Distinguishing numbers of disc symbols.		Head Lights.
	Over right- hand buffer.	Over left- hand buffer.	
Buninyong Line— Ballarat and Buninyong ...	1	—	
Yard Pilots. Within Station limits ...	—	—	

Working of Trains.

TRAIN CONTROL SYSTEM.

1. (a) The movement of all trains and Light Engines (Electric trains excepted) and the movement of Rolling Stock within the sections mentioned in clause 8 hereof, is under the direction of Chief Train Control Officer located in the Train Running Room, at the Head Office, Spencer-street, Melbourne; the Train Control Office is open continually except from 7 a.m. till midnight on Sundays.

(b) The Control Officer on each shift is in constant circuit for each Station and Signal-box on the sections referred to by means of the Selector Telephone.

(c) Normally Passenger trains will not be subject to any controlling movements, by the Control Officer, but he must assume control of these trains when necessary.

(d) The Superintendent of the Melbourne Yard, Melbourne Goods Superintendent, District Superintendents, Live Stock Agent, and every other Officer connected with Train Running, will co-operate with the Chief Train Controller to see that the best possible use is obtained from the regular schedules and in the case of extra trains—Passenger, Live Stock or Goods trains—that the best paths are selected for their working.

(e) District Train Running Officers and their Assistants are required to keep in close contact with the Central Control, who will advise them from time to time of the anticipated times at which Down trains will arrive at their Depots. In the case of Up trains, District Officers must advise Central Control immediately it is known that there will be any delay in the arrival at or prospective departure from their depots so that the necessary adjustment of the programmed services may be made. By maintaining an effective contact between these Officers, material savings will be effected by the adjustment of the connecting train services and District Superintendents are enjoined to give personal attention to this phase of Train Working.

(f) The Control Sections attached to the offices of the respective Superintendents and Locomotive Depots must function as directed from time to time by the Chief Train Controller, and in every case prior to the despatch of Relief Crews, the Central Control must be consulted respecting the necessity therefor, and the train by which the Relief Crews are to be sent.

(g) In every case of accident, engine failure or any other irregularity affecting the regular movement of traffic, the Central Control Officers must be promptly advised of the circumstances by the Station-master who first receives intimation of such an occurrence, and the Control Officers will then make the necessary arrangements for the working of traffic in conjunction with the respective Depots and Stations concerned; this will not, however, relieve the Station-master of his responsibility for full and prompt compliance with the instructions under the heading of "Reporting Accidents." See pages 9 to 16, inclusive.

WORKING OF TRAINS.

2. (a) To speak to the Control Officer the Station or Signal-box concerned must lift the receiver on the "Selector Telephone," and if the line be not engaged, push in the black button, call the name of his Station, and wait until the Control Officer replies "So and so speak." When the communication is completed the Station must say "So and so finished," and when the Control Officer replies "So and so finished" the Station must replace the receiver on the hook.

EXAMPLE.—*The Stationmaster, Sunbury, has a communication to make to the Control Officer. He lifts the receiver, listens, and if the line be not engaged, says "Sunbury speaking," then waits till the Control Officer replies, "Speak Sunbury." When the communication is completed Sunbury says, "Sunbury finished," then waits till the Control Officer replies, "Finished Sunbury," when the receiver must be replaced on the hook.*

(b) The Officer or employe in charge of the Station must promptly advise the Control Officer the time of arrival and departure of all stopping trains, including Passenger, and also the time of passing non-stopping trains.

(c) The advice of the Control Officer must be obtained in connection with all questions of train movement, immediate or prospective, and the instructions of the Control Officer must be promptly and implicitly obeyed by all members of Station Staffs and Trainmen.

3. (a) At terminals and intermediate points, loading will be detached and attached by Goods Trains in accordance with the Special Instructions issued occasionally by the General Superintendent of Transportation in respect of "Regular Goods Trains and Roadside Work"; such arrangements must not be departed from without the direction or consent of the Control Officer.

(b) Stationmasters on the sections of lines in which traffic is under the direction of the Control Officer, must (in addition to notifying their depots the loading on hand to be moved by Up or Down trains) notify the Control Officer by 4.0 p.m. daily the number of trucks and gross tonnage for both Up and Down directions. The details of Van-goods offering must also be communicated to the Control officer in respect of each train as soon as such details are known.

(c) The Officer or employe in charge of the Station must give immediate attention to any call from the Control Officer; the "Selector Telephone" must not be used for any purpose other than in connection with the operation of trains and conveying to the Control Officer the information herein referred to.

(d) The Officer or employe in charge of the Station must take the earliest opportunity of inquiring from the Control Officer the intended movements for approaching trains so that all may be in readiness to expedite such movements.

Do not wait for the Control Officer to call you, this is a loss of your time and his; he is in constant attendance to advise and function with you as a unit in train working operation.

WORKING OF TRAINS.

4. (a) Depot Yards, Junction Stations, or other commencing Stations at which Goods trains enter upon controlled territory, must, prior to the despatch of such train, telephone the Control Officer the following information:—

- (i.) Number of the train, or in the case of extra trains working under Special Train Notice the booked time of departure of same.
- (ii.) Number of vehicles and gross tonnage of train.
- (iii.) Number and class of engine.
- (iv.) Name of Driver.
- (v.) Name of Guard.
- (vi.) Details of roadside loading to be attached or detached en route.

(b) In the case of Passenger trains the following details must be telephoned the Control Officer prior to the despatch of the train:—

- (i.) Number of the train, or in the case of extra trains working under Special Train Notice the booked time of departure of same.
- (ii.) Number of vehicles on train.
- (iii.) Number and class of engine.
- (iv.) Name of Driver.
- (v.) Name of Guard.

(c) Immediately it is known that a train cannot be despatched on scheduled time the Sectional Yard Foreman (Melbourne Yard) or Officer or employe in charge at the Station concerned, must advise the Control Officer of the anticipated late departure and the reason therefor.

(d) In the case of Depot Yards requiring to work extra Goods Trains through controlled territory, the officer or employe in charge of the Depot must telephone the following "Preliminary Advice" to the Control Officer, seeking his approval for the working of such extra train; an "Extra Train" means any train other than one scheduled in the Working Time Table, or in any Special Time Table to regularly run, or to run until further notice.

- (i.) Number of train desired if it be a "when required train" shown in the Working Time Table, or, if not, the time it is desired to despatch the train.
- (ii.) Destination of train.
- (iii.) Class of engine.
- (iv.) Estimated tonnage of loading at commencing Station.
- (v.) Proposed work of train en-route, if any.

(e) If the Control Officer approve of the suggested time of departure and the working for the train he will advise accordingly, or, if not, he will indicate the time at which he is prepared to despatch the train; as soon as the train is prepared ready to depart the details, of the loading hereinbefore referred to must be telephoned the Control Officer.

5. (a) In the case of failure of communication with the Control Officer, the officer or employe in charge of the Station must arrange to

advance the regular and special trains as expeditiously as possible in conformity with the Rules and Regulations; every effort must, however, be made to get into communication with the Control Officer by telegraph or other telephone circuits.

6. (a) Depots. (Transportation and Locomotive) must, prior to despatching relief for train crews, ascertain from the Control Officer the location of the crews concerned, and the anticipated time of their return to Depot, so that they may be in a position to determine whether relief should be despatched, and if so, by which train. In every instance in which relief should be despatched the following information must be promptly telephoned to the Control Officer:—

(i.) The names of the Relief Crew, and the train by which they are travelling.

(ii.) The names of the crew to be relieved, and the number of the train on which they are working.

(b) The above information is required in connection with regular relief crews as well as in cases of emergency or other reliefs.

7. The control movements directed by the Control Officer do not in any way relieve the staff of their responsibility for complying with the existing Rules, Regulations or other Instructions, nor of their arranging in conjunction with the Control Officer the working of all trains and Light Engines to the best possible advantage. Remember always, "SAFETY FIRST."

8. The Train Control system as prescribed in the foregoing instructions is in force on the undermentioned sections:—

Districts.	Sections.
Northern	Melbourne-Bendigo
North-Western	
South-Western	Melbourne-Geelong
North-Eastern	Melbourne-Seymour
Eastern and South-Eastern . .	

9. Movements of Important Trains on Sections Not Included in Clause 8.—(a) In all cases of actual or prospective delay (from any mutual cause) to any Passenger or Mixed Train or to any Goods Train conveying Live Stock or perishable loading the Station at which the detention occurs or is likely to occur must promptly telegraph particulars to the Train Running Officer for the District. These reports are necessary to enable District Officers to keep in close touch with the running of certain trains, so that, when necessary, prompt measures may be adopted in regard to the traffic affected; it will be seen, therefore, that the particulars must be telegraphed without delay. See also Late Running of Live Stock Trains, page 520.

DESPATCH IN TRAIN RUNNING.

The following Instructions apply generally in respect of Despatch in Train Running.

1. Running Schedules.—(a) The Running Schedules shown in the Working Time Table are based on the actual 3-5ths, 4-5ths, or full Ruling Grade, or Sectional Loads, as the case may be, and in respect of Passenger trains, on an authorised number of vehicles that can be hauled over the various Sections.

(b) Instances are noted in which trains with slightly over 3-5ths of a full load have taken the schedule running time for a fully laden train to clear the sections, and with a view to obtain the best possible results in connection with the despatch of trains, the attention of all concerned is directed to the following instruction:—

(i) Subject to the published speed limits and to restriction of speed over specified sections as advised by the General Superintendent of Transportation from time to time, it will be the duty of the Driver to work his engine to the best advantage, and under normal conditions to increase the speed of his train in the proportion—roughly—that the load is reduced. That is to say, a train with 1-10th less than the full Vehicle or Ruling Grade, or Sectional Load over a section, should occupy that section for less time than that specified in the Schedule according to the percentage reduction of the load and the contour of the Line. The above will not apply in the case of a Passenger or Mixed train, except when the train is running late, or when special circumstances render it necessary that the train should arrive at the next Station earlier than usual.

(ii.) In order that this instruction may be given effect to, it will be the duty of the Guard to inform the Driver as to the number of vehicles, or the tonnage on his train, according to the authorised method of computing the load at starting, and again at each Station en route where an alteration of the load is made. The Guard must also show in a column specially provided on the Statement of Running, the load hauled over each Section of the journey.

(iii.) When a copy of the Statement of Running is handed to the Driver on the completion of the trip, he must, when time has been lost, endorse on the back of the Statement his reason for not having maintained the scheduled time for the load over the Sections.

(c) The Running Schedule for a Light Engine, two Light Engines coupled, or in either case with only a Brake-van attached, shall (subject to the instructions on pages 270 to 294) be equal to the Schedule for the fastest stopping train for the Section unless otherwise shown in the Working Time Table; the 6.30 a.m. Down North-Eastern, 7.40 a.m. Down Eastern and corresponding Up trains are specified as examples of the fastest stopping trains on their respective Lines.

2. In every case where a Brake-van is attached to the engine or engines, the Train must be signalled as a "Through" Goods Train; but before sending the "Is Line Clear?" Signal, each Signalman must inform the Signalman in advance, by telephone or telegraph, that the train consists of an engine (or engines) and Brake-van.

WORKING OF TRAINS.

3. Late Running of Trains.—SUBURBAN TRAINS.—(a) Whenever a detention of five minutes or more occurs to any passenger train on any of the Lines leading into Flinders-street or Spencer-street Stations, the Station-master at the Metropolitan Terminal concerned, the Train Control Officer or Train Running Officer, Flinders-street, must be immediately advised by telephone, if a direct line be available, or by telegraph, so that prompt steps may be taken to maintain the scheduled service on the Line; immediately on receipt of the message the Train Control Officer or Train Running Officer must at once notify the Station-master, Flinders-street, and then advise the Metropolitan Superintendent and the Chief Time Tables Officer, Head Office.

(b) In the event of late running of any Suburban train that should arrive at Spencer-street or Flinders-street in time to connect with a Down Country train, the Country train must not be detained for more than 3 minutes waiting the arrival of any passengers who may be travelling by such train; if the Country train be running in two divisions, the first division must not be detained if the second division will make similar connections.

(c) **LAST UP COUNTRY PASSENGER TRAINS.—**When any last Up Passenger train from the Northern, North-Western, South-Western, North-Eastern, Goulburn Valley, Eastern or South-Eastern Line is likely to reach Melbourne over 30 minutes late, and such late running occurs on the Down side of any Station shown in the list hereunder, the Station-masters, Spencer-street and Flinders-street, must be advised of the particulars by wire, and at the same time informed whether there are passengers in the train for any Station on the North or South Suburban Lines, and, if so, the destinations of such passengers. The advice must be sent as hereunder:—

Line.	By the Station-master—
Northern	Sunbury
Western	Bacchus Marsh
South-Western	Werribee
North-Eastern	Wallan
Goulburn Valley	
Eastern	Oakleigh
South-Eastern	

In the case of any train on which a Conductor is employed, the information regarding the actual number and destination of passengers for each Station on the Suburban Lines must be carefully ascertained by the Conductor, and when the train arrives at any of the Stations named above, a slip containing the information must be handed to the Station-master.

(d) If the Country train will reach Melbourne too late to connect with any last Suburban train by which passengers desire to travel the following arrangements are to be made.

- (i.) The last Down Suburban train may be delayed 10 minutes if the Country train will arrive within that time.

WORKING OF TRAINS.

- (ii.) If the last Down Suburban train has departed when the Country train arrives, a Special train may be run on any Suburban Line for which there are not less than ten (10) passengers.
- (iii.) If the last Suburban train has departed when the Country train arrives, and there are not sufficient passengers to justify the running of a Special train, the names and addresses of the passengers who have missed their trains must be taken, and they are to be informed that an allowance of 7/6 will be made for bed and breakfast, or that sum will be granted towards cab hire, provided an application be made to the Claims Agent within seven days. It must be made quite clear that not more than the sum mentioned will be allowed for cab hire, and if the fare is more the passengers must either pay the difference themselves or stay in the city overnight and accept the offer of 7/6 to defray their expenses; if cabs be required, the Station-master must arrange to procure them and take their numbers.
- (iv.) The Station-masters referred to in the foregoing must notify the passengers of the arrangements they may expect to be made for their convenience.
- (e) Immediately the last Country Passenger train departs on the Up journey the Station-master, Sunbury, Wallan, and Werribee must wire the Station-master, North Melbourne, the time of such departure.
- (f) In any case where a Branch Line Train, that ordinarily connects with the last Up Train to Melbourne, fails to make such connection, a Special Train to give connection must not be run unless there are at least 25 passengers. If there be less than this number, they must be informed that they will require to make arrangements locally for their accommodation for the night, and to submit any claim for expenses thereby incurred to the Claims Agent.

The Station-master may be able to assist passengers by suggesting suitable places for accommodation, and thus help to minimise any inconvenience that may have been caused.

4. Passengers at Refreshment Stations to be Advised.—

(a) Passengers at Stations where Branch Lines connect with the Main Lines must be notified by the Station staff of the late running of connecting trains, so that whilst waiting for the connecting trains they may partake of refreshments at the Railway Refreshment Rooms, if any, or visit the nearest hotel for that purpose.

Station-masters or other Officers in charge for the time being should keep in close touch with the running of trains, and see that any passengers waiting for the connecting trains are informed of the time that late trains may arrive, so that opportunity may be taken to obtain a meal if so desired. Where practicable, the principal local hotels and restaurants should be also advised whenever connecting trains are known to be running a quarter of an hour or more behind time, so that intending passengers may have their meals in comfort; anything that Officers in charge can do to assist the public in this way will be readily appreciated.

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(b) **PASSENGER TRAINS.**—The late running or otherwise of Passenger trains must be reported to the General Superintendent of Transportation, in accordance with the instructions contained in the Working Time-table. In regard to Guaranteed Special trains, it is important, in order to avoid disappointment to the guarantors, that they be run as closely as practicable to the Time-table laid down for their running. Except in the case of show stock and exhibits for Agricultural Shows, which may be forwarded by a Special Passenger Train on the day of the Show, trucks of goods of any kind must not be attached to Special Trains which run between guaranteed points, without the authority of the General Superintendent of Transportation.

5. In the event of a train running so late as to require some alteration of the Loco. arrangements for a connecting train, the Station-master, or other responsible employe, must arrange for the Locomotive Officer or Foreman being promptly advised.

6. **Despatch in Goods Train Service.—Regulation 197.**—The following instructions respecting the running of Goods trains must be observed by all concerned:—

- (a) When a Signalman receives the "Is Line Clear" Signal for a Goods or Ballast Train or a Light Engine and according to the schedule running time allowed for the Section there is sufficient margin of time to enable it to clear the Section without interrupting the despatch of a more important train, and the Line is clear according to the Rules or Special Instructions, he must accept the train or engine unless he has received instructions to the contrary from the Station-master or Yard Foreman.
- (b) If the margin of time be not sufficient for the requirements specified in clause (a), or if, owing to congestion or other reason, a Signalman has received instructions from the Station-master or Yard Foreman to not accept a Goods Train, and the Signalman who sent the "Is Line Clear" Signal declares the despatch of the train or engine to be urgently necessary, he must fully explain the urgent conditions to the Signalman at the opposite end of the Section, who, before giving permission for the train to approach, must explain the circumstances to the Yard Foreman, and the Yard Foreman must then make the best possible arrangements. If there is not a Yard Foreman the Signalman must inform the Station-master, and the latter must instruct the Signalman. The Signalman will, however, be responsible for the strict observance of Rules and Special Instructions in respect of Block Working.
- (c) Unless specially authorised a Signalman must not accept from Shunters an instruction to decline to accept a train or engine from a Station in the rear. In every case in which, owing to congestion or other reasons, such a course is necessary the instructions must be given to the Signalman by the Station-master or Yard Foreman, and full particulars in regard to such instructions, and the messages received from the next Signal-box, must be entered in the Train Register Book. Separate reports respecting delay

WORKING OF TRAINS.

to trains in this connection must be promptly forwarded by the Block and Signal Inspector to the Superintendent of Goods Train Service.

7. Train Advice Cards.—(a) Train Advice Cards (T.R. 64) may be obtained by Guards from the Station-masters at Seymour, Bendigo, Castlemaine, Woodend, Ballarat and Geelong. The Guard of every Up Melbourne Goods train ex Northern, North-Eastern, North-Western and South-Western Lines to, either before starting or at a suitable Station en route, hand to the Driver of his train two (2) Train Advice Cards properly filled in, showing the nature of the loading on train, and the Driver is to be instructed to deliver one card to the Officer-in-Charge, Broadmeadows, Sunshine or Newport Signal-box, as the case may be, who must promptly telephone the particulars shown thereon to the Signalman at Weighbridge Junction Signal-box. The other card received by the Driver must be handed to the Shunter in charge of the Footbridge Cabin, Dudley-street, immediately on arrival. The information shown on these cards in regard to Live Stock should be as full as possible, i.e., whether it is for Newmarket, Melbourne, or elsewhere; particulars of Goods for shipment are also to be clearly stated.

(b) Similarly the Guard of an Up train ex Lilydale, Eastern, South Eastern, Frankston Lines, must hand a copy of his truck sheet showing the correct order of the trucks on the train to the Driver, with instructions to deliver it to the Yard Foreman or his Assistant on arrival at or when passing the Down Home Signal, Dudley-street Junction.

(c) In the case of all Pilots from the various North Suburban Stations, Guards or Shunters in charge must also hand a Train Advice Card showing the position of the loading to the Driver with instructions to hand it to the Shunter in charge of the Footbridge Cabin, Dudley-street.

(d) The Shunter in charge of the Footbridge Telephone Cabin will in each case repeat the information as to the class of loading and number of vehicles on the various trains, to the Signalman at Dudley-street, and to the Yard Foreman at the "Gravitation."

(e) The Station-masters at the places mentioned and all Guards concerned must give this matter special attention to ensure that these Train Advice Cards are made use of in accordance with these instructions.

8. Goods Trains with "Through" Loads Between Flinders-street and Newmarket, Sunshine, Newport and Newport Power House.—(a) Whenever any Goods train has a "Through" load from Flinders-street to Newmarket, Sunshine, Spotswood, or Newport (see (d) hereof), the Signalman, Box "A," Flinders-street, must advise the Signalman, Viaduct Junction, and the latter must communicate with the Signalman, Franklin-street Junction, who may arrange for such Goods trains to be worked through via the Passenger Lines; the Signalman, Viaduct Junction, must not, however, allow any such train to proceed on the Passenger Lines without permission from the Signalman, Franklin-street Junction.

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(b) Whenever any Goods train from Newmarket, Sunshine or Newport has a "Through" load to Flinders-street, or beyond Flinders-street, the Signalman Newmarket, Sunshine or Newport, must advise the Signalman Kensington or South Kensington, as the case may be, and these Signalmen must communicate with the Signalman North Melbourne Junction, and the latter must communicate with the Signalman Franklin-street Junction, who may arrange for such Goods trains to be worked through via the Passenger Lines; the Signalman Kensington or South Kensington must not, however, allow any Goods trains to proceed on the Passenger Lines without permission from the Signalman North Melbourne Junction.

(c) Unless specially authorised by the Superintendent, Melbourne Yards, no Goods train shall be worked via the Spencer-street Passenger Lines on Week days between the hours of 6.0 a.m. and 9.30 a.m., or between 4.0 p.m. and 8.0 p.m.; nor on Saturdays, between 6.0 a.m. and 9.30 a.m., or 11.0 a.m. and 2.30 p.m.

(d) In order to give effect to the foregoing, the Guard of any Eastern or South-Eastern Goods train having a "Through" load for Newmarket or Newport must so inform the Driver and the Signalman at "B" Box Caulfield when the train is stopped in accordance with the instructions re "Testing Brakes," page 877. When despatching the train the Signalman "B" Box, Caulfield, must advise the Signalman, South Yarra, who must communicate the particulars to the Signalman Box "A" Flinders-street, via Jolimont Junction, the Signalmen Jolimont Junction, and Box "A" to confer respecting the Line on which the Goods train is to proceed towards Flinders-street Station.

NOTE.—Sub-clause (a) of this clause must not be confused with the instructions referring to Goods trains having to work at Flinders-street. If a train has trucks to put off at Jolimont Yard it must be dealt with in accordance with the instructions shown on page 727, and if, after completing its work at Flinders-street, it has a "Through" load for Newmarket, it must be dealt with as laid down in the following clause (e).

(e) The Guard of any Goods train having a "Through" load from Flinders-street to Newmarket, Sunshine or Newport, must so inform the Yard Foreman or Leading Shunter, and the latter must communicate the particulars to the Signalman Box "A."

(f) At Newmarket, Sunshine, Newport or Spotswood the Guard of any Goods train having a "Through" load for Flinders-street or beyond, must, before his train leaves the Siding, so inform the Signalman.

(g) Particulars of communications sent and received by the Signalmen must be entered in the Train Register Books.

9. DOWN GOODS TRAINS FROM MELBOURNE.—Guards of Down Goods trains from Melbourne must show on their Running Statements the starting time of the train as from the time it is ready to depart, i.e., when the Driver starts or whistles for the Fixed Signal. Any delay that may then occur, whether due to Yard movements or to Signals, must be shown separately on the Statement.

WORKING OF TRAINS.**WORKING OF GOODS TRAINS HAULED BY ELECTRIC LOCOMOTIVES.**

1. (a) Except where Special Instructions are issued to the contrary, an electric locomotive must not be used on any Passenger or Mixed train, and only where specially authorised on Goods trains.

(b) On Lines where the use of electric locomotives is authorised, two or more may be run coupled in the front of any Goods trains.

(c) Each electric locomotive must be regarded as a unit, and may take the load equivalent to that of the 120 per cent. capacity engine.

(d) When more than one unit is attached in the front of a train, they will be worked as one locomotive, and the combined ruling grade load will be double that authorised for the 120 per cent. capacity engine.

2. Electric locomotives will be manned as prescribed hereunder.

(i) **SINGLE ELECTRIC UNIT.**—When a train is hauled by one Electric Unit it will be manned by an Engine-driver accompanied by an assistant qualified to act as laid down in Regulation 158.

(ii) **TWO ELECTRIC UNITS COUPLED.**—When an Electric Unit is being employed to assist at the front of a train for a portion of the through journey only, or when a unit is being returned light from a terminal point, both units will be manned as above, i.e., an Engine-driver and an assistant on each Unit. But in the event of a train being hauled by two Units (as one locomotive) from point to point, one crew may be employed to man the electric locomotive of two units, but when this is done shunting and roadside work, such as marshalling, etc., should be minimised, and as far as practicable, only the work of straight picking up and putting off at intermediate Stations be performed.

3. **PREPARATION OF ELECTRIC LOCOMOTIVE FOR SERVICE.**—When two or more units are employed to haul a train, the crew of the leading unit will be responsible for the whole of the preparations of such units, and must carry out the prescribed examinations and tests.

4. **OPERATION.** — (a) In every case where more than one unit is employed on any one train, such units must be placed at the front of the train, and under normal conditions a locomotive must not be used to assist in the rear of the train.

(b) When one or more units are being utilised on a Goods train, the general operation governing the controlling of the train in starting, running or stopping will be as laid down for one locomotive on steam-operated trains.

(i) As a general principle, in every case where two or more units are coupled together, such units are under the control of the Driver on the leading unit, and must remain so until detached; but this will not relieve the Driver of the second unit from the due observance of all Signals regulating the safe working of the Line, and in case of emergency he must apply the Air Brake, as per Regulation 174, clause (a).

WORKING OF TRAINS.

5. BRAKING.—(a) The Straight Air Brake Equipment is provided on each unit, but under normal conditions that on the leading unit must be used for controlling the surging or bunching the slack of the train without the assistance of the Brakes on the second unit.

(b) The Driver on the leading unit, when preparing the units for service, and when reversing at terminal points, must personally satisfy himself that all Brake Valves and Isolating Cocks on the units attached to his train are in the proper position immediately prior to starting from a terminal, or after a unit has been detached and is again coupled to the train.

6. (a) Trains Hauled by a Steam and an Electric Locomotive Coupled.—When a train is hauled by steam and electric locomotives coupled, either locomotive may be used as the leading engine.

- (i.) Clause (e) of Instruction 91, on pages 116 of the "Book of Instructions to Motormen, Guards, Shunters, and other Employes Engaged in the Operation of Electric Trains" will not apply to such Goods train.
- (ii.) A locomotive must not be used to assist at the rear of these trains, except as authorised on pages 332-341; a locomotive must not be used to assist at the rear within the Suburban Area.
- (iii.) In every case where a train is being hauled by steam and electric locomotives coupled, the Regulations applicable to the double-heading of Steam Trains, and the loads that may be taken on the various Lines where double-heading is permitted, will be as laid down on pages 312-332 of this Book.
- (iv.) Any train worked by a steam and an electric locomotive must be regarded as an electric train, and all concerned must be advised accordingly, and due care is to be exercised to see that the train is not diverted to an unwired road. If, due to emergency, it should become necessary to place the train on to any track not equipped with overhead conductors, the Signaller or other Transportation employe responsible for authorising such movement must, in every case, first so inform the Drivers of both locomotives.

(c) **MANNING AND PREPARATION OF LOCOMOTIVES.**—A crew will be provided in each locomotive, and each Driver will be responsible for the preparation of his own locomotive, in accordance with the prescribed instructions.

(d) **OPERATION.**—Where steam and electric locomotives are working together the general principle of controlling the train will be as laid down for double-headed steam trains.

- (i.) When the electric locomotive is used as the second engine the Driver must close the Isolating Cock controlling the air operated Safety Apparatus, and the Driver's Assistant must hold over the Control Governor switch as instructed by the Driver. When, for any reason, the steam locomotive is detached from the electric unit, the

WORKING OF TRAINS.

- Driver must immediately revert to the normal method of working, with the air operated Safety Apparatus in operation.
- (ii.) At all times the Driver must be on the alert to lower the Pantograph, and, if necessary, apply the Automatic Brake, should the train be inadvertently turned into an unwired Road.
 - (iii.) In all cases where the train reaches a point where the electric locomotive can take the load through to the terminal, the steam locomotive must be released and returned to its home depot, picking up loading en route as required.
 - (iv.) Where it is necessary to perform shunting work, the leading engine should, if the shunting will be of long duration, be detached, and the work carried out with the other engine.
 - (v.) The attention of Drivers is directed to Brake Rule 19, Appendix 111, on page 267, of Book of Rules and Regulations. Care must, however, be exercised in regard to the electric unit, as the Driver's Brake Handles and Isolating Cocks are duplicated.
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INSTRUCTIONS GOVERNING THE OPERATIONS OF RAIL MOTOR TRAINS.

1. A Rail Motor may be operated on any Line jointly agreed upon by the Chief Mechanical Engineer and the General Superintendent of Transportation.

2. Only men certified for the purpose must be allowed to drive Rail Motors on any part of the Running Lines or Sidings; they are required to operate their Rail Motor personally, and under no circumstances must they allow any unauthorised person to operate it.

3. The Driver for the time being in charge of a Rail Motor must not allow any unauthorised person to ride in the Driving Compartment, and not more than two persons (exclusive of the Driver) shall be allowed to ride therein at the one time. Except in case of actual necessity, no official must converse with the Driver whilst the Rail Motor is in motion.

4. The Driver must not leave his Rail Motor, unless it is absolutely necessary to do so, except as directed in the Rules and Regulations or other printed instructions, and in no case unless the supply from the Petrol Tank is shut off, all Hand Brakes are hard "On," all windows giving access to the Driving Compartment are closed and fastened, and the doors are secured by means of the special locks; in every case the Driver must take with him the keys of these locks. See also clause 14.

5. Except where special Instructions are issued to the contrary by the General Superintendent of Transportation, when there is only one Driving Compartment on a Rail Motor, the driving end must always be leading. If there be a driving compartment at each end, the Driver must drive from the leading end, and he must lock all windows and doors of the rear Driving Compartment and retain the keys.

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6. Except as prescribed in clause 15 of these Instructions, or specially authorised by the General Superintendent of Transportation, a Rail Motor must not be attached to any engine or vehicle other than the vehicle specially designed as a Rail Motor Trailer Vehicle. See clause 12.

7. (a) When a Rail Motor is run with a trailer vehicle attached, the train must be accompanied by a Motor Guard, who must perform the duties of Guard as far as they are applicable, and such other duties as may be allotted to him; electric bell communication is provided between the Driver and Motor Guard.

The Motor Guard must ride in the Trailer; when two or more vehicles are attached to the train he must ride in the rear vehicle.

(b) When the Rail Motor is run without the trailer vehicle a Motor Guard will not be required, unless specially authorised by the District Superintendent in cases of emergency; the Driver must attend to all duties when not accompanied by a Motor Guard.

8. (a) The Driver must have with him or see that his Rail Motor is equipped with the following articles, viz.:—A Watch, a Carriage Key, a Key or Keys of the Special Locks of the Driving Compartment, and a complete set of Train Signal Lamps, of which the Tail Lamp is an oil lamp, a Special Head Lamp, a Hand Signal Lamp, a Mirror—see clause (a) Regulation 195—an Ambulance Stretcher and Ambulance Box, a Rope Lashing 20 feet in length—see Clause 12 hereof—a Kit-bag, two Red Flags and one White Flag, a Special Tail Disc, a box of not less than twelve Detonators, a Fire Extinguisher, and such other articles and Books or Forms as may be ordered.

(b) When a trailer is to be attached to the Rail Motor the Driver must see that the trailer is properly coupled together and equipped with Train Signal Lamps, that the electrical jumpers are properly connected to each vehicle, and that the Bell communication is in working order.

(c) The Head, Side and Carriage Lamps are lighted electrically; the Driver must see that the Oil Lamps are ready for immediate use, and that all Lamps are lighted and extinguished according to requirements.

In addition to the ordinary Head Lamp, a special lamp is provided on the front of the Rail Motor for the purpose of lighting up the track at night, so that the Driver may observe any obstruction and have a clear view of stopping places other than Stations; the light of the special lamp must, however, be switched off when approaching Junctions or Stations or Signal-boxes.

(d) The directions for use of the Fire Extinguisher are shown on the Extinguisher.

9. The Motor Guard, when accompanying the train, must have with him a Whistle, a Carriage Key, one Green and two Red Flags, a box of not less than twelve Detonators, a Hand Signal Lamp ready for use and lighted as required, a Kit-bag, and such other articles and Books or Forms as may be ordered.

10. The doors of the single ended cars must be kept closed whilst the train is in motion; on the double ended cars the door at the trailing end must be locked at the commencement of the journey and kept locked

WORKING OF TRAINS.

until the Rail Motor arrives at the terminus, unless it is required to be opened en route to entrain or detrain passengers, when it must be immediately re-locked prior to starting.

When the Motor Guard is not accompanying the train the Driver must, before starting, exercise due care to see that the intending passengers are all on board and seated, and that all is right to proceed.

(b) When a Rail Motor is not accompanied by a Motor Guard the Driver must receive intimation from the Station-master when, in accordance with Regulation 194, all is right for the train to start from a Station; on receipt of such intimation and before starting, the Driver must sound his Whistle. The Whistle of a Rail Motor is of the "Horn" type.

11. When permission is given by the Station-master to the Signalman to allow a Rail Motor to run to a platform at which a train is already standing, this must be done as prescribed in Regulation 109; if, however, the Station-master has to work the Fixed Signals for the Rail Motor he must arrange for the Guard of the train that is standing at the platform to exhibit the necessary Hand Signals to stop the approaching Rail Motor, and to verbally instruct the Driver in accordance with Regulation 109. The Fixed Signals must be kept at Danger until the approaching Rail Motor has been stopped and the Guard is exhibiting his Red Signal as required for the protection of the train at the platform.

12. The Rail Motor or the trailer is not provided with buffers, and must not be pushed by any engine or train.

When a disabled Rail Motor is to be drawn it must be connected to the Relief engine by means of the Rope Lashing. When the Rope Lashing has been securely fastened to the engine and Rail Motor, there must be sufficient slack to provide a space of at least sixteen (16) feet between the engine and the disabled Rail Motor. The Driver must ride in his Driving Compartment, and by means of his Brakes regulate the movement of the Rail Motor so as to prevent its running against the engine. If the Driver of the Relief engine has reason to stop he must warn the Driver of the Rail Motor by giving a succession of short whistles, and the Driver of the Rail Motor must whistle in a similar way should he require the Engine-driver to stop.

13. (a) The separate Brakes on the Rail Motor are worked mechanically by a pedal lever and a hand lever; both levers can be operated from the Driver's seat; the Brake on the trailer vehicle is of the ordinary type in use on Brake-vans. Before starting on each trip the Driver must test and examine the Brake on each vehicle, but this will not relieve the Motor Guard of responsibility of testing his Hand Brake.

(b) The Motor Guard, if the trailer be attached, must watch the speed of the Rail Motor train, and always assist the Driver by the use of his Hand Brake when approaching a Station or Stopping Place.

The bell communication may be used to call for the assistance of the Guard's Hand Brake when approaching a Station or Stopping Place, but in the case of Danger the train whistle must also be used,

WORKING OF TRAINS.

and in the event of a defect in the bell communication the Driver must whistle for the assistance of the Guard's Hand Brake as prescribed in clause (d), Regulation 199.

CODE OF BELL SIGNALS:—

For Guard to apply Hand Brake—One long ring.

For Guard to release Hand Brake—Two long rings.

To gain attention of Driver or Guard—Three short rings.

Note.—The Motor Guard, after complying with the Signals, must acknowledge them.

14. In the event of a Rail Motor being stopped between two Staff Stations by accident, failure, obstruction or other exceptional cause, and the Driver be not in possession of the Train Staff or Tablet, the Driver must, if not accompanied by a Motor Guard, immediately protect his Car in the rear, as laid down for the Guard in Regulation 239, and if the stoppage be due to an accident causing the obstruction of any Line parallel to that on which his Car is travelling, the Driver must act as prescribed for the Guard in Regulation 241.

If, however, the stoppage be due to a defect which the Driver has reason to believe he can rectify in a few minutes, and no other Line has been obstructed, it will not be necessary for the Driver to go back and protect his train; but if a Repairer or other competent employe be available the Driver must supply him with requisite Hand Signals and Detonators and request him to take the necessary steps to protect the train, and it will be the duty of such Repairer or other employe to render such service as the Driver or the occasion may require; the Driver must, however, see that such employe understands the duties he has to perform.

On no account must any naked light be used for the purpose of examining, cleaning, or when effecting any repairs; an electric inspection lamp is specially provided for this purpose.

Before descending from the Driving Compartment for any purpose the Driver must secure the Rail Motor by applying and securing the Hand Brake hard on, and if the circumstances should require him to leave the immediate vicinity of his train he must, in addition to securing all Hand Brakes and the doors and windows of the Driving Compartment as laid down in clause 4, and, if necessary, secure his train by means of the Rope Lashing, which must be passed through a wheel and around the rail, and secured in position.

15. (a) In the event of a Rail Motor becoming disabled between two Staff Stations the Driver, after seeing that his train is protected in accordance with Regulation 239, must communicate with the Station-master at either end of the Section and inform him of the circumstances, stating as near as possible the position at which the failure has occurred. The Station-master receiving this information must at once communicate the circumstances to the Station-master at the opposite end of the Section, and the two Station-masters must then confer and agree as to the most expeditious means of sending a Relief engine, bearing in mind the locality of the disabled Rail Motor and the particulars contained in clause 12. When the Station-masters have agreed as to the course to be pursued, the

WORKING OF TRAINS.

Stationmaster who, according to such mutual arrangements, has agreed to despatch the Relief engine, must write out and send a telephone message to the Driver of the disabled Rail Motor, stating that a Relief engine shall be sent from his Station on completion of arrangements and in accordance with instructions laid down hereunder.

- (i.) If the disabled Rail Motor be carrying a Staff Ticket and the Relief engine is to be supplied from the Station in the rear, the Relief engine may be despatched on receipt of the Driver's acknowledgement of the Station-master's telephone message intimating that the Relief engine is to be despatched from his Station, and an assurance from the Driver that his disabled Rail Motor has been protected in the rear by Detonators, but immediately before allowing the Relief engine to proceed the Station-master must advise the Station-master at the opposite end of the Section that the Relief engine is about to be despatched.

The Station-master must personally hand the Train Staff to the Driver of the Relief engine, together with a written order stating the position of the disabled Rail Motor, and the Engine-driver must sign for the Order on a copy held by the Station-master.

The Driver of the Relief engine must exercise extreme care in running to the point of obstruction, and after removing the disabled Rail Motor or Rail Motor and trailer to the most convenient end of the Section, must then hand over the Tablet or Staff to the Signaller or other authorised person.

If, however, on receipt of the intimation of the disabled Rail Motor the Station-masters, after conferring, agree that it would be more expedient to send the Relief engine from the Station in advance of the disabled Rail Motor, the Station-master there must, after receipt of a message from the Station-master in the rear intimating that the Train Staff is secured under lock and key, communicate the arrangements to the Driver of the disabled Rail Motor and direct him to write out and sign an Order (see specimen form at end of this clause) addressed to him and asking for a Relief engine to come to his assistance. The Driver of the disabled Rail Motor, after writing out the Order, must proceed as quickly as possible (along the Line or as mutually arranged) towards the Station in advance with the Order in his possession, and the Station-master in advance must arrange to send a competent man or go himself to meet the Driver. When these two men meet, the Driver must hand the Order for the Relief engine to the Messenger, who must at once return with the Order to the Station in advance, and the Driver must return to the vicinity of his Rail Motor and await the arrival of the Relief engine. When proceeding to meet the Messenger from the Station in advance, the Driver of the disabled Rail Motor must place Detonators on the Line as prescribed in Regulation 239.

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The Station-master in advance, on receipt of the Driver's Order for the Relief engine, must endorse it and hand it to the Driver of the Relief engine and instruct him to proceed cautiously to the disabled Rail Motor.

The Driver of the Relief engine must exercise extreme care in running to the point of obstruction, and on the arrival of the Relief engine the Driver of the disabled Rail Motor must attach the Relief engine to the disabled Rail Motor by means of the Rope Lashing, as prescribed in clause 12.

The Driver of the Relief engine must retain the written order in his possession until the disabled Rail Motor has been removed to the Station to which it was proceeding, when, provided the Section is clear, the Order must be handed to the Station-master, who must attach it to his reports.

- (ii.) If the disabled Rail Motor be travelling on the Train Staff (or Tablet) the Driver, on receipt of the intimation that a Relief engine shall be sent, must write out an Order for the Relief engine, and must proceed to meet the Messenger sent from the Station from which the Relief engine is to be despatched; the Driver must hand the written Order together with the Train Staff, to the Messenger to be taken back to the Station-master. The Station-master must personally hand the Train Staff to the Driver of the Relief engine, and, retaining the Order received from the Rail Motor Driver for the Relief engine, hand the Driver of the Relief engine a written order from himself stating the point of the disabled Rail Motor, and the Driver must sign for this Order on a copy held by the Station-master; the Driver of the Relief engine must also peruse and endorse Order sent by the Driver of the disabled Rail Motor.

When proceeding for relief the Driver of the disabled Rail Motor must place Detonators on the Line as laid down in Regulation 239, but before proceeding for relief he must similarly protect in the opposite direction.

The Driver of the Relief engine must exercise extreme care in running to the point of obstruction, and, after having removed the disabled Rail Motor or Rail Motor and trailer, to either end of the Section, and the Running Line is again clear, must deliver the Staff to the Station-master.

- (iii.) If the Driver of the disabled Rail Motor be in possession of a Line Clear Report, he must, on receipt of the intimation that the Relief engine shall be sent, write out an order for the Relief engine and proceed to meet the Messenger sent from the Station from which the Relief engine is to

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be despatched, and hand to the Messenger the written Order; he must, however, retain possession of the Line Clear Report. The Station-master, on receipt of the written order for the Relief engine, must endorse the Order and hand it to the Driver of the Relief engine, and instruct him to proceed cautiously to the disabled Rail Motor.

The Driver of the Relief engine must exercise extreme care in running to the point of obstruction, and, after having removed the disabled train to the end of the Section to which it was previously proceeding, must deliver up the written order to the Station-master, and the Driver of the disabled Rail Motor must hand over the Line Clear Report held by him.

(b) In the cases specified in sub-clauses (i.), (ii.) and (iii.), if the Motor Guard be accompanying the Rail Motor, it will be his duty to proceed by the most expeditious means to the Station from which the Relief engine is to be despatched. In such a case it will not be necessary for the Station-master to despatch a Messenger to meet the Motor Guard, unless it would be more expeditious to send a Messenger by private vehicle, in which case a proper understanding must be first arrived at in respect of the route to be taken in order that the men shall not pass each other.

The Motor Guard, when proceeding in either direction for Relief, must place Detonators on the Line (as directed in Regulation 239) for the protection of the disabled Rail Motor, and the Driver, after securing the Rail Motor, must similarly protect it in the opposite direction, and then return to his train.

(c) If, owing to telephone failure, the Driver of the disabled Rail Motor be unable to communicate with the Staff Station on either side of the obstruction, and the Motor Guard be not accompanying the train, the Driver, after seeing that the Rail Motor is protected as directed in clause 14, must proceed to the nearest Staff Station at which relief can be obtained, and on arrival there the Station-master must arrange for a Relief engine to proceed as laid down in the Rules; the Driver of the disabled Rail Motor must, however, accompany the Relief engine to the point of obstruction.

If the Motor Guard be accompanying the train, the Driver must arrange for the Guard to act as laid down for the Fireman, in the case of a disabled engine.

(d) The Driver of the disabled Rail Motor in each case must not allow his Rail Motor to be moved until the Relief engine arrives, unless satisfactory arrangements have been made to prevent the Relief engine from coming to his assistance, and, when a written Order has been issued, until the Order has been handed back to the Driver of the Rail Motor.

WORKING OF TRAINS.

Hereunder is a Specimen of the Form referred to in clause 15:—

(To be printed on green coloured paper.)

VICTORIAN RAILWAYS.

RAIL MOTOR SERVICE.

(A supply of these Forms must be kept by the Driver of each Rail Motor.)

To the Station-master at.....

The Rail Motor of them. train, of which I am the Driver, and which is travelling on..... is disabled in the Section.....and.....

Allow a Relief engine to come to my assistance, as authorised by Clause 15, for my train which is stationary at.....

My Rail Motor or train will not be moved in any direction until the arrival of the Relief engine.

Signed.....

Rail Motor Driver.

Date.....19...

Time issued.....m.

* Here state whether on Staff, Staff Ticket, or Line Clear Report, and the distinguishing number of Staff Ticket or Line Clear Report.

NOTE.—Until such time as the printed Form specified above is available the Form specified on page 242 of the Book of Rules and Regulations, and altered to read as above, may be used for the purpose of clause 15 of these Instructions.

RAIL MOTOR INSPECTION CARS.

1. (a) Except as prescribed in sub-section (i.) and (ii.) hereof, the Rules, Regulations and Instructions applicable to the working and signalling of a train shall, unless otherwise specified, apply to Rail Motor Inspection Cars.

- (i.) The Rail Motor Inspection Car must not run during foggy weather, unless the Driver be in possession of the Train Staff for the Section.
- (ii.) On Lines worked under the Train Staff and Ticket System, the Officer-in-Charge of the Car may, during clear daylight only, arrange for the Car to follow a train travelling on a Ticket, after a suitable interval (in no case with a less interval than ten minutes) has elapsed. In all such cases, the Signaller must issue to the Officer-in-Charge of the Inspection Car a "NOTICE OF TRAIN AHEAD."
- (iii.) When the District Superintendent is travelling with the Car, arrangements may be made by him for the Car to run on a Single Line Section without the Driver carrying the Electric Staff or the Train Staff, or Train Staff Ticket. In every such case the instructions laid down on pages 493-498, respecting the use of Trolleys, Tricycles and other machines

WORKING OF TRAINS.

must be observed; the District Superintendent will be responsible for advising the Signalmen and for making the necessary arrangements for safety at both ends of the Section over which the Car is to run.

2. (a) Only Officers or employees certified for the purpose must be allowed to drive these Cars, and every such employee must be certified to by a Block and Signal Inspector as competent in the Rules and Regulations applying to the Lines over which the Car will be run—otherwise the Driver must be accompanied by a competent official.

(b) Rail Motor Inspection Cars must carry the Regulation Train Signals, and the Driver must have with him in the Car—A Red, Green and White Flag, a Hand Lamp (which must be trimmed and ready for use in accordance with the Regulations), and a Box of not less than 12 Detonators.

3. (a) Subject to the conditions laid down under sub-clause (b) hereof, the maximum permissible speed of Rail Motor Inspection Cars is as shown hereunder:—

Description of Car.	Maximum speed over lines where the permissible maximum speed for trains is 50 miles per hour or over.	Maximum speed over lines where the permissible speed for trains is under 40 miles per hour.	Over Points worked from a Locking frame, or otherwise securely fastened.	Over Facing or Trailing Points held by hand.
	Miles per hour.	Miles per hour.	Miles per hour.	Miles per hour.
Commissioners' Inspection Car ...	40	30	25	5
All other Motor Inspection Cars ...	30	30	15	5

(b) The above-mentioned rates of speeds are subject to the following conditions:—

- (i.) When running through Trailing Points, the Points must always be held or set in the proper position for the Line on which the Car is running.
- (ii.) Over ordinary Crossings, the Car may run at a maximum speed of 15 miles per hour, but at locations where there are Spring Crossings, the speed must not exceed two miles per hour through such Spring Crossings; the Officer-in-Charge of the Car must ascertain where Springs Crossings are located in their Districts, and notify all concerned in the operation of the Car.
- (iii.) At all places where the Fixed Signals are controlled by Track Circuit (see clause 4) the speed of these cars must not exceed 25 miles per hour.

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4. (a) In consequence of the light weight and the structural design of Rail Motor Inspection Cars, no guarantee can be given as to their effectiveness in reversing the Fixed Signals to the Stop position; the following instructions must be observed on Sections where the Track Block system or Automatic Signalling is in force:—

- (i.) Before entering upon a Track Block Section or Automatic Signalling Area, the Car must be stopped at the last place at which a Signaller is on duty, and the employee in charge of the Car must inform the Signaller of the destination of the Car and obtain his assurance that no train will be permitted to pass on to the Track Block Section or Automatic Signalling area until the Rail Motor Inspection Car has been reported by telephone as having arrived at the next Signal-box in advance.
- (ii.) When the Inspection Car has gone forward, no train must be permitted to enter the Track Block Section or Automatic area until the Inspection Car has been reported by telephone as having arrived at the Signal-box next in advance where there is a Signaller on duty.
- (iii.) The Signaller in the Signal-box at the entrance to the Track Block Section or Automatic Signalling area must inform the Signaller at the Signal-box next in advance of the circumstances, and the information must then be passed on to each Signalbox to the end of the Track Block Section or Automatic Signalling area; the messages respecting the departure from and arrival at each Signal-box must be announced as follows:—

Departure.—

Inspection Car Left at.....TimeSender.

Arrival.—

Inspection Car Arrived at.....TimeSender.

- (iv.) It will not be necessary for the Car to stop at an intermediate Signal-box if the Signaller on duty exhibits a Green Flag or Light to the Driver of the Car as it passes the Signal-box; the exhibition of the Green Hand Signal may be taken as an assurance that the foregoing sub-section (ii.) shall be observed. In the event of the Green Hand Signal not being received the Driver must comply with sub-section (i.) hereof.

(b) At places in the Melbourne Yard area, and at South Yarra or Caulfield, the Inspection Car must, if practicable, be despatched on a Line where it will not cause delay to a following train, and as far as possible Rail Motor Inspection Cars should not be permitted to leave a Signal-Box or Station unless it has the running time to reach the next Signal-box in advance without causing delay to a Passenger or Mixed train.

WORKING OF TRAINS.

5. (a) Rail Motor Inspection Cars are light, and in the event of a defect may be pushed clear of the Line, but in all such cases the employee in charge of the Car, or the competent official referred to in clause 2, must arrange for Relief, and comply with the Rules, Regulations, and Instructions applying to the Signalling System in operation on the Line over which the Car is running. In the event of the Car being removed from the Line or placed in a Siding he must, also, when sending for Relief, furnish the Signaller with a written Order to that effect, stating that the Car will not be again placed on the Running Line until Relief arrives.

(b) The Rail Motor Inspection Cars are provided with portable turn-tables attached to the chassis so that they can be turned wherever necessary; due care must be exercised to see that the parallel Lines are properly protected during the turning operations.

6. The Way and Works Branch is responsible for the maintenance and housing of the Rail Motor Inspection Cars.

MAIL MOTOR SERVICES.

1. (a) Unless otherwise authorised by the General Superintendent of Transportation, all Mail Services by Tricycle or other rail machine must be worked under the Rules and Supplementary Instructions for working traffic over Single Lines by the Electric Staff or Train Staff and Ticket System. The schedules for Mail Services are shown in the Working Time-Table.

(b) Exceptions.—On the Sections specified hereunder authority is given for the Mail Tricycle to run without a Train Staff or Staff Ticket, but in every such case the instructions respecting the use of Trolleys, Tricycles, etc., shown on pages 493-498, must be observed:—

Noradjuha-Natimuk.

Maffra-Briagolong.

ENGINE-DRIVER OR MOTORMAN INCAPACITATED.

(Regulation 153.)

1. Although the abovementioned Regulation prescribes that in the event of the Engine-driver or Motorman being incapacitated, the Fireman, or, in the case of an Electric train, the Guard, may drive the train to the nearest Station in advance, it must be borne in mind that clause (a) or (b) of the Regulation shall not apply where the services of another qualified Engine-driver or Motorman can be obtained within a reasonable time, nor when the Air Brake is in any way defective.

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2. The Guard must see that his train is protected as prescribed in the Rules and Regulations:—

- (i.) If, however, there be another competent employe available to exhibit the Danger Hand Signal in the vicinity of the three outer Detonators, the Guard must call upon such employe for, and instruct him in, the performance of that duty, the Guard may then return to and except as directed hereunder must exhibit his Red Hand Signal at a reasonable distance in the rear of his train. If it be not clear daylight, the Guard must see that the Train Signals on the rear of his train are showing clearly.
- (ii.) If no competent employe be available to exhibit the Danger Hand Signal, the Guard, after fixing the Detonators as prescribed in the Regulation, may return to his train, and in addition to complying with the foregoing must make the best possible arrangements for carrying out the following instructions:—

3. If, owing to a slight injury, the Engine-driver or Motorman is unable to drive, but capable of supervising the driving of his train, and no other qualified Driver be available, arrangements may be made for the Fireman, or in the case of an Electric train, the Guard, to drive the train to its destination, but the Engine-driver or Motorman will be responsible for exercising such supervision as will ensure the movements of the train being regulated in conformity with the Rules, Regulations and other Instructions.

4. When, in accordance with clause 1 hereof, the Fireman or Guard is required to drive the train, and the regular Driver or Motorman is not accompanying the train as prescribed in clause 3, the Fireman or Guard will be responsible for carrying out the duties of the Engine-driver or Motorman, as the case may be; the train must be operated with caution, the speed must be kept well under control, and the instructions shown hereunder must be observed.

5. In the case of a locomotive-hauled train the Guard must be consulted before the Fireman undertakes to drive, and if the services of another competent man be available he must be called on to ride on the engine and act under the instructions of the Fireman. Before proceeding, the Air Brake must be tested, and if found to be in any way defective the train must be secured by the Hand Brakes and the Guard must obtain a Relief train as quickly as possible in accordance with the Rules and Regulations.

6. (a) In the case of an Electric train, the Guard, before proceeding to drive, must test the Air Brake and the Air Operated Safety Apparatus. If the Air Brake be in good order on the train, the Guard may drive the train as prescribed in the Regulation; but if from any cause it is necessary to close the Isolating Cock of the Air Operated Safety Apparatus, the Guard must be accompanied by a competent man, who must hold over the Control Governor Switch and act under his instructions; the

WORKING OF TRAINS.

speed of the train must not exceed a rate of five (5) miles per hour. The Guard must also be accompanied by a competent man, and the speed must not exceed the rate of five (5) miles per hour in the event of—

- (i.) The Pilot Valve being defective, or its failing to operate the Emergency Relay Valve when the Plunger is released with the Controller Handle at the normal (the off) position;
- (ii.) Failure of Emergency Relay, or
- (iii.) Failure of the Controller Handle, from any cause, to return to the normal (the off) position after being released.

(b) If on testing the Air Brake it be found to be in any way defective, the train must be secured by the Hand Brakes until a Relief train is obtained in accordance with the Rules and Regulations.

- (i.) If any train approach on an adjacent Line, the Guard must stop such train and make the best possible arrangements to clear the obstructed Line, as laid down in the Rules and Regulations;
- (ii.) If the services of a reliable person can be obtained, the Guard must hand such person a written notification of the particulars to be taken to the nearest Station or Signal-box, and on receipt of this information the Station-master or Signaller must at once make the necessary arrangements to clear the Line.

If not an employe, the Messenger referred to in the above preceding paragraph must be requested to avoid walking on the Line; if possible a resident having a conveyance must be engaged to deliver the message to the Station-master or Signaller, so that relief may be obtained as quickly as possible.

(c) Except as specified hereunder, the provisions of this clause (clause 6) will also apply to the Motorman in the event of the Guard becoming incapacitated between Stations.

- (i.) In the circumstances referred to in sub-clause (b) hereof—if the services of another qualified Guard be available the Motorman must act as prescribed in sub-clause (b), clause 4, of the instructions shown under the heading of "Disabled Electric Trains" on pages 487-492.

SPEED OF ENGINES OR TRAINS.

1. The maximum rate of speed is the highest rate of speed allowed on any portion of the Line, and on any mile or portion of a mile of the journey.

2. A train must not in any instance be run at a rate of speed in excess of the maximum laid down herein in respect of the particular Class of train and particular portion of Line.

3. The maximum rates of speed laid down in respect of the various Lines, or portions of Lines, are subject to—

- (i.) The provisions of Regulation 59;
- (ii.) the special rates of speed shown on pages 291 to 294 inclusive;
- (iii.) to such Temporary Speed Reductions as are shown from time to time in the Weekly Notice or other Printed or Written Instructions; and
- (iv.) the special rates of speed laid down in sections (a), (b), and (c) of clause 4 hereunder.

4. (a) **Maximum Rates of Speed for Engines.**—The maximum rates of speed permissible on any Line for the various classes of Locomotives, with or without any vehicle attached, are shown hereunder:—

Class.	Miles per Hour.	Class.	Miles per Hour.	Class.	Miles per Hour.	Class.	Miles per Hour.
AA	60	DDE	50	*N	45	..	..
A2	60	EE	40	R (old)	40	XY	40
C	50	Electric	40	RY	40	Narrow Gauge	20
D	60	F Motor	50	T	40	NA	20
DD	60	*K	45	V	35	..	..

* See maximum rates and speed laid down in sections (I.) and (II.) and sub-clause (b) hereof.

Note.—The maximum rates of speed laid down for locomotives in sub-clauses (a), (b), and (c) hereof are subject to the maximum rates of speed laid down in respect of various Lines or portions of Lines and to the conditions imposed on pages 271 to 294 inclusive.

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(i.) On the undermentioned Lines or portions of Lines, the maximum rates of speed shown hereunder in respect of the particular section, must not be exceeded in the case of "N" or "K" class engines:—

	Maximum Speed Miles per hour.		Maximum Speed Miles per hour.
Clarkefield—Lancefield ..	25	Hamilton—Coleraine	25
Redesdale Jun.—Redesdale ..	25	Branxholme—Casterton .. .	25
Castlemaine—Shelbourne ..	25	Heywood—Rennick	30
Heathcote Jun.—Bendigo ..	30	Lubeck—Marnoo	25
Elmore—Cohuna	30	Murtoa—Warracknabeal .. .	30
Echuca—Deniliquin	25	Warracknabeal—Patchewollock	25
Barnes—Balranald	30	East Natimuk—Goroke .. .	25
Kerang—Swan Hill	35	Dimboola—Rainbow	25
Kerang—Murrabit	25	Rainbow—Yaapeet	30
Swan Hill—Yungera	25	Jeparit—Yanac	25
Wycheproof—Kulwin	25	Yea—Mansfield	35
Boort—Annuello	30	Cathkin—Alexandra	25
Annuello—Robinvale	25	Murchison East—Colbinabbin	25
Wedderburn Jn.—Wedderburn	25	Rushworth—Girgarre	25
Tempy—Merbein	30	Toolamba—Echuca	25
Merbein—Yelta	25	Shepparton—Katamatite ..	25
Ouyen—Pinaroo	30	Numurkah—Picola	25
Redcliffs—Merrigum	25	Benalla—Yarrowonga	25
Waubra Jun.—Waubra	25	Benalla—Tatong	25
North Creswick—Daylesford	25	Bowser—Bright	25
Carlsruhe—Daylesford .. .	30	Everton—Yackandandah ..	25
Ararat—Avoca	25	Wodonga—Tallangatta .. .	35
Avoca—Maryborough	30	Tallangatta—Cudgewa .. .	25
Ben Nevis—Navarre	25	Bairnsdale—Orbost	30
Dunolly—Inglewood	30	Warragul—Noojee	25
Birregurra—Forrest	25	Morwell—North Mirboo .. .	25
Irrewarra—Newtown	25	Hernes Oak—Yallourn .. .	20
Colac—Alvie	25	Traralgon—Stratford Jun. ..	25
Timbeon Jun.—Timbeon .. .	25	(via Maffra)	
Terang—Mortlake	25	Maffra—Briagolong	25
Koroit—Hamilton	25	Foster—Port Albert	25
Hamilton—Kanagulk	30	Alberton—Woodside	25
Kanagulk—Noradjuha	25	Bittern—Red Hill	25
Noradjuha—Horsham	30	Sand Co.'s Sidings (Cran-	
Ballarat East—Buninyong ..	30	bourne)	10
Linton Junction—Skipton ..	25		

(c) Train Assisted by a Second Engine in Front.—On the Lines or portions of Lines between the Stations specified hereunder, the

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speed of any train assisted by a second engine in front must not exceed a maximum rates of 25 miles per hour:—

Ultima and Manangatang
Swan Hill and Piangil
Elmore and Cohuna
Tempy—Mildura (all Trains)
Ouyen and Pinaroo
Beacac and Newtown
Linton and Skipton
Hamilton and Cavendish

Heywood and Mount Gambier
Ben Nevis and Navarre
Rupanyup and Marnoo
East Natimuk and Kanagulk
Dimboola and Yaapeet
Jeparit and Yanac
Benalla and Tatong
Moe and Thorpdale

5. (a) The Driver of an engine or train fitted with a Speed Recorder must regulate the running of his engine or train so that the maximum rate shall be closely approached only where authorised, and provided the conditions are favourable for properly controlling the train; special care must therefore be exercised when travelling on steep falling gradients and when nearing sharp curves.

(b) The Driver of an engine or train not fitted with a Speed Recorder must regulate the running of his engine or train so that the speed will, in every case, be less than the rate allowed.

6. The running of engines **tender first** is subject to the instructions on pages 308 and 310 relating to Tender first running. (See also sub-section (ii.), clause 2, page 312.)

7. If necessary, for the purpose of time-keeping, Mixed trains **without any 4-wheeled vehicle** attached, may be run at the higher rate of speed laid down for Passenger trains on which there is no 4-wheeled vehicle. When this is done the Driver must, if the engine be fitted with a Speed Recorder, see that an explanatory remark is made on the Speed Chart.

8. Drivers, Firemen, and Guards, must keep a good look-out for Hand Signals, which will be exhibited at the various localities where **TEMPORARY** Speed Reductions are in force in accordance with the Regulations. It must, however, be understood that repairs of Lines may be necessary at other places besides those mentioned in the Weekly Notice or other printed or written instructions, and of which, owing to their urgency, it has not been possible to give previous notice. Drivers must, therefore, be always on the look-out, and be prepared to **STOP OR RUN AT REDUCED SPEED** whenever and wherever Hand Signals are exhibited. (See pages 108-109 respecting Special Permanent Way Signals.)

9. Station-masters, Signalmen, Guards, Gangers and others must promptly report through their superior officers any case in which a train runs in excess of the rate of speed laid down, and such reports must be forwarded to the Head of the Branch without delay.

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	50	40	30	25	20	15	10	5	Down
Royal Park and North Fitzroy ..	50	40	30	25	20	15	10	5	Down
Over Arness-street Level Crossing	25	25	25	25	20	15	10	5	Up
North Fitzroy and Fitzroy ..	—	—	—	—	—	—	—	—	—
North Fitzroy and Merri ..	—	—	—	—	—	—	—	—	—
North Fitzroy and Clifton Hill ..	50	40	30	30	30	30	30	30	30
Clifton Hill and Reservoir ..	50	40	30	30	30	30	30	30	30
Northote Loop between Clifton Hill and Merri ..	10	10	10	10	10	10	10	10	10
Princes-bridge or Flinders-street and Automatic Signal S.15 (Down), or S.22 (Up)	25	25	25	25	25	25	25	25	25
Automatic Signals 6.15 (Down), or 8.22 (Up), and Clifton Hill	35	30	30	30	30	30	30	30	30
Clifton Hill and Heidelberg ..	50	40	30	30	30	30	30	30	30
Heidelberg and Eltham ..	45	40	30	30	30	30	30	30	30
Eltham and Hurst Bridge ..	40	30	20	20	20	20	20	20	20
Monte Park Line ..	—	—	—	—	—	—	—	—	—
Flinders-street Platform and Yard Footbridge (All Lines) ..	25	25	25	25	25	25	25	25	25
Yard Footbridge and the Down Home Signals at Jolimont Junction (All Lines)	30	25	25	25	25	25	25	25	25
Jolimont Junction and Richmond† ..	40	30	30	30	30	30	30	30	30
Richmond and Hawthorn ..	35	30	30	30	30	30	30	30	30
Hawthorn and Canterbury ..	40	30	30	30	30	30	30	30	30
Canterbury and Box Hill ..	50	40	30	30	30	30	30	30	30
Between Speed Board on Down side of Canterbury and the Station Platform on Up journey.	20	20	20	20	20	20	20	20	20
Box Hill and Ringwood ..	50	40	30	30	30	30	30	30	30
Burnley and Darling ..	40	40	30	30	30	30	30	30	30
Hawthorn and Kew ..	40	40	30	30	30	30	30	30	30
Camberwell and Ashburton ..	40	40	30	30	30	30	30	30	30
Riversdale and East Kew ..	—	—	—	—	—	—	—	—	—
Approaching Madock-street Foot Crossing Up side of Riversdale ..	10	10	10	10	10	10	10	10	10
Ringwood and Lilydale ..	50	50	40	40	40	40	40	40	40
Ringwood and Upper Fern Tree Gully ..	50	50	40	40	40	40	40	40	40
Richmond and South Yarra Platform ("C" Class Engines excepted)	40	30	30	30	30	30	30	30	30
"C" Class Engines—	—	—	—	—	—	—	—	—	—
(i) Over River Yarra Bridge on Caulfield (East) Lines ..	—	10	10	10	10	10	10	10	10
(ii) "C" Class Engines must not be run on the Up or Down Brighton Lines between Richmond and South Yarra	—	—	—	—	—	—	—	—	—
South Yarra Platform and Caulfield (All Lines) ..	45	35	30	30	30	30	30	30	30
Caulfield and Oakleigh ..	50	40	30	30	30	30	30	30	30
Oakleigh and Dandenong ..	50	40	30	30	30	30	30	30	30
Spring Vale and Spring Vale Cemetery ..	45	40	30	30	30	30	30	30	30

† Or Bunker First, in the case of Tank Engines.

* For maximum rates of speed of various classes of Engines, see Clause 4, pages 271-272.

WORKING OF TRAINS.

BROAD GAUGE LINES—continued.

SUBURBAN DISTRICT—continued. LINE OR PORTION OF LINE BETWEEN—	MAXIMUM RATE OF SPEED.*				
	Electric Multiple Unit Trains, Including Single Motor Car.	Steam Trains, Passenger and Mixed.		All Goods Trains.	
	Single Motor Car. Miles per Hour.	Engine Running Fuelled First. Miles per Hour.	Engine Running Tender Electric. Miles per Hour.	Engine Running Tender Electric. Miles per Hour.	Miles per Hour.
Gaulfield and Mordialloc	50	40	30	30	30
Mordialloc and Frankston	50	(see page 290)	30	20	20
Richmond and South Yarra Platform	40	30	30	25	20
* C. Class Engines must not run on the Up or Down Brighton Line between Richmond and South Yarra					
South Yarra Platform and Sandringham	45	40	30	25	20
Flinders-street and St. Kilda	45	40	30	20	20
Flinders-street and Port Melbourne Station	45	40	30	20	20
Port Melbourne and Port Melbourne Railway Pier	5	5	5	5	5
Graham and Prince's Pier (New Pier)	25	5	5	5	5

* For maximum rates of speed of various classes of Engines and double-headed Trains see clause 4, pages 271-273 —† Or Barker First, in the case of Tank Engines.

Melbourne Goods Yards (including North Melbourne Junction and Arden-street).

LINE OR PORTION OF LINE.	Maximum Rate of Speed.*
Between Viaduct Junction, Dudley-street, and North Melbourne.	Miles per Hour.
Between Dudley-street Box and Viaduct Junction, in clear weather	10
† Up and Down Coburg Goods Lines, between Dudley-street Box and North Melbourne Junction, in clear weather	10
Midland and Western Goods Lines—	
† Between Dudley-street Signal Box and Weighbridge Junction (Down journey) in clear weather	10
Between Weighbridge Junction and Dudley-street Signal Box (Up journey)	5
Between Weighbridge Junction and South Kensington Junction (Down journey)	5
† Between South Kensington Junction and Weighbridge Junction (Up journey), in clear weather, subject to the note hereunder	10
NOTE.—On the Up journey between South Kensington Junction and Weighbridge Junction, trains must not approach Weighbridge Junction from the top of the bank at a greater speed than five (5) miles per hour, and when they arrive on Siding "D" or "H" must stop clear of Weighbridge Junction.	
North-Eastern Goods Line.—	
† Between Dudley-street Signal Box and Weighbridge Junction (Down journey) in clear weather	10
Between Weighbridge Junction and Dudley-street (Up journey)	5
Between Weighbridge Junction and Kensington Junction (Down journey)	10
Between Kensington Junction and Weighbridge Junction, including No. 2 and No. 3 Goods Arrival Roads (Up journey)	5

* For maximum rates of speed of various classes of engines and double-headed trains see clause 4, pages 271-273.

† FOGGY WEATHER.—In foggy weather, or when from any other cause a distinct view cannot be obtained, the rate of speed must not exceed 5 miles per hour on any Permissive Block Section.

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MELBOURNE GOODS YARDS—continued.

LINE OR PORTION OF LINE.	Maximum Rate of Speed.*
	Miles per Hour.
North-Eastern Goods Line—continued.	
Between Dudley-street Box and North Melbourne Gravitation Sidings (Up and Down journey)	5
Trains arriving in Melbourne Goods Yard when passing Dudley-street Signal-box	5
Trains departing from Melbourne Goods Yard when passing Dudley-street Signal-box	10
Light Engines passing Dudley-street Signal-box to or from Engine-shed	15
Light Engines passing Dudley-street Signal-box going to Coal Stage, South side	5
Passing Level Crossings between the Yard and Victoria Dock. See Special Instructions, page 713 ..	5
To City Market and Gravitation Yard, etc. See Special Instructions, page 517	5
Clear Weather, during daylight	10
Foggy Weather and during the hours between sunset and sunrise	5
On the Reversing Loop	10
Macaulay and North Melbourne—Up Goods trains passing through Macaulay to North Melbourne Junction via Arden-street Sidings—whilst travelling between Arden-street Gates and No. 10 Signal Post. See Special Instructions, pages 719-721	5

* For maximum rates of speed of various classes of engines and double-headed trains see clause 4, pages 271-273.

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SPENCER-STREET AND FLINDERS-STREET YARDS.

PORTION OF LINE.	Maximum Rate of Speed.*
	Miles per Hour.
Flinders-street Station —The speed of any train, motor coach, or engine, on any siding, or when being shunted to or from any siding and a running line at Flinders-street, must not exceed a rate of 15 miles per hour. This is subject to the special rates specified hereunder :—	
Over Viaduct Sidings	5
Flinders-street Station, between Box "A" on the West side and Boxes "B" and "C" on the East side, all Roads. Subject to the further restriction (see hereunder) in regard to Nos. 2, 3 and 7 Roads ...	15
From West End of No. 7 Road, to Swanston-street Bridge ...	5
"C" Box, Flinders-street—Approaching No. 5 Road from the Camberwell Line via "U" Road ..	15
Movements between "D" and "E" Boxes via Through Siding	
"D" Box, Flinders-street—Up trains from the Clifton Hill Line, between the overhead bridge near Auto Signal S 22 and the platform; speed must not be increased after passing 3-position Home Signal No. 5	10
Down trains to Clifton Hill Line—when passing round the curve between "D" Signal-box and the Down Automatic Signal S 15	10
Shunting movements between "D" and "E" Boxes via the "Through Siding"	5
Jolimont Goods Yard —Entering from the East or West end	10

WORKING OF TRAINS.

NORTHERN DISTRICT.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed.*		
	Engine Fuelled First.		Engine Tended First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains.
Sunshine and Bendigo ("C" Class Engines excepted)	60	40	30
"C" Class Engines—			
Sunshine and Malmesbury	40	40	30
Malmesbury and 85½ miles	30	30	30
85½ and 92 miles	40	40	30
92 miles and Bendigo	30	30	30
Bendigo to Sunshine ("C" Class Engines excepted)	60	40	30
"C" Class Engines—			
Bendigo to Malmesbury	30	30	30
Malmesbury to Woodend	40	40	30
Bendigo Box "A" at Three Arch Bridge and Box "C" Williamson street	20	20	15
Bendigo and Echuca ("C" Class excepted)	50	40	25
"C" Class Engines	40	40	25
North Bendigo Junction and Bendigo Cattle Yards and Loco. Siding	—	10	5
Echuca and Deniliquin	35	30	20
Over left-hand curve, commencing at 157 miles 21 chains, and ending at 158 miles 15 chains, between Moama and Moira	25	25	20
At Timber Bridge at 161 miles 37 chains	25	25	20
† Echuca and Echuca Wharf	5	5	5
Barnes and Balranald	45	40	20
Clarksfield and Lancefield	40	35	20
Redesdale Junction and Redesdale	40	35	20
Castlemaine and Shelbourne	40	35	20
Heathcote Junction and North Bendigo Junction	40	35	20
North Bendigo Junction and Freezing Company's Siding	—	25	20

* For maximum rates of speed of various classes of engines and double-headed trains, see clause 4, pages 271-273.

† Engines are not allowed to proceed on to the Echuca Wharf.

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NORTHERN DISTRICT—continued.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed.*		
	Engine Pinned First.		Engine Tender First
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains
	Miles per Hour.	Miles per Hour.	Miles per Hour.
† Elmore and Cohuna	40	35	20
Bendigo and Eaglehawk	50	40	25
Eaglehawk and Kerang	50	40	25
Between Eaglehawk and Raywood for Engines of greater axle load than 70% "D" Class	25	25	25
Kerang and Swan Hill	40	35	20
Swan Hill and Swan Hill Wharf	—	10	10
† Swan Hill and Kooloonong	40	35	20
Kooloonong-Yungera	25	25	20
Kerang and Murrabit	25	25	20
Murrabit and Stony Crossing	25	25	20
Eaglehawk and Korong Vale ("C" Class Engines excepted)	50	40	25
"C" Class Engines	40	40	25
† Station Yard, Bridgewater, and Mill Company's Siding	—	5	5
Over Loddon Bridge at 126 miles 59 chains Down side of Bridgewater	10	10	10
Korong Vale and Wycheproof	50	40	25
Through Wycheproof Main Street	15	15	15
Between Korong Vale and Wycheproof for Engines of greater axle load than 70% "D" Class	25	25	25
Wycheproof and Kulwin	40	35	20
† Korong Vale and Annuello	40	35	20
Annuello and Robin Vale	25	25	20
Wedderburn Junction and Wedderburn	40	35	20

* For maximum rate of speed of various classes of engines, see clause 4, pages 271-273.

† See clause 4, pages 271-273 for special rate of speed for trains assisted by a second engine in front.

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MIDLAND DISTRICT.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed. *		
	Engine Fuelled First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and mixed and ...	All Trains.
	Miles per Hour.	Miles per Hour.	Miles per Hour.
Ballarat and Maryborough ("C" Class Engines excepted)	50	40	25
"C" Class Engines	40	40	25
Maryborough and Tempy ("C" Class Engines excepted)	50	40	25
"C" Class, Maryborough and Donald	40	40	25
† Tempy and Merbein	40	35	20
Merbein and Yelta	25	25	20
Bet Bet and Ballast Siding	—	—	10
Red Cliffs and Meringur	40	35	20
† Ouyen and Pinnaroo	40	35	20
Waubra Junction and Waubra	40	35	20
North Creswick and Daylesford	40	35	20
Carlsruhe and Daylesford	40	35	20
Castlemaine and Maryborough ("C" Class excepted)	50	40	25
"C" Class Engines	30	30	25
Maryborough and Avoca ("DD_R" Class excepted)	40	35	20
"DD _R " Engines	30	30	20
Avoca and Ararat ("DD_R" Class excepted)	40	35	20
"DDE" Engines	25	25	20
† Ben Nevis and Navarre	40	35	20
Dunolly and Inglewood	40	35	20

* For maximum rates of speed of various classes of engines, see clause 4, pages 271-273.

† See clause 4, pages 271-273, for special rate of speed for trains assisted by a second engine in front.

WORKING OF TRAINS.

WESTERN AND SOUTH-WESTERN DISTRICTS.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed. *		
	Engine Fuelled First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains	All Trains.
	Miles per Hour.	Miles per Hour.	Miles per Hour.
Sunshine and Serviceton ...	60	40	30
(i) "C" Class Engines between Ararat and Stawell ...	40	40	30
(ii) Dog Trap Gully (mileage, 37 miles) to Rowsley ...	40	40	20
(iii) Passing over Level Crossing at Humffray-street, Ballarat East—Down Goods Trains entering Ballarat Goods Yard ...	—	5	5
(iv) Trains or Engines running to and from the Ballarat East Loco. Yards ...	—	5	5
(v) Over Passenger Lines between Ballarat East Signal-box and Box "C" at McArthur-st., Ballarat North—			
(a) Down Trains ...	20	20	15
(b) Up trains ...	20	10	10
(vi) Linton Jn. Box "D" and Ballarat Cattle Yards Sdg. ...	—	15	15
Bungaree Racecourse Line ...	25	25	20
Ballarat East and Buninyong ...	40	35	20
Over Eureka Tile Co.'s Siding ...	—	5	5
†Linton Junction and Skipton ...	40	35	20
Burrumbeet Racecourse Line ...	25	25	20
Newport and Geelong ("C" Class Engines excepted) ...	60	40	30
(i) "C" Class Engines—			
(a) Newport-Geelong ...	40	40	30
(b) Over Werribee River Bridge, Down side of Werribee ...	15	15	15
(ii) Over Harbour Trust new Siding, North Geelong ...	—	5	5

* For maximum rates of speed of various classes of engines and double-headed trains, see pages 271-273.

WORKING OF TRAINS.

WESTERN AND SOUTH-WESTERN DISTRICTS—Continued.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed. *		
	Engine Fuel First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains.
	Miles per Hour.	Miles per Hour.	Miles per Hour.
North Geelong Loop Line, between Box "A" and Box "C" ...	10	10	10
Entering Sidings "A" ...	—	5	5
In Sidings "A" when proceeding towards "A" "B," or "C" Box ...	—	5	5
In Low Level dead-end road of Harbour Trust's Siding ...	—	5	5
Geelong and Warrnambool ...	60	40	30
(i) Geelong Box "A" at Latrobe Terrace, and the Up end of the Tunnel ...	20	15	15
(ii) Geelong and Geelong Pier ...	—	5	5
(iii) Over Emu Creek Bridge on Down side of Boorcan ...	15	15	15
(iv) Warrnambool & Warrnambool Pier—			
(a) Fenced portion ...	—	10	10
(b) Unfenced portion ...	—	5	5
Warrnambool and Port Fairy ...	50	40	25
Port Fairy and Port Fairy Wharf ...	—	5	5
North Geelong and Fyansford ("DDE" excepted) ...	—	25	10†
"DDE" Engines ...	—	20	10†
North Geelong and Warrenhelp ("C" Class Engines excepted) ...	60	40	30
(i) "C" Class Engines between North Geelong and Gheringhap ...	40	40	30
Lal Lal Racecourse Line ...	25	25	20

* For maximum rates of speed of various classes of engines and down trains, see clause 4, pages 271-273.

† During daylight the tender first speed is 20 miles per hour

WORKING OF TRAINS.

WESTERN AND SOUTH-WESTERN DISTRICTS—Continued.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed. *		
	Engine Fanned First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains.
	Miles per Hour.	Miles per Hour.	Miles per Hour.
South Geelong and Queenscliff ("DD" Class excepted) ...	45	40	25
South Geelong and Cheetham's Siding—"DD" Engines ...	—	40	25
Moriac and Wensleydale ...	10	10	10
Birregurra and Forrest ...	40	35	20
†Irrewarra and Newtown ...	40	35	20
Colac and Alvie ...	25	25	20
Gheringhap and Maroona ("C" Class excepted) ...	40	40	25
(i) "C" Class Engines ...	35	35	25
(ii) Double-headed Goods trains ...	—	30	—
Timboon Junction and Timboon ...	40	35	25
Terang and Mortlake ...	40	35	20
Koroit and Hamilton ...	40	35	20
Penshurst Ballast Pit ...	—	5	5
Ararat and Portland ("C" Class excepted) ...	50	40	25
(i) "C" Class Engines—			
(a) Ararat-Marroona ...	40	40	25
(b) Over Hopkins River—mileage 133½, between Ararat and Langi Logan ...	15	15	10
(c) Over bridges at mileages 140½ and 143½, between Langi Logan South and Maroona ...	15	15	15
(ii) Portland and Portland Pier ...	—	5	5
Hamilton and Coleraine ...	40	35	20
†Hamilton and Noradjuha ...	40	35	20

* For maximum rates of speed of various classes of "V" engines see clause 4, pages 271-273.

† See clause 4, pages 271-273, for special rate of speed for trains assisted by a second engine in front.

WORKING OF TRAINS.

WESTERN AND SOUTH-WESTERN DISTRICTS—Continued.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed. *		
	Engine Fuelled First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains.
	Miles per Hour.	Miles per Hour.	Miles per Hour.
†Noradjuha and Horsham	45	40	25
Branxholme and Casterton	40	35	20
†Heywood and South Australian Border	40	35	20
South Australian Border and Mount Gambier	35	30	20
Over McDonnell Bay Level Crossing, East end of Mount Gambier Station Yard	4	4	4
Stawell and Grampians	10	10	10
†Lubeck and Marnoo	40	35	20
Murtoa and Warracknabeal	45	40	25
Warracknabeal and Patchewollock	40	35	20
East Natimuk and Goroke	40	35	20
Goroke and Mortat	30	25	20
Mortat and Carpolae	20	20	15
†Dimboola and Yaapect	40	35	20
†Jeparit and Yanac	40	35	20

* For maximum rates of speed of various classes of engines see clause 4, pages 271-273.

† See clause 4, pages 271-273, for special rate of speed for trains assisted by a second engine in front.

WORKING OF TRAINS.

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NORTH-EASTERN DISTRICT AND WHITTLESEA LINE.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed. *		
	Engine Fuelled First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains.
	Miles per Hour.	Miles per Hour.	Miles per Hour.
Essendon and Albury	60	40	30
Essendon Station, between the Up and Down Home Signals, Posts Nos. 40 and 55 respectively ...	25	25	20
Passing Goulburn River Junction (Passenger trains worked by "C" Class Engines excepted) ...	40	40	30
Passenger trains worked by "C" Class Engines over Goulburn River Bridges ...	30	30	30
Passing Mangalore Junction ...	25	25	25
Over Shire Council's Siding at Glenrowan... ..	—	10	10
Passing over Level Crossings at Rowan-st. and Templeton-st. (between Down end of Wangaratta Yard and Owens River Bridge) ...	15	15	15
Passing Wodonga Loop Line Junction (Vic. and N.S.W. Lines) ...	20	20	20
Wodonga Loop Line	10	10	10
Tallarook and Yea	45	40	25
Yea and Mansfield	40	35	20
Cathkin and Alexandra	35	30	20
Mangalore and Numurkah	50	40	25
Numurkah and Cobram	50	40	25
Strathmerton and Tocumwal	50	40	25
Over Murray River Bridge at Tocumwal	5	5	5
Murchison East and Colbinabbin	40	35	20

* For maximum rates of speed of various classes of engines and double-headed trains see clause 4, pages 271-273.

WORKING OF TRAINS.

NORTH-EASTERN DISTRICT AND WHITTLESEA LINE—continued.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed. *		
	Engine Fuelled First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains.
	Miles per Hour.	Miles per Hour.	Miles per Hour.
Rushworth and Girdgarre ...	40	35	20
Toolamba and Echuca ...	40	35	20
Shepparton and Katamatite ...	40	35	20
Numurkah and Picola ...	40	35	20
Benalla and Yarrawonga ...	40	35	20
† Benalla and Tatong ...	40	35	20
Beechworth Junction and Bright ...	40	35	20
Everton and Yackandandah ...	35	30	20
Springhurst and Wahgunyah ...	45	40	25
Wodonga and Tallangatta ...	40	35	20
Tallangatta and Gudgewa ...	25	25	20
Reservoir and Whittlesea ...	50	40	25

* For maximum rates of speed of various classes of engines, see clause 4, pages 271–273.

† See clause 4, pages 271–273, for special rates of speed for trains assisted by a second engine in front.

WORKING OF TRAINS.

EASTERN AND SOUTH-EASTERN DISTRICT.

LINE OR PORTION OF LINE BETWEEN—	Maximum Rate of Speed. *		
	Engine Funnel First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains.
	Miles per Hour.	Miles per Hour.	Miles per Hour.
Oakleigh and Moe ("C" Class excepted) ...	60	40	30
Moe and Bairnsdale (via Sale) ("C" Class excepted) ...	50	40	30
Sale and Sale Wharf ...	—	10	10
"C" Class Engines—			
Oakleigh and Traralgon ...	40	40	30
Bairnsdale and Orbost ...	40	35	20
Bairnsdale and Bairnsdale Wharf ...	—	10	10
Warragul and Neerim South ...	40	35	20
Neerim South and Noojee ...	25	25	20
Over Ballast Siding at 75½ miles ...	—	10	10
Moe and Thorpdale ...	30	25	20
Herne's Oak and Yallourn ...	20	20	20
Yallourn and Brown Coal Mine ...	15	15	15
Morwell and North Mirboo ...	40	35	20
Traralgon & Stratford Jun. (via Maffra)—	40	35	20
Over Public Crossing Down Side of Maffra. (Trains approaching from the Stratford and Briargolong side)	10	10	10
Maffra and Briargolong ...	40	35	20
Dandenong and Foster ("C" Class Engines excepted) ...	50	40	25
"C" Class Engines, Dandenong and Nyora ...	40	40	30
Foster and Yarram ...	40	35	20
Yarram and Won Wron ...	30	30	20
Won Wron and Woodside ...	25	25	20

* For maximum rates of speed of various classes of engines, see clause 4, pages 271-273.

† See clause 4, pages 271-273, for special rate of speed for trains assisted by a second engine in front.

WORKING OF TRAINS.

EASTERN AND SOUTH-EASTERN—continued.

LINE OR PORTION OF LINE BETWEEN—	MAXIMUM RATE OF SPEED *		
	Engine Fuelled First.		Engine Tender First.
	Passenger Trains without any 4-wheeled vehicle attached.	Passenger Trains with any 4-wheeled vehicle attached, and Mixed and Goods Trains.	All Trains.
Alberton and Port Albert	40	35	20
Koo-wee-rup and Strezlecki	25	25	20
Nyora and Wonthaggi ("C" Class excepted)	40	35	20
(i) "C" Class Engines (subject to a maximum rate of 15 miles per hour through stations and over points and crossings)	30	30	20
Wonthaggi and Eastern Area ("DDE" Class excepted)	25	25	20
State Mine and Dudley Area	25	25	20
Korumburra and Outtrim	30	25	20
Coal Creek Junction and Coal Creek	—	15	15
Foster and Foster Ballast Pit	—	10	10
Lilydale and Healesville	50	40	25
† Lilydale and Warburton	40	35	20
Warburton and La La Sidings, (subject to a rate of speed not exceeding 5 miles per hour when proceeding over the Level Crossing)	—	10	10
Mordialloc-Frankston	60	40	30
Frankston and Mornington	50	40	25
Moorooduc Quarry Line	—	10	10
Baxter and Stony Point	50	40	25
Bittern and Red Hill	25	25	20
Crib Point and Naval Base	15	15	15

* For maximum rates of speed of various classes of engines and double-headed trains, see clause 4, pages 271-273.

† For speed of Electric trains, Ringwood to Lilydale or Upper Fern Tree Gully, see page 275.

Special Rates of Speed.

Curves.—(a) Every curve, with the exception of those referred to in clause 2 hereof, that is of such a radius as to render necessary any modification of the foregoing rates of speed, is indicated by a **Curve Board** (see diagram in margin) placed on the Left-hand side of the Line at the entrance to the curve. The number shown on the Curve Board indicates, in miles per hour, the maximum rate of speed allowed when going round the curve. It is pointed at one end, and is so placed that the pointed end indicates the direction of the curve, Right-hand or Left-hand, as the case may be. The speed must be reduced before the engine or train enters on the curve, and the indicated rate of speed must not be exceeded until the whole of the train is clear of the curve.



(b) The following tables give respectively the Maximum Rates of Speed around curves of certain radii on Suburban Lines, and on all other Lines. These rates agree with those shown on the Curve Boards, and are subject to the maximum rates of speed laid down for the several classes of trains, whether the engine be running funnel first or tender first:—

Suburban Lines.		All Other Lines.	
Radius of Curve in Chains.	Maximum Rate of Speed.*	Radius of Curve in Chains.	Maximum Rate of Speed.*
	Miles per Hour.		Miles per hour.
Less than 8	10	Less than 8	10
8 to 9	15	8 to 9	15
More than 9 to 11	20	More than 9 to 12	20
" " 11 to 14	25	" " 12 to 20	25
" " 14 to 18	30	" " 20 to 25	30
" " 18 to 22	35	" " 25 to 30	35
" " 22 to 26	40	" " 30 to 35	40
" " 26 to 30	45	" " 35 to 40	50
" " 30 to 35	50	" " 40	60
" " 35 to 40	55		
" " 40	60		

WORKING OF TRAINS.

2. Passing Over Points.—The following Speed Restrictions apply generally when passing over Points at Stations, Junctions and Sidings:—

	Maximum Rate of Speed.*	
	When running to or from Lines diverging from the Straight Road.	When running on the Straight Road.
	Miles per Hour.	Miles per Hour.
(a) Except as shown in sub-clauses (b) and (c) hereof—		
(i.) Over Facing Points worked from a Locking Frame or otherwise securely fastened	25	40
(ii.) Over Facing Points held by hand	15	15
(iii.) Over Trailing Points	25	40
(b) On the following Lines, viz.:—Essendon-Albury, Sunshine-Bendigo, Bendigo-Echuca, Castlemaine-Maryborough, Maryborough-Woomelang, Sunshine-Service-ton, Newport-Port Fairy, Geelong-Ballarat, Oakleigh-Warragul, Dandenong-Nyora, Mordialloc-Baxter, Baxter-Mornington, Ringwood-Healesville, Ringwood-Upper Fern-tree Gully, the speed restrictions specified in sub-sections (i), (ii.) and (iii.) hereof will (Rail Motor Trains excepted) apply—		
(i.) Over Facing Points worked from a Locking Frame or otherwise securely fastened	25	50
(ii.) Over Facing Points held by hand	15	15
(iii.) Over Trailing Points	25	50
(c) RAIL MOTOR TRAINS—The Speed Restrictions shown hereunder will apply to Rail Motor Trains:—		
(i.) Over Facing Points worked from a Locking Frame or otherwise securely fastened	25	†40
(ii.) Over Facing Points held by hand	15	15
(iii.) Over Trailing Points	25	†40

* For maximum rates of speed of various classes of engines and double-headed trains, see clause 4, pages 271-273.

† Subject to a maximum rate of speed of 35 miles per hour for four-wheeled Rail Motor trains.

WORKING OF TRAINS.

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SPECIAL RATES OF SPEED—continued.

3. At Various Places :—

DESCRIPTION.	Maximum Rate of Speed, All Trains.
Terminal Stations—	Miles per hour.
When engine is passing the near end of platform at which the train has to stop. See clause (d), Rule 12, Appendix III., and clause 8, pages 601- 605 of this book	15
Suburban Stations—	
Entering and passing through in foggy weather ...	15
On Single Lines—	
When entering a Crossing Station at which the train has to stop	15
Tablet or Staff Stations—	
When staffs are exchanged by means of Automatic Staff Exchange apparatus	40
When exchanging Tablet, or Miniature Staff, by hand, where carriers are provided. See pages 418-419	20
† When exchanging Staff (ordinary type) or delivering Ticket	15
RAIL MOTOR TRAINS	6
Crossing Stations—	
When backing a train over a Level Crossing not provided with Gates	5
Examining Stations—	
When entering station. See clause 4, page 449 ..	10
Permanent-way Repairers' Signals—	
In clear weather, when a Green Hand Signal waved slowly from side to side. See Regulations 98, 179, 265, and 274, and pages 110-111 of this book	15
Single Line Working—	
Over Points which become Facing Points when the traffic of a Double Line is being worked over a Single Line	10
When Air Brake is wholly inoperative—	
On a long falling gradient, or when approaching any Station or Junction	15

† See clause 5 (b) on page 551.

WORKING OF TRAINS.

SPECIAL RATES OF SPEED—continued.

4. Various Trains, Light Engines, and Steam Cranes.

(Subject to such lesser speed as already laid down, when the engine is running tender first.)

DESCRIPTION.	Maximum Rate of Speed.*
Trains composed partly or wholly of seated trucks by which Passengers are conveyed...	Miles per Hour. 30†
Rail Motor Trains...	35
Goods Trains by which any Way and Works Steam Crane or Steam Shovel is conveyed...	45†
† Goods Trains by which "Dead" Engines are conveyed—	
Dead Engine having	
(i) Inside Cylinders	25†
(ii) Outside Cylinders	15†
Goods Trains on Running Lines without a Brake Van in the rear:—	
(See pages 472-479)	15†
Light Engines other than Tank Engines:—	
With Driving Wheels of 5 feet or more in diameter	50†
With Driving Wheels of less than 5 feet in diameter	40†
Tank Engines:—	
"DDE," "EE," "E," and "F" (motor) classes, whether light or attached to a train, or whether running funnel or bunker first	40†
Any Break-down Van train or any train to which a Break-down Van is attached	40†
Steam Cranes:—	
Nos. 2, 3, 4, 8, 9 (5 tons)	20†
No. 11 (7 tons)	30†
Wreckage Cranes:—	
Nos. 5, 7 (30 tons)	30†
No. 6 (10 tons)	30†
Lifting Cranes (Way and Works Branch):—	
Nos. 1, 2, 3, 4 (3 tons)	15†
On Truck Weighbridge—	
(i) Vehicles over Scales	4
(ii) Engines or Vehicles over Weighbridge Relief Rails	8
Pushing Trains:—	
On Running Lines	10
Ballast trains around curves of less than 8 chains radius. See clause 3, page 397	5
Empty Trains, when Guard, Shunter or other employee leaves the leading vehicle to attend to the Points. See (f), clause 2, page 444.	3

* For maximum rates of speed of various classes of engines and double-headed trains, see clause 4, pages 271-273.

† Or such lesser speed as may be laid down for the Line or portion of Line.

‡ See further instructions, clauses 2, 3, and 4, pages 341-342.

WORKING OF TRAINS.

NARROW GAUGE LINES.

COLAC-BEECH FOREST-CROWES LINE.					Maximum Rate of Speed. *During daylight.
BETWEEN— Colac		and	Miles. 95	Chains. 40	Miles per hour. 10
Miles.	Chains.				
95	40	"	98	15	20*
98	15	"	98	30	10
98	30	"	104	20	20*
104	20	"	104	47	10
104	47	"	108	33	20*
108	33	"	108	40	10
108	40	"	114	5	20*
114	5	and Beech Forest † ...			10
Beech Forest		and	125	15	10
125	15	"	127	25	15
127	25	"	127	48	10
127	48	"	128	1	15
128	1	"	128	13	10
128	13	"	131	28	15
131	28	"	132	0	10
132	0	"	132	47	15
132	47	"	132	58	10
132	58	"	134	76	15
134	76	"	135	6	10
135	6	"	136	26	15
136	26	"	136	44	10
136	44	"	137	25	15
137	25	and Crowes	...	...	10

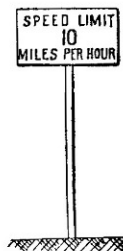
* The maximum rate of speed on the Beech Forest and Crowes Line during darkness must not exceed 15 miles per hour on any part of the Line; this rate is, however, subject to any lower permanent or temporary rate of speed in force on any part of the Line.

† The speed round the Reversing Loop at the Down end of Beech Forest Station must not exceed a rate of 10 miles per hour.

WORKING OF TRAINS.

WALHALLA NARROW GAUGE LINE.					Maximum Rate of Speed.
BETWEEN—					Miles per Hour.
	Miles.		Chains.		
Moe		and	90	37	20
Miles.	Chains.				
90	37	„	100	50	15
100	50	and Walhalla	—		10

On the Lines between Colac and Crowea, and Moe and Walhalla, Speed Limit Boards are erected on both sides of the Single Line (left-hand side for each direction) at the mileages shown above. The figures appear on one side of the Board only, and indicate in miles per hour the maximum rate of speed at which any train is permitted to travel between such Board and the Board next in advance on the same side of the Line. See Diagram of Speed Limit Board in margin.



GEMBROOK NARROW GAUGE LINE.					Maximum Rate of Speed.
BETWEEN—					Miles per Hour.
Upper Fern Tree Gully and Gembrook	...		...		15

WHITFIELD NARROW GAUGE LINE.					Maximum Rate of Speed.
BETWEEN—					Miles per Hour.
Wangaratta and Whitfield	...		...		20

When permission is given (vide clause 12, page 402), for a train to be pushed on a Narrow Gauge Line, the maximum rate of speed must not exceed half that shown above for the respective sections. See clause 3, page 397.

CLASSES OF ENGINES ALLOWED TO RUN ON VARIOUS LINES.

Except where otherwise provided the following are the particulars of the classes of engines that are allowed to run over the various Broad Gauge Lines. The words "**Lighter Classes**," which in respect of some Lines or portion of Lines, appear in the "Engines allowed to run" column, mean engines of a lighter axle load than the class specified. See instruction (pages 307-308) for Engine Axle loads.

(i.) Except where instructions to the contrary are in force (see notes at end of following list) the classes of engine allowed to run on any particular Line, or portion of a Line may also be worked on any Siding connected therewith.

(ii.) In a case of special emergency the District Engineer may authorise the running, for one return trip, of a heavier class of engine (excluding "A2" and heavier classes) than specified for a particular Line.

Northern District.

Line or Portion of Line between—	Engines Allowed to Run.
Sunshine and North Bendigo Junction ...	All classes
North Bendigo Junction and Echuca ...	All classes except "C" class; see note hereunder
<p style="text-align: center;">NOTE.—No Engine must be allowed to proceed on to the Wharf at Echuca.</p>	
Echuca and Deniliquin ...	70% "D" and lighter classes
Clarkefield and Lancefield ...	" " " "
Carlsruhe and Daylesford (see Note 1) ...	" " " "
Redesdale Junction and Redesdale (see Note 1) ...	" " " "
Maldon Junction and Shelbourne ...	" " " "
Heathcote Junction and Bendigo Freezing Company's Siding ...	" " " "
Bendigo Freezing Company's Siding and North Bendigo Junction ...	"AA" and lighter classes

WORKING OF TRAINS.

NORTHERN DISTRICT—continued.

Line or Portion of Line between—	Engines Allowed to Run.
Elmore and Cohuna	70% "D" and lighter classes
Echuca and Balranald	" " "
North Bendigo Junction and Eaglehawk ...	All classes (see Note 4)
Eaglehawk and Raywood	"A2" and lighter classes (see Note 4)
Raywood and Yungera	70% "D" and lighter classes
Kerang and Murrabit	" " "
Eaglehawk and Korong Vale	All classes
Korong Vale and Wycheproof	"A2" and lighter classes
Wycheproof and Kulwin	70% "D" and lighter classes
Korong Vale and Robin Vale	" " "
Wedderburn Junction and Wedderburn ...	" " "

Midland District.

Line or Portion of Line between—	Engines Allowed to Run.
Ballarat and Maryborough	All classes
Maryborough and Castlemaine	" "
Maryborough and Donald	" "
Donald and Ouyen	"A2" and lighter classes.*
Ouyen and Yelta	70% "D" and lighter classes
Bet Bet Ballast Pit Line	" " "
Ouyen and Pinnaroo	" " "
Red Cliffs and Meringur	" " "

* Between mileage 278 (on Up side of Bronzewing) and Nunga station, the maximum rate of speed of A2 class engines must not exceed thirty-five (35) m.p.h. engine first, and twenty (20) m.p.h. when running tender first.

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MIDLAND DISTRICT—continued.

Line or Portion of Line between—	Engines Allowed to Run.
Waubra Junction and Waubra ...	70% "D" and lighter classes
North Creswick and Daylesford ...	" " "
Maryborough and Ararat (see Note 1) ..	"DDE" and lighter classes
Ben Nevis and Navarre ...	70% "D" and lighter classes
Dunolly and Inglewood (see Note 1) ..	" " "

Western and South-Western Districts.

Line or Portion of Line between—	Engines Allowed to Run.
Sunshine and Ararat (see Note 3) ...	All classes except "C" class
Ararat and Stawell ...	All classes
Stawell and Serviceton (see Note 2) ...	All classes except "C" class
Newport and Geelong ...	All classes
Geelong Pier ...	Old "R" and lighter classes
Geelong and Port Fairy ...	All classes except "C" class
Warrnambool Pier ...	"DDE" and lighter classes
Port Fairy Wharf ...	All classes except "C" class
North Geelong Loop Line ...	All classes
North Geelong and Gheringhap ...	" " "
Gheringhap and Warrenheip ...	All classes except "C" class
Lal Lal Racecourse Line ...	" " "
Gheringhap and Maroona ...	All classes
South Geelong and Cheetham's Siding ...	"DDE" and lighter classes

WORKING OF TRAINS.

WESTERN AND SOUTH-WESTERN DISTRICT—continued.

Line or Portion of Line between—	Engines Allowed to Run.
Cheetham's Siding and Queenscliff ...	70% "D" and lighter classes
North Geelong and Fyansford ...	"DDe" and lighter classes
Moriac and Wensleydale ...	Old "R" (12 tons) and lighter classes
Birregurra and Forrest (see Note 1) ...	70% "D" and lighter classes
Irrewarra and Newtown (see Note 1) ...	" " "
Colac and Alvie (see Note 1) ...	" " "
Timboon Junction and Timboon ...	" " "
Terang and Mortlake ...	" " "
Koroit and Hamilton ...	" " "
Penshurst Ballast Pit Line ...	Old "R" and lighter classes
Burrumbeet Racecourse Line ...	All classes except "C" class
Ballarat East and Buninyong ...	70% "D" and lighter classes
Linton Junction and Skipton ...	" " "
Linton Junction and Ballarat Cattle Yards ...	70% "D" and lighter classes— "N" and "K" classes excepted
Bungaree Racecourse Line ...	All classes except "C" class
Ararat and Maroona ...	All classes
Maroona and Hamilton ...	All classes except "C" class
Hamilton and Portland ...	70% "D" and lighter classes
Portland Pier.—NOTE: No Engine must be allowed to proceed on to the Old Pier at Portland; see page 782.	" " "
Hamilton and Coleraine ...	" " "
Bransholme and Casterton ...	" " "

WORKING OF TRAINS.

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WESTERN AND SOUTH-WESTERN DISTRICT—continued.

Line or Portion of Line between—	Engines Allowed to Run.
Heywood and Rennick	70% "D" and lighter classes
Rennick and Mount Gambier	70% "D" and lighter classes "N" and "K" classes excepted
Stawell and Grampians (see Note 1)	Old "R" (12 tons) and lighter classes
Lubeck and Marnoo (see Note 1)	70% "D" and lighter classes
Murtoa and Patchewollock	" " " "
Horsham and Goroke	" " " "
East Natimuk and Hamilton	" " " "
Dimboola and Yaapeet	" " " "
Jeparit and Yanac	" " " "

North-Eastern District and Whittlesea Line.

Line or Portion of Line between—	Engines Allowed to Run.
Essendon and Seymour	All classes
Seymour and Albury	All classes except "C" class
Tullarook and Mansfield (see Note 1)	70% "D" and lighter classes
Cathkin and Alexandra	" " " "
Mangalore and Murchison East	All classes except "C" class
Murchison East and Cobram	All classes except "C" and "A2" classes
Strathmerton and Tocumwal	70% "D" and lighter classes
Murchison East and Colbinabbin	" " " "
Rushworth and Girgarre	" " " "

WORKING OF TRAINS.

NORTH-EASTERN DISTRICT AND WHITTLESEA LINE—continued.

Line or Portion of Line between—	Engines Allowed to Run.
Toolamba and Echuca	70% "D" and lighter classes
Shepparton and Dookie	" " "
Dookie and Katamatite	" " "
Numurkah and Picola	" " "
Benalla and Yarrawonga	" " "
Benalla and Tatong	" " "
Bowser and Bright (see Note I)	" " "
Everton and Yackandandah... ..	" " "
Springhurst and Wahgunyah	All classes except "C" class
Wodonga and Tallangatta	70% "D" and lighter classes
Tallangatta and Cudgewa	" " "
Reservoir and Epping Quarry Siding	"A2" and lighter classes
Epping Quarry Siding and Whittlesea	70% "D" and lighter classes

Eastern and South-Eastern Districts.

Line or Portion of Line between—	Engines Allowed to Run.
Oakleigh and Traralgon	All classes
Traralgon and Bairnsdale (via Sale)	All classes except "C" class
Bairnsdale and Orbost	70% "D" and lighter classes
Sale Wharf	All classes except "C" class
Bairnsdale Wharf	70% "D" and lighter classes
Warragul and Noojee	" " "

WORKING OF TRAINS.

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EASTERN AND SOUTH-EASTERN DISTRICTS—continued.

Line or Portion of Line between—	Engines Allowed to Run.
Moe and Thorpdale (see Note 1) ...	Old "R" (12 tons) and lighter classes
Herne's Oak and Yallourn ...	70% "D" and lighter classes
Yallourn and Coal Mine ...	" " "
Morwell and North Mirboo (see Note 1)...	" " "
Traralgon and Stratford (via Maffra) ...	" " "
Maffra and Briagolong ...	" " "
Dandenong and Nyora ...	All classes
Nyora and Leongatha Ballast Siding ...	All classes except "C" class
Leongatha Ballast Siding and Port Albert	70% "D" and lighter classes
Alberton and Woodside ...	" " "
Koo-wee-rup and Strezlecki (see Note 1) ...	"DD" and lighter classes
Nyora and Wonthaggi ...	All classes
Wonthaggi and Eastern Area ...	70% "D", lighter classes and 113% "DDE" class
State Mine and Dudley Area ...	70% "D", lighter classes and 113% "DDE" class
Korumburra and Outtrim ...	All classes except "C" class
Coal Creek Junction and Coal Creek ...	70% "D" and lighter classes
Foster Ballast Siding ...	" " "
Ringwood and Healesville ...	All classes except "C" class
Ringwood and Upper Ferntree Gully ...	" " "
Lilydale and Warburton ...	70% "D" and lighter classes
Frankston and Mornington ...	All classes except "C" class
Mooreoduc Quarry Siding ...	" " "
Baxter and Stony Point ...	70% "D" and lighter classes

WORKING OF TRAINS.

EASTERN AND SOUTH-EASTERN DISTRICTS—continued.

Line or Portion of Line between—	Engines Allowed to Run.
Bittern and Red Hill	70% "D" and lighter classes
Crib Point and Naval Base	" " "

Suburban District.

Line or Portion of Line between—	Engines Allowed to Run.
Melbourne goods Yard and Williams-town	All classes (see Note 8)
South Kensington and City Abattoirs ...	All classes except "C" class
Maribyrnong River Goods Siding ...	" " "
Footscray and Angliss's Siding ...	" " "
Spotswood and Power House Siding ...	" " "
Newport and Workshops Platform ...	" " "
Newport South Jun. and Williamstown Racecourse	" " "
Williamstown Racecourse and Altona Beach	"DD" and lighter classes
Newport and Sunshine (Loop Line) ...	All classes
Melbourne Goods Yard and Sunshine (see Notes 8 and 9)	" "
North Melbourne and Fawkner ...	All classes except "C" class
Royal Park and Clifton Hill ...	" " "
Clifton Hill and Merri, via Loop ...	"DD," "F," "Old R," "T,"
North Fitzroy and Reservoir ...	All classes except "C" class
North Fitzroy and Fitzroy ...	" " "

WORKING OF TRAINS.

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SUBURBAN DISTRICT.—continued.

Line or Portion of Line between—	Engines Allowed to Run.
Flinders-street and Eltham ...	All classes except "C" class
Eltham and Hurstbridge ...	"DDE" and lighter classes
Macleod and Mont Park ...	All classes except "C" class
Flinders-street and Ringwood ...	" " "
Burnley and Darling ...	" " "
Hawthorn and Kew ...	" " "
Camberwell—Ashburton—East Kew—Outer Circle Line	" " "
Flinders-street and Oakleigh ...	All classes. NOTE.—"C" class engines must not run on the Up or Down Brighton Line between Richmond and South Yarra.
Spring Vale and Spring Vale Cemetery	All classes except "C" class
Caulfield and Frankston ...	" " "
Flinders-street and Sandringham ...	" " "
Melbourne Goods Yard and Essendon	All classes
Newmarket Jun. and Flemington Race-course	All classes except "C" class
Flinders-street and North Melbourne Stations	All classes
Flinders-street and St. Kilda ...	All classes except "C" class (see Note 6)
Flinders-street and Port Melbourne Passenger Station	All classes except "C" class (see Note 7)
Graham and Prince's Pier (New Pier) ...	All classes except "C" class (see Note 7)
Port Melbourne Railway Pier ...	NIL. See pages 890-891.

NOTES.—1. (a) On the Branch Lines specified hereunder, engines of a heavier axle load than those ordinarily authorised in the foregoing list to run over such Branch Line, may, when necessary for shunting purposes, and subject to Block Working Rules, be placed on the Branch

WORKING OF TRAINS.

Line at the Station named; in every such case the speed specified for the local movement on the Branch Line must not be exceeded. See also clause (b).

Station.	Branch Line.	Class of Engine that may be used for Shunting on Branch Lines*	Speed.
			Miles per Hour.
Carlsruhe	Daylesford	"C" class	10
Redesdale Junction	Redesdale	"C" "	10
Maryborough	Avoca	"C" "	10
Dunolly	Inglewood	"C" "	5
Stawell	Grampians	"C" "	5
Lubeck	Rupanyup	"A2" "	10
Birregurra	Forrest	"A2" "	10
Colac	Alvie	"A2" "	10
Cressy	{ Irrewarra } Newtown	"C" "	10
Tallarook	Yea	"C" "	10
Bowser	Beechworth	"A2" "	10
Moe	Thorpdale	"A2" "	10
Morwell	North Mirboo	"A2" "	10
Koo-wee-rup	Strezlecki	"A2" "	10

* Similar conditions apply to any engine of an axle load lighter than that shown in this column.

(b) Except as shown hereunder, the engine must not proceed further than is necessary to clear the junction, and unless the return movement be governed by a Fixed Signal, the engine or train must not be allowed to foul the Junction until the Driver or Guard has been verbally instructed to do so by the Signalman.

LUBECK.—At Lubeck the engine may proceed on the Rupanyup Line for a distance of one mile from the Junction.

STAWELL.—On the Grampians Line the engine may proceed to a point three-quarters ($\frac{3}{4}$) of a mile from Box "B."

2. GEELONG.—No "C" class engine must pass over Brougham Place Subway, situate at Up end of the Station.

3. ARARAT.—No "C" class engine must pass over the old 50 feet Turntable in the Ararat Loco. Yard.

4. EAGLEHAWK.—"A2" or "C" class engines are not permitted to pass on to No. 6 (Back Goods) Road.

5. BRIDGEWATER.—No "C" class engine must pass on to the dead-end extension of No. 4 Road (the Chaff Siding) at the Down end of the Station, nor on to the Flour Mill Company's Siding at Bridgewater.

6. ST. KILDA.—"DDE" class engines, and also engines with tenders, are too long for the Traverser at St. Kilda, and they must not be used for Passenger trains on the St. Kilda Line unless a stand-by engine is available at St. Kilda.

7. LIGHT ENGINES.—(a) Two Light engines, coupled, may run over any Line, provided the authorised speed for the Line concerned be not exceeded, and subject also to the condition that the permission applies only to engines of the classes authorised to run on such Line. (See clauses 2 and 3, pages 341-342, re "Dead Engines").

(b) Except as shown hereunder, not more than two Light Engines are allowed to run coupled together unless specially authorised by the General Superintendent of Transportation.

(i.) Not more than three Light Engines coupled together must be allowed to run between Spencer-street and Newport Workshops.

8. MELBOURNE GOODS YARD.—(a) "C" class engines may be allowed to arrive or depart either via Weighbridge Junction or North Melbourne Junction.

(b) On no account must a "C" class engine be allowed to run on any Pier or Wharf Line, unless specially authorised.

9. VICTORIA DOCK.—On the new portion of the Dock engines of any class (except "C" class) may be permitted to run, but no engine with an axle load exceeding 10 tons is to be allowed on the decking of the old portion.

ENGINE AXLE LOADS.

The maximum axle loads of the various classes of engines are as under:—

Class.	Maximum Axle Weight.		
	Tons.	Cwt.	Qrs.
BROAD GAUGE—			
C	18	10	0
A2 (Superheated)	17	10	0
AA (Superheated)	17	8	0
A2	17	3	0
AA	16	17	0
EE (tank, 170 lb. pressure) ...	16	8	0
EE (tank, 140 lb. pressure) ...	16	0	0
Y (175 lb. pressure) ...	15	7	0

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ENGINE AXLE LOADS—continued.

The maximum axle loads of the various classes of engines are as under :—

Class.	Maximum Axle Weight.		
	Tons.	Cwt.	Qrs.
BROAD GAUGE—continued.			
RY (175 lb. pressure) ...	15	2	0
DDE (Superheated) ...	15	1	0
DDE (tank) ...	14	10	2
D (160 lb. pressure, 70 per cent.)	13	12	0
K ...	13	10	0
N ...	13	10	0
Dd (Superheated) ...	13	2	0
Dd ...	12	10	0
Electric Locomotive ...	12	10	0
V ...	12	8	0
Old R ...	12	0	0
F Motor (tank) ...	11	6	0
T (160 lb. pressure) ...	10	17	0
NARROW GAUGE—			
NA (Simple) ...	9	9	2
NA (Compound) ...	9	6	0
G ...	9	5	0

ENGINES WITH ONLY ONE COW-CATCHER RUNNING TENDER FIRST.

1. Unless specially authorised, no engine employed as assisting engine on a Passenger train shall run tender first.

WORKING OF TRAINS.

2. Unless otherwise ordered, an engine having only one cow-catcher must not, if a turn-table is available, run tender first. Where there is no turn-table available, such an engine may run tender first during daylight on any Line, but it is not permitted to run tender first during darkness, except between the following Stations:—

Sunshine and Sunbury
Woodend to Castlemaine (see Note 1)

Castlemaine and Malmsbury
Bendigo and Rochester
Wallan and Heathcote
Wycheproof and Berriwillock
Sea Lake and Nandaly
Boort and Quambatook
Bendigo and Pyramid
Piangil and Yungera
Waubra Junction to Maryborough
Mildura and Maryborough (see Note 2)

St. Arnaud and Cope Cope
Merbein and Yelta
Redcliffs and Merringur
Ouyen and Tutye
Ballarat and Allendale
Bacchus Marsh and Melton
Ballarat and Bungaree
Ballarat and Buninyong ("F" class motor)

Ararat and Beaufort
Ararat and Stawell
Stawell and Great Western
Stawell and Glenorchy
Doon to Murtoa
Hopetoun and Patchewollock
Dimboola and Nhill
Rainbow and Yaapect
Yanac to Jeparit
Kanagulk to East Natimuk
Natimuk to East Natimuk
Geelong and Winchelsea (see note 3)

Colac and Alvie
North Geelong and Fyansford
Geelong and Warrenheip
Cressy and Newtown
Gheringhap and Maroona
Maroona and Dunkeld
Hamilton and Cavendish
Portland and Heywood
Portland and Portland Freezing Works

Seymour and Euroa
Benalla and Tatong
Wangaratta and Glenrowan
Rushworth and Colbinabbin
Rushworth and Girgaree
Oakleigh and Pakenham
Warragul and Nar-Nar-Goon
Moe to Yallourn
Yarram and Woodside
Bena and Korumburra
Box Hill and Upper Fern Tree Gully

Ringwood and Lilydale
Lilydale and Yarra Junction
Melbourne and Baxter
Hurstbridge to Heidelberg
Whittlesea to Reservoir; and
Suburban Lines:—Between Melbourne and Williamstown, Altona, Werribee, Sunshine, Broadmeadows, Fawkner, Reservoir, Heidelberg, Box Hill, Darling, Kew, Ashburton, East Kew, Oakleigh, Frankston, Sandringham, St. Kilda or Port Melbourne.

WORKING OF TRAINS.

Note 1.—Permission to run tender first from Woodend to Castlemaine is subject to the following conditions:—When the Turntable road at Woodend is fully occupied by engines and time can be saved in despatching Bendigo engines which are being returned light, these engines may run tender first from Woodend to Castlemaine to turn, and take water at the latter Station, and in the event of such engines being required to haul or assist Down Goods trains from Castlemaine to Bendigo, twenty minutes are to be allowed for engine requirements at Castlemaine; this instruction is not applicable to A2 class engines.

Note 2.—On the Mildura Line there is a Turntable at Maryborough, Bealiba, St. Arnaud, Donald, Woomelang, Ouyen, and Mildura, and permission to run tender first is subject to the following conditions:—When a train or engine has to return, during darkness, from a Station intermediate to any of the above-mentioned Stations, the engine may run tender first to the nearest Station at which a Turntable is provided; it must, however, be understood that the running of engines tender first must be reduced to a minimum.

Note 3.—Authority is granted for the use of DDE class engines without cow-catchers on the undermentioned sections:—Ballarat-Maryborough, Maryborough-Castlemaine, Ararat-Maroonah.

Note 4.—During daylight the Goods Train between Geelong and Wensleydale may be run by an engine without a cow-catcher.

TRAINS ASCENDING GRADES.

A Driver must not attempt to take his train over any section of the Line where there are rising gradients, unless he has sufficient engine power to take it through the section without having to stop on a gradient between Stations. If he be in doubt as to whether his engine can take the whole of the train through the section, he must stop at the Station at the entrance to such section and advise the Guard of the circumstances; arrangements must then be made to reduce the load, so as to bring it within the limit that the engine can take. In the event of the train being accidentally divided, or if it be necessary to divide it on the gradient, the Driver when returning must be very careful in setting back towards the rear portion, in order that it shall not be started back down the incline.

Grades of 1 in 50 or steeper are to be regarded as heavy grades.

WATER SUPPLY FOR LOCOMOTIVES.

In all cases of partial or complete failure of water supply for engines, advice must be immediately telegraphed by the Station-master or Officer in charge to the Superintendent Goods Train Service, to the Chief Time Tables Officer, Superintendent Loco. Running, Superintendent Loco. Supplies, the Transportation and Rolling Stock Superintendents, and Depot Foremen for the district, the Water Supply Engineer, District Engineer, and Works Foreman.

WORKING OF TRAINS.

COMPOSITION OF PASSENGER AND MIXED TRAINS.

1. Country Express and Country Passenger Trains.—Unless otherwise arranged by the General Superintendent of Transportation, the Sydney, Albury, Adelaide and Bendigo Express trains must be composed of bogie vehicles only.

2. (a) Every regular Country Express train, other than a train mentioned in clause 1, and every regular Country Passenger train which runs on any Line on which the maximum rate of speed for such trains is not less than 45 miles per hour, must be composed of either bogie vehicles or six-wheeled vehicles, or both bogie and six-wheeled vehicles.

(b) A number of six-wheeled *louvre* trucks have been specially provided for the purpose, and these, in addition to six-wheeled passenger vehicles, may, when necessary, be attached to the trains referred to in sub-clause (a).

(c) Four-wheeled vehicles must not be run on these trains, unless specially authorised, and when permission is given for this to be done, the rate of speed laid down for a passenger train with any four-wheeled vehicle must not be exceeded. See pages 280-290.

3. The maximum number of vehicles and scheduled loads allowed on Passenger trains will be found in the Working Time-table, and, unless otherwise specified in the Notices, the load of Special trains must not exceed that laid down in the Working Time-table for a corresponding train.

4. (a) Any Passenger Train on which there is one or more twelve-wheeled vehicles fitted with the old design of buffer plates must not have attached to any such twelve-wheeled vehicle any four-wheeled vehicle.

(b) Any Mixed train on which there is one or more twelve-wheeled vehicles fitted with the old design of buffer plates, must not have attached to any such twelve-wheeled vehicle any four-wheeled vehicle other than an empty 15-ton or 16-ton "I" truck.

(c) If a twelve-wheeled vehicle on either a Passenger or a Mixed train be fitted with the new design of buffer plate, any four-wheeled vehicle of a kind that is allowed to run on a Passenger or a Mixed train may be attached thereto, but the rate of speed laid down for a passenger train with any four-wheeled vehicle must not be exceeded.

5. The new and old designs of buffer plates are illustrated hereunder:—

New standard design on
Buffer Plates on twelve-
wheeled bogie cars.

Old design of Buffer
Plate on twelve-
wheeled bogie cars.



6. A twelve-wheeled bogie Passenger vehicle must not be attached to a Goods train unless specially authorised by the General Superintendent of Transportation.

WORKING OF TRAINS.

ENGINES ASSISTING IN FRONT OF TRAINS.**(Regulation 174.)**

1. (a) Subject to the following instructions, an assisting engine may be employed in front, on a Passenger, Mixed or Goods train.

(b) The Train engine and the assisting engine must be of a class allowed to run on the portion of the Line over which the assisting engine is to be employed (see pages 297-305), and subject to the further conditions specified in clauses (b), (c), (d) and (e) hereof.

(c) Two engines must not be employed on any train of which the train engine is a "C" class engine, nor must a "C" class engine be employed on any train as an assisting engine.

(d) Except as prescribed in sub-section (i.) hereof, or where specially authorised, two engines must not be employed on any train of which the train engine is a "V" class engine, nor must a "V" class engine be employed on any train as an assisting engine.

(i.) In the case of Goods trains within the suburban area a "V" class engine may be assisted by, or assist, any engine of lower capacity, but unless otherwise authorised, the "V" class engine must be the leading engine.

(e) Except where specially authorised in the following list, an "A2," "K" or "N" class engine must not be employed as an assisting engine on any Goods train, of which the train engine is of "A2," "K," or "N" class. Unless specially authorised two "N" or two "K" class engines must not be used on any passenger train.

(f) In no case must the authorised maximum load, vehicular or tonnage (see following list), be exceeded:—

(i.) Passenger Trains.—In the case of Passenger trains, the number of vehicles must not exceed the maximum number prescribed for any Passenger train, and will also be subject to any reduction laid down in the Working Time-table for the particular Running Schedule fixed for the train.

(ii.) Mixed Trains.—Except where specially authorised in the following list, the load, vehicular or tonnage, of the Train engine must not be exceeded.

2. As a general principle, the larger type of engine should be the leading engine. Exceptions to this are, however, allowed in the circumstances specified hereunder:—

(i.) If the assisting engine is to be employed on the greater portion of, or throughout the train journey, the larger type of engine should be the leading engine; if, however, it is only to assist on a particular section, the assisting engine may be attached as the leading engine. This is, however, subject to sub-clauses (ii) and (iii) hereof.

(ii.) If the assisting engine should have to run tender first, the Train engine must be the leading engine, and the maximum rate of speed must not exceed that laid down for a train on which the Train engine is running tender first. (See pages 274-290.)

- (iii.) If one engine should have a larger Air Pump than the other, that engine should, subject to sub-clause (ii) hereof, be the leading engine. In any case, in which the Driver of the engine with the smaller pump has any reason to doubt his ability to maintain sufficient air-pressure, the engine with the larger pump must be the leading engine. No distinction in respect of the size of the pump is to be considered in this connection, when one of the engines is equipped with "C" (8in. x 8 $\frac{1}{2}$ in. x 10in.), and the other with a "BC" (8in. x 8 $\frac{1}{2}$ in. x 9in.) pump.
- (iv.) If only one of the engines be fitted with a Speed Recorder, that engine must, subject to sub-clauses (ii.) and (iii.) hereof, be the leading engine; this clause will not, however, apply in the case of the assisting engine on a Suburban Goods train, which may be the leading engine irrespective of whether it or the Train engine is fitted with a Speed Recorder.
- (v.) If, under conditions not specified in preceding sub-clauses, there should be any doubt as to which engine should be leading, a responsible officer of the Rolling Stock Branch must be consulted; if, however, such officer be not conveniently available, the Senior Driver must decide which engine shall lead, bearing in mind that the Driver of the leading engine will control the running of the train.

3. Subject to the foregoing clauses of these instructions, and sub-clauses (i.) and (ii.) hereof, whenever it would make for expeditious working, a Light Engine may be attached as an assisting engine on any train, provided always that the use of a second engine in front is authorised over the section; unless specially authorised, this must not be done in the case of an Express Passenger train.

- (i.) Passenger trains.—The Station-master or Officer in charge, before arranging for the Light Engine to be attached to any Passenger train, must see that the Light Engine is of a type suitable to run on the particular train, and, where practicable, must confer with the nearest officer of the Rolling Stock Branch. In no case must the Light Engine be attached to run tender first.
- (ii.) Mixed Trains.—(a) In no case must the Light Engine be attached to run tender first.
(b) On the Wallan-Seymour section, a second engine must not be attached to a Mixed train.

4. The running of assisting engines tender first, in front of trains, must be reduced to a minimum, and where suitable Turn-tables are available, no engine must run tender first. When it is necessary to run any Goods train with two engines in front, and both have to run tender first, the maximum speed of the train must not exceed that laid down for such train when the Train engine is to run tender first (see pages 274-290), and the maximum load of the train, as hereinafter provided for the two engines, must be further reduced by 20 per cent.

WORKING OF TRAINS.

5. As far as possible in the case of a Goods train, an assisting engine should be employed with a Through Goods train only, but if it be necessary for a train on which there is an assisting engine to do work en route, work must not be done at more than three Roadside Stations between any two Depots or Terminal Stations, e.g., if an assisting engine be employed on a Goods train between Melbourne and Castlemaine, such train could be utilised to work at three Stations between Melbourne and Woodend and three Stations between Woodend and Castlemaine, not counting Woodend or Castlemaine. This will not, however, apply in the circumstances referred to in clause 3, in which case the train must work at any Station at which, in the ordinary course it may be necessary; but in either case, only one engine should, as far as is reasonably practicable, be employed in the shunting work. In this connection, see instruction, page 235, "Uncoupling and Shunting with Two Engines Attached."

NOTE.—The Up Car Goods train at Bairnsdale is exempt from the conditions of clause 5.

6. When an assisting engine is employed, a water truck must not be attached between the engines.

7. The following list shows the sections of the Line where two engines may be employed to draw a train; where, in addition to those above-mentioned, any special instruction is to be observed, it is stated in the list. It will be noticed that over the whole length of some Lines the assisting is restricted to Passenger trains, but that, over certain specified portions of such Lines, Goods trains may also be assisted; the assisting must be strictly limited, as shown.

8. (a) See clause 4, pages 272-273, for special rate of speed for trains assisted by a second engine in front.

(b) For instructions respecting trains hauled by a Steam and an Electric Locomotive coupled, see clause 6, page 257.

Section.	Class of Train and Special Instructions to be Observed.
Melbourne to Bendigo	<p>Passenger and Goods trains—</p> <p>Passenger Trains.—A Light engine of "A2" class may be attached in front of the Train engine on a Down Passenger train (4.50 p.m. Down Express excepted) from Woodend to Bendigo. The position of engines, relative to clause 2, pages 312-313 must, however, be reversed at Kyneton, to suit the Driver in charge of the train.</p> <p>Goods trains.—(a) The load to be the combined ruling grade load of the engines employed, except from Woodend to Castlemaine, in which case the load must not exceed that shown in the Load Table for the Train engine.</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Melbourne to Bendigo— <i>continued</i> .	(b) An "A2" class engine may assist another engine of similar class on any Goods train from Castlemaine to Bendigo, the load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 50.
Bendigo to Castlemaine	Passenger and Goods trains. Goods trains—The load to be the combined ruling grade load of the engines employed. Vehicular limitation, 50.
Castlemaine to Woodend	Passenger and Goods trains. Goods trains—The load to be the combined ruling grade load of the engines employed from Castlemaine to Elphinstone; from Elphinstone to Malsbury the full sectional load, and from Malsbury to Woodend the combined ruling grade load of the engines employed; vehicular limitation—Castlemaine to Malsbury, 50; Malsbury to Woodend, 60. See pages 334-335 for Instructions respecting Goods trains with two engines in front and Bank engine in rear.
Woodend to Melbourne	Passenger and Goods trains. Goods Trains.—The load, vehicular, and tonnage of the Train engine must not be exceeded.
Bendigo and Echuca	Passenger and Goods trains. Goods trains—The load to be the combined ruling grade load of the engines employed, less 20 per cent.; vehicular limitation, 60.
Echuca to Goornong	Goods trains—The load to be the combined ruling grade load of the engines employed, less 20 per cent.; vehicular limitation, 60.
Goornong to Bendigo	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 60.

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Section.	Class of Train and Special Instructions to be Observed.
Bendigo and Sea Lake †Korong Vale and Manangatang †Bendigo and Piangil	} Mixed trains.
Bendigo and Korong Vale	
Bendigo to Raywood	Goods trains—The load to be the combined ruling grade load of the engines employed; when one of the engines is of "A2" or higher class, 10 per cent. reduction must be made. Vehicular limitation, 40.
Raywood to Bendigo	Goods trains—The load to be the combined ruling grade load of two engines employed, less 20 per cent. vehicular limitation, 40.
Woodend and Daylesford	Passenger trains. Mixed and Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Daylesford and Nth. Creswick Bendigo and Wallan †Elmore and Cohuna	Mixed and Goods trains.—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Ballarat and Maryborough	Passenger and Goods trains. Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.
Ballarat and Waubra	Mixed trains.
Maryborough and Donald	Passenger and Goods trains. Goods trains—(a) The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation between Maryborough and Cope Cope, 40.

† See clause 4 (c) pages 272-273, for special rate of speed for trains assisted by a second engine in front.

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Section.	Class of Train and Special Instructions to be Observed.
Maryborough and Donald— <i>continued.</i>	<p>(b) The 10 per cent. reduction shall not apply to Up Goods trains between Dunolly and Maryborough.</p> <p>NOTES.—(1) In the case of Goods trains when one of the engines is of "A2" class, an assisting engine of not more than 113 per cent. capacity may be employed; the "A2" engine must lead, and the load shall be the combined ruling grade load of the engines employed, less 10 per cent., and if one engine be tender first a further reduction of 10 per cent. must be made.</p> <p>(2) When No. 16 ex Donald requires to be assisted from Bealiba to Maryborough, permission is granted for the "DD_R" engine to run as leading engine on that section.</p> <p>(3) No. 2 Up Goods ex Donald and No. 3 Up Mixed ex Inglewood may be run coupled together from Dunolly to Maryborough, if the running of these trains through the section will be thereby expedited.</p> <p>No. 2 Up must form the first portion of the train, the Van of which must be coupled to the leading vehicle of the Mixed train. Each Guard must ride in the Van of his own train, and the Guard of the Mixed train will be Head Guard. The Under Guard must remove the Tail Signal and (at night) obscure the Side Lights of the Goods train as soon as the trains are coupled together. The Head Guard and the Signaller must see that this is done. The maximum number of vehicles must not exceed 40; in any case, where the combined load consists of Live Stock, perishable or other urgent loading, or would amount to more than 40 vehicles, the trains must be run separately.</p>
Donald and Mildura	Passenger trains

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Station.	Class of Train and Special Instructions to be Observed.
†Woomelang to Mildura	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 45.
†Ouyen to Woomelang	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.
Maryborough and Castlemaine	<p>Passenger trains.</p> <p>Mixed and Goods trains.—The load to be the combined ruling grade load of the engines employed, less 20 per cent., subject to a maximum load of 500 tons; vehicular limitation, 40.</p>
Maryborough and Ararat †Ouyen and Pinnaroo Dunolly and Inglewood	<p>Mixed and Goods trains—(a) Except as shown in section (b), the load, vehicular and tonnage, of the Train engine must not be exceeded.</p> <p>(b) For Goods trains between Ouyen and Pinnaroo the load shall be the combined loads of the engines employed, less 5 per cent.; vehicular limitation, 50.</p>
Melbourne and Serviceton (Via Bacchus Marsh).	<p>Passenger trains—When the local engine is employed to assist 7.40 a.m. Down Passenger train from Bacchus Marsh, it must be detached at Ingliston and return, tender first, to Bacchus Marsh.</p>
Melbourne to Bacchus Marsh	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.
Bacchus Marsh to Melbourne	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 40.
Bacchus Marsh to Ballan	Goods trains—(a) The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 40.

† See clause 4 (c), pages 272-273 for special rate of speed for trains assisted by a second engine in front.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Ballan to Warrenheip	Goods trains—The load to be the combined ruling grade load of the engines employed, less 20 per cent.; vehicular limitation, 35.
Warrenheip to Bacchus Marsh	Goods trains—The load to be the combined ruling grade load of the engines employed, less 20 per cent.; vehicular limitation, 35.
Ballarat to Warrenheip	<p>Goods trains—Assisting engine must be uncoupled opposite Warrenheip Signal-box. If necessary, two assisting engines may be employed (one in front and one in rear; see Instructions, page 338). If only two engines be employed, the load shall be the combined tonnage of the two engines, less 5 per cent.; if, however, such load exceeds 380 tons, the assisting engine must be in the rear.</p> <p>Authority is hereby given for two "A2" engines to be utilised in front of an Up Goods train on the section Ballarat-Warrenheip.</p>
Ballarat and Beaufort	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 50.
Beaufort and Ararat	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 50.
Ararat to Stawell	<p>Goods trains—(a) The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.</p> <p>(b) For the purpose of expediting the train through the Section, two "A2" engines may be employed in front on any Goods train; vehicular limitation, 40.</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.															
Stawell to Ararat	<p>Goods trains—(a) The load to be that laid down for a train that is assisted in the rear from Stawell to "Stop Board," but, except as shown in section (b), the Bank engine must not be used.</p> <p>(b) During the busy season, but in daylight only, the load may be increased to the combined load that the two engines are authorised to bring from Glenorchy to Stawell; the train must be assisted in the rear from Stawell to "Stop Board" by an engine of not less than 100 per cent. capacity, running funnel first, and, as far as practicable, the train must be given a clear run through Armstrong on account of the sharp grades; vehicular limitation, 45. When this is done, the engine running schedules must be as follows:—</p> <table><tr><td></td><td>Through Trains. mins.</td><td>Roadside Trains. mins.</td></tr><tr><td>Stawell to—</td><td></td><td></td></tr><tr><td>Great Western ..</td><td>33</td><td>34</td></tr><tr><td>Armstrong</td><td>24</td><td>26</td></tr><tr><td>Ararat</td><td>30</td><td>35</td></tr></table> <p>(c) For the purpose of expediting the trains through the Sections, two "A2" engines may be employed in front on any Goods train; vehicular limitation, 45.</p>		Through Trains. mins.	Roadside Trains. mins.	Stawell to—			Great Western ..	33	34	Armstrong	24	26	Ararat	30	35
	Through Trains. mins.	Roadside Trains. mins.														
Stawell to—																
Great Western ..	33	34														
Armstrong	24	26														
Ararat	30	35														
Stawell and Glenorchy	<p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 60.</p> <p>Note.—Authority is granted for a "DDE" class engine to be the leading engine when assisting an Up Goods train over the section Glenorchy to Stawell. This modifies clause 2 of these instructions, pages 312-313.</p>															
Ballarat—Stawell—Glenorchy	<p>Authority is granted for engine 110 "N" (fitted with Booster) being assisted by another engine under the conditions laid down on pages 312-313.</p>															

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Ballarat—Stawell—Glenorchy— <i>continued.</i>	Between Ballarat and Ararat the combined load will be as set out above. From Stawell to Ararat the conditions applicable to double-heading or banking in the rear will apply, subject to a maximum load of 700 tons vehicular limitation, 45. Between Stawell and Glenorchy in both directions the combined load will be 900 tons, 60 vehicles, and this load must not be exceeded.
Glenorchy and Murtoa	Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Murtoa and Dimboola	Goods trains—Down journey—The load to be the combined ruling grade load of the engines employed, less 20 per cent.; vehicular limitation, 60. Up journey—The load, vehicular and tonnage of the train engine must not be exceeded.
Dimboola and Serviceton	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.
Melbourne and Geelong	Passenger trains.
*South Geelong to Port Fairy Port Fairy to Geelong	Passenger trains.
Melbourne and Werribee	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 60.
Werribee and Geelong	Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.

*The leading engine must precede the train from Geelong to South Geelong, where it must be placed convenient to drop on the train on its arrival. The Fireman of the Assisting engine must couple up at South Geelong.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Sth. Geelong to Koroit Koroit to Camperdown Camperdown to Geelong	<p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.</p> <p>Note—From Winchelsea to Geelong, the load will be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 45.</p>
Geelong and Ballarat	Passenger trains.
Geelong to Ballarat	<p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 60. This also applies to Goods trains proceeding via the Loop between North Geelong "A" and "C" Boxes.</p>
<i>Lethbridge to Ballarat</i>	<p>(a) For the purpose of expediting the train, two "A2" engines may be employed in front on any Down Goods train from Lethbridge to Ballarat.</p> <p>(b) Two Down Goods trains may be coupled together if the running of such trains through the Section will thereby be expedited. (Fast Goods trains or any Goods train with car attached, conveying passengers, are, however, excepted.)</p> <p>The Van of the first train must be coupled to the leading vehicle of the second train. Each Guard must ride in the Van of his own train, and the rear Guard will be the Head Guard. The Under Guard must remove the Tail Signal and (at night) obscure the Side Lights at the rear of the first train as soon as the trains are coupled together; the Head Guard and the Signaller must see that this is done. Maximum load to be that authorised for the two engines, less 5 per cent.; vehicular limitation, 60.</p>
Warrenheip to Gheringhap	<p>Goods trains—The load, vehicular and tonnage, of the Train engine, must not be exceeded.</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Sth. Geelong to Queenscliff Queenscliff to Geelong	<p>Passenger, Mixed, and Goods trains.</p> <p>Mixed trains—The load to be the full ruling grade load of the train engine; vehicular limitation, 25.</p> <p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 20 per cent.; vehicular limitation, 30.</p>
†Irrewarra and Cressy	<p>Mixed and Goods trains.</p> <p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation 40.</p>
†Cressy and Newtown	<p>Mixed and Goods trains.</p> <p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 35.</p>
Ballarat and Newtown †Newtown and Skipton	<p>Mixed trains—Vehicular limitation, 20.</p>
Birregurra and Forrest	<p>Mixed and Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.</p>
Camperdown and Timboon	<p>Mixed and Goods trains.</p> <p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 35.</p>
Koroit and Hamilton	<p>Mixed and Goods trains.</p> <p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 20 per cent.; vehicular limitation, 30.</p>
Ararat and Portland	<p>Mixed trains.</p>
Ararat and Maroona	<p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent. When one of the engines is an "A2" class, it must not be assisted by an engine, of more than 100 per cent. capacity.</p>

† See sub-clause (c), clause 4, pages 272-273.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Ararat and Maroona— <i>continued</i>	and the load will be the combined ruling grade load of the engines employed, less 15 per cent. Vehicular limitation, 60.
Maroona and Portland	Goods trains—The load to be the combined ruling grade load of the engines employed, less 20 per cent.; vehicular limitation, 40.
Hamilton and Coleraine	Mixed and Goods trains.
Branxholme and Casterton	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 30.
†Hamilton and Cavendish	Mixed trains.
†Heywood and Mt. Gambier.	Mixed trains.
†Heywood and Dartmoor	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.
†Ben Nevis and Navarre	Mixed and Goods trains. Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.
†Lubeck and Marnoo †Murtoa and Hopetoun †Horsham and Kanagulk Natimuk and Goroke †Dimboola and Yaapeet †Jeparit and Yanac E. Natimuk and Natimuk	Mixed and Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded. Mixed and Goods trains. Mixed trains—The load to be the combined ruling grade load of the engines employed, less 15 per cent.; vehicular limitation, 30. Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 40.

† See sub-clause (c), clause 4, pages 272-273.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Geelong-Gheringhap-Maroon Maroon-Gheringhap-Geelong	Mixed trains.
Gheringhap to Maroon Maroon to Geelong (via Gheringhap)	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent. When one of the engines is an "A2" class, it must not be assisted by an engine of more than 100 per cent. capacity, and the load will be the combined ruling grade load of the two engines employed, less 15 per cent. Vehicular limitation, 60.
Melbourne and Wodonga	Passenger trains. NOTE.—Subject to the conditions laid down in clauses 1 and 2, pages 312-313, a Light Engine may be attached as an assisting engine in front of a Down North-Eastern Express train from Benalla to Wodonga for the purpose of working such engine through to Wodonga; the Loco. Foreman, Benalla, must be previously notified whenever this course is necessary, and the engine to be attached must not run tender first, nor be the leading engine.
Melbourne to Wallan	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 50.
Wallan to Seymour Wallan to Melbourne	Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Seymour to Wallan	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; when, however, either engine is below 100 per cent. capacity, the 5 per cent. reduction for such engines should not be made. For the purpose of working an "A2" class engine toward Melbourne, it may be attached in front to a train hauled by another "A2" class engine.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Seymour to Wallan— <i>continued</i> .	<p>Ordinarily, the maximum tonnage load of any train must not exceed 590 tons; but in the case of a train hauled by two "A2" engines, or of a Live Stock train hauled by an "A2" and a "DD" class engine, the load may be increased to 598 tons.</p> <p>Vehicular limitation, in each case—40.</p>
Seymour and Benalla	<p>Goods trains—(a) Except as shown in section (b) the load to be the combined ruling grade load of the engines employed, less 5 per cent. on Down journey between Seymour and Avenel—vehicular limitation, 65—and 20 per cent. between Avenel and Benalla on Down journey—vehicular limitation, 60—or between Benalla and Seymour on Up journey.</p> <p>Goods trains run by "A2" class engine, may be assisted in front by another engine of "A2" class for the purpose of returning engine to its Home Depot; the load of train not to exceed that for a single engine.</p>
Benalla and Wangaratta	<p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 60.</p> <p>Between Benalla and Wangaratta Up or Down Goods trains, when run by "A2," "K" or "N" class engines, may be assisted in front by another "A2" or "K" or "N" class engine, the load of train to be the combined ruling grade load of the two engines employed, less 10 per cent.; vehicular limitation, 60.</p>
Wangaratta and Wodonga	<p>Goods trains—(a) The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 50.</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Wangeratta and Wodonga— <i>continued</i> .	Between Wangeratta and Wodonga Up or Down Goods trains, when run by "A2," "K" or "N" class engines, may be assisted in front by another "A2," "K" or "N" class engine, the load of train to be the combined ruling grade loads of the two engines employed, less 10 per cent.; vehicular limitation, 60.
Tallarook and Mansfield Seymour and Cobram (see Note 1). Murchison E. and Rushworth Toolamba and Echuca Shepparton and Katamatite Numurkah and Picola † Benalla and Tatong Benalla and Yarrawonga Springhurst and Wahgunyah Wodonga and Tallangatta (see Note 2).	Mixed and Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded. NOTES.—(1) Between Murchison and Toolamba a 90 per cent. "AA" class engine must not be employed with an engine of the same class and power, nor with a "DD" class engine; nor must a "DD" class engine be employed with another "DD" class engine. (2) Tallangatta-Wodonga—Double-heading of Goods trains on this section is permitted in cases of emergency only; the load shall be the combined ruling grade load of the engines employed, less 25 per cent.
Yabba South to Dookie	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 60.
Telford to Tungamah	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 50.
Wangeratta and Everton	Mixed and Goods trains. Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 40.
Everton to Wangeratta	Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.

† See sub-clause (c), clause 4, pages 272-273.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Melbourne and Bairnsdale (via Rosedale or Maffra)	Passenger trains.
Melbourne to Oakleigh	<p>Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.</p> <p>Note.—In the case of a Suburban Goods, train the combined ruling grade load of the engines employed may be taken.</p> <p>Vehicular limitation (in each case), 50.</p>
Oakleigh to Melbourne	Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Oakleigh to Dandenong	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 50.
Dandenong to Oakleigh	Goods trains—The load to be the combined ruling grade load of the engines employed, less 33 per cent.; vehicular limitation, 50.
Dandenong and Warragul	<p>Goods trains—(a) Except as prescribed in Section (b) hereunder, the load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 50.</p> <p>(b) Authority is granted for two "A2" engines to be employed in front on Up Goods trains, between Warragul and Drouin, the load to be the combined ruling grade load of the two engines, less 10 per cent.; vehicular limitation, 40.</p>
Warragul and Bairnsdale (via Rosedale)	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 40.
Bairnsdale and Orbost	Mixed and Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Warragul and Neerim South †Moe and Thorpdale Morwell and North Mirboo Maffra and Briagolong	Mixed trains.
Traralgon and Stratford (via Maffra)	Passenger and Goods trains. Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 30.
Dandenong and Port Albert	Passenger trains.
Dandenong to Lang Lang	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 50.
Lang Lang to Nyora	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 50.
Nyora to Korumburra Korumburra to Dandenong	Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Korumburra and Foster	Mixed and Goods trains. Mixed trains—The load to be the combined ruling grade load of the engines employed, less 40 per cent.; vehicular limitation, 16. Goods trains—The load to be the combined ruling grade load of the engines employed, less 25 per cent.; vehicular limitation, 30.
Foster and Woodside	Mixed and Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded. Note. —For Goods trains on Up journey between Agnes and Toora, the combined ruling grade load of the engines employed, less 10 per cent., and a vehicular limitation of 50, must not be exceeded.

†See sub-clause (c), clause 4, pages 272-273.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Nyora and Wonthaggi	Mixed trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Melbourne and Healesville Lilydale and Warburton Ringwood and Upper Ferntree Gully	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 40.
Melbourne and Box Hill	Passenger trains—Vehicular limitation, 18.
Camberwell to Riversdale	Goods trains—The load to be the combined "A" loads of the two engines employed, and when the reduced load account suburban passenger traffic applies, the 5 per cent. reduction is not to be made; after passenger traffic, the combined full loads, less 5 per cent., may be taken. Vehicular limitations—Melbourne and Hawthorn, 60; Hawthorn-Camberwell, 50; Camberwell-Box Hill, 30.
Box Hill to Lilydale Lilydale to Box Hill	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 40.
Ringwood and Upper Ferntree Gully	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 30.
Lilydale to Warburton Warburton to Wandin	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 30.
	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 30.
	NOTE.—Permission is given for "V" and "DD" class engines to be employed in front on any Goods train between Lilydale and Warburton, but in every such case the "V" class engine must be the leading engine.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Wandin to Mt. Evelyn	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 30.
Mt. Evelyn to Lilydale	Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Melbourne and Stony Point Baxter and Mornington	Passenger trains.
Caulfield to Mordialloc	Goods trains—The load to be the combined ruling grade load of the engines employed, less 25 per cent.; vehicular limitation—Caulfield to Moorabbin, 40; Moorabbin to Mordialloc, 30
Mordialloc and Frankston	Goods trains—The load, vehicular and tonnage, of the Train engine must not be exceeded.
Frankston and Stony Point	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 30. NOTE.—Permission is granted for the Mornington engine to be coupled to the engine of No. 1 Down Baxter Goods, between Frankston and Baxter; in the event of the Goods engine being of the "V" class, the Mornington engine must be the leading engine.
Mordialloc to Caulfield	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 30.
Melbourne and Whittlesea Melbourne and Coburg	Passenger trains. Goods trains—The load to be the combined ruling grade load of the engines employed, subject to a reduction of 10 per cent. on Up journey; vehicular limitation in each case, 50.
Melbourne to Victoria Park and Reservoir (via Royal Park)	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 50.

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Prince's Bridge to Victoria Park	Goods trains—The load to be the combined ruling grade load of the engines employed, less 5 per cent.; vehicular limitation, 40.
Victoria Park to Melbourne Reservoir to Melbourne	Goods trains—The load to be the combined ruling grade load of the engines employed; vehicular limitation, 50.
Heidelberg and Hurstbridge	Passenger trains.
Victoria Park and Heidelberg	Goods trains—The load to be the combined ruling grade load of the engines employed, less 10 per cent.; vehicular limitation, 40.
Melbourne and Sandringham	Goods trains—The load to be the combined ruling grade load of the engines employed, less 25 per cent.; vehicular limitation, 50.
Flinders-street and Port Melbourne	Goods trains—The load to be the combined load of the engines employed, less 10 per cent.; vehicular limitation, 50.

ENGINES ASSISTING IN REAR OF TRAINS.

(Regulations 173.)

1. Engines are only to assist in the rear of trains over such sections of the Line as are shown in the following list, or in cases of emergency, in accordance with the Rules and Regulations.

2. The Bank engine must come to the rear of the train it is going to assist, while such train is stationary, and, after the enginemmen have exchanged the proper Signals, the train must start from a state of rest.

3. On the arrival of the train at the appointed place, at the top of the incline, the train must stop for the Bank engine to be uncoupled. If, however, the Bank engine be authorised to run uncoupled, it will cease to push at the top of the incline, and the train may proceed on its journey without stopping.

4. During foggy weather, a Passenger or Mixed train must not be assisted by an engine in the rear; the assisting engine must be attached in front subject to the provisions laid down in the instruction under the heading of Engines Assisting in Front of Trains, pages 312-332.

5. Except where otherwise specified, every engine assisting in the rear must run coupled to the train, in which case the Automatic Air Brake apparatus must be connected throughout.

WORKING OF TRAINS.

6. When a Bank engine runs through the section, it must not be uncoupled at the Station to which it is appointed to run until the train with the Bank engine attached is well within the Home Signal.

7. Engines assisting on Goods trains must not be allowed to remain attached to trains after load has been so reduced that assisting engine is no longer required. Engines must be returned as soon as possible, and from nearest suitable Station, in every case, unless required for loading on the return journey.

In all cases when an assisting engine to be returned light is held for more than fifteen minutes, a full report, giving particulars of the detention, must be forwarded to the District Superintendent or Chief Train Control Officer.

List of Sections over which trains may be assisted in the rear—

Section.	Class of Train and Special Instructions to be Observed.
Bendigo to Castlemaine	<p>1.—Goods trains with "C" class engines, —(a) Up Goods trains hauled by a "C" class engine may be assisted in the rear from Bendigo to Castlemaine, subject to the following conditions:—</p> <p>(i.) The Bank engine must be of not less than 113 per cent. capacity, and run coupled to the train.</p> <p>(ii.) The load of the train to be assisted (820 tons), and the vehicular limitation (45) must not be exceeded.</p> <p>(iii.) The speed of train must not exceed 20 miles per hour at any point; and between milages 83 and 82½ the speed of the train must not exceed 15 miles per hour.</p> <p>2.—Drivers of both engines must confer before leaving Bendigo to ensure working in the following manner:—</p> <p>(i.) Only the Train engine must steam before the train is clear of the Bendigo Yard.</p> <p>(ii.) After leaving Bendigo the Driver of the Bank engine must, if all be right, keep steaming until the whole of the train has topped the bank about mileage 93½, when he must cease steaming until train engine is passing Ravenswood.</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Bendigo to Castlemaine—(continued).	<p>When passing Ravenswood the Driver of the Bank engine must apply steam until the whole of the train has topped the bank, about mileage 85½.</p> <p>3.—When from any cause the train is stopped between Bendigo and Castlemaine, the Hand Brake must be at once applied on the Bank engine, and it must not be released until the train is ready to start.</p> <p>4.—Until facilities are provided at Castlemaine, the Bank engine must be uncoupled and taken over the "Pit" at Down end of the Yard for the purpose of engine requirements; this movement must be expedited by all concerned.</p>
Castlemaine to Elphinstone	<p>1.—(a) Passenger trains, but in clear weather only.</p> <p>(b) If the train engine be of "A2" class, a Bank engine must not be employed unless the load exceed equal to 19 vehicles. Bank engine to run coupled.</p> <p>NOTE.—When the Maryborough engine is required to assist a Passenger train from Castlemaine to Elphinstone, and there is not sufficient time to turn such engine without causing delay to the train, the assisting engine may run tender first; in such circumstances the Station-master, Castlemaine, must hand the Driver of the train engine written instructions intimating that the assisting engine is to run tender first, and that the speed of the train must not exceed a rate of 30 miles per hour until after the assisting engine has been detached at Elphinstone.</p> <p>2.—Goods trains.—(a) Subject to the following conditions the Bank engine may assist in the rear of any Up Goods trains hauled by two engines:—</p> <p>(i.) That the Bank engine be of not less than 100 per cent. capacity, and coupled to train. (Bank engine to return light to Castlemaine.)</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Castlemaine to Elphinstone— (continued).	<p>(ii.) When the train is departing from the Siding road at Castlemaine, the Driver of the Bank engine must not give his engine steam until it is on the Main Line.</p> <p>(iii.) When, from any cause, the train is stopped between Castlemaine and Elphinstone, the Hand Brake must be at once applied on the Bank engine, and not released until the train is ready to start.</p> <p>(iv.) When the train is approaching Elphinstone Tunnel the firing to be so arranged that the smoke when passing through the Tunnel will be minimised as much as possible.</p> <p>(b) The load of the train will be the combined sectional tonnage for the train engine and assistant engine as between Elphinstone and Malmesbury. <i>Example.</i>—Train engine "A2," assistant engine "Y" class with Bank engine of not less than 100 per cent. in rear, load will be:—"A2" class engine load Elphinstone to Malmesbury = 423 tons, plus load of "Y" class engine = 367 tons, or a total of 790 tons.</p> <p>The load from Malmesbury to Woodend will be the combined load of the two engines, subject to a reduction of 5 per cent. when train or assistant engine is an "A2" class engine.</p>
Castlemaine to Malmesbury ("C" class engines)	<p>3.—Goods trains hauled by "C" class engines.</p> <p>(a) An Up Goods train, hauled by a "C" class engine, may, subject to the following conditions, be assisted in the rear between Castlemaine and Malmesbury.</p> <p>(i.) The Bank engine must be of not less than 113 per cent. capacity, and must run coupled.</p> <p>(ii.) The load of the train to be assisted (820 tons), and the vehicular limitation (45), must not be exceeded.</p> <p>(iii.) The speed must not exceed the rate of 25 miles per hour.</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Castlemaine to Malmsbury ("C" class engines)—(continued).	<p>(b) Drivers of both engines must confer before leaving Castlemaine to ensure working in the following manner:</p> <p>(i.) Only the Train engine must steam, when moving from the Yard to the Main Line at Castlemaine, after which both engines may steam to mileage $71\frac{1}{2}$, where both Drivers must shut off, and the Hand Brake on the leading engine must be then applied; the speed of the train must be reduced to 10 miles per hour at Taradale.</p> <p>Approaching Taradale, the leading engine is to be gradually given sufficient steam to take up slack in couplings, and the Bank engine is to steam from about the centre of Taradale Bridge—$67\frac{1}{4}$ miles.</p> <p>(iii.) Both drivers must shut off steam near the Distant Signal at Malmsbury.</p> <p>(iv.) Train must stop at Malmsbury, where the Bank engine is to be uncoupled, and, without being coupled again, used to push the train until the Bank engine reaches the Up Starting Signal, where the Bank engine must stop; the Bank engine must not, however, be delayed for this purpose if, from any unusual cause, the train cannot at once proceed from Malmsbury.</p> <p>(v.) The Bank engine may then return to the Malmsbury Station, but the Driver must bring the engine to a stand clear of all Points and Crossings, and must not proceed further until verbally instructed to do so by the Signaller.</p> <p>After the Up train with the Bank engine has started from the Station, the Signaller at Malmsbury must not accept the "Is Line Clear" Signal for a following Up train, nor permit any conflicting movement until the Bank engine has returned and has been dealt with in accordance with the Rules.</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Castlemaine to Malmesbury "C" class engines—(continued).	<p>(c) When, from any cause, the train is stopped between Castlemaine and Malmesbury, the Hand Brake must be at once applied on the Bank engine, and it must not be released until the train is ready to start.</p> <p>(d) When the train is approaching Elphinstone Tunnel the firing to be so arranged that the smoke will be minimised when passing through the Tunnel.</p> <p>(e) Except as prescribed in sub-section iv., Section 3, the Bank engine must run coupled.</p>
<i>Echuca to Stop Board at Up End of the Murray River Bridge</i>	See Special Instructions.
St. Arnaud to "Stop Board," near 160 mile post	<p>Mixed and Goods trains. Mixed trains in Clear weather only. Bank engine to run coupled.</p> <p>The load for Goods trains assisted in the rear from St. Arnaud to the Stop Board is the combined ruling grade load of the two engines employed, less 5 per cent.; vehicular limitation, 40. This load may be taken from the Stop Board to Sutherland by the train engine.</p> <p>When a train is assisted in the rear four minutes is allowed for stopping and uncoupling the Bank engine.</p>
Woomelang to "Stop Board" at 240½ miles	Goods trains. Bank engine not to run coupled.
Bacchus Marsh to Parwan	Goods Trains. Bank engine to run coupled.
Bacchus Marsh to Ingliston	Passenger trains (with one or two engines in front); in Clear weather only. Bank engine to run coupled.
Ballarat to Warrenheip	<p>(a) Passenger and Goods trains. (Passenger trains in Clear weather only and Goods trains whether with one or two engines in front. See Instruction respecting "Engines Assisting in Front of Trains," on this section, page 319).</p>

WORKING OF TRAINS.

Section.	Class of Train and Special Instructions to be Observed.
Ballarat to Warrenheip—continued.	<p>(b) If only two engines be employed either double-headed or with assistant engine in the rear the load shall be the combined tonnage load of the two engines, less 5 per cent. When this load exceeds 380 tons, however, the assisting engine must be in the rear.</p> <p>(c) The Bank engine must run coupled, with both classes of trains, and on arrival at Warrenheip to be uncoupled as follows:—</p> <p>Passenger trains—When the train is at the platform.</p> <p>Goods trains.—When the Bank engine is opposite the Signal box.</p>
Ballarat to Ballarat North	Goods trains to Wood Yard. Bank engine to run coupled.
Stawell to "Stop Board" at 148 miles 57 chains	<p>Passenger trains in Clear weather only. Bank engine to run coupled.</p> <p>Goods trains. Bank engine is not to run coupled.</p>
Dimboola to Stop Board at 220¾ Miles	Goods trains—Bank engine to run coupled. The load to be the combined ruling grade load of the two engines, less 15 per cent.; vehicular limitation, 60, subject to a maximum load of 978 tons.
Hamilton to Stop Board at 193½ miles	Goods trains—Bank engine to run coupled.
Hamilton to Stop Board at 198¾ miles	<p>Goods trains.—Bank engine to run coupled. The load to be the load of the Train engine for the Section, Braxholme to Heathmere.</p> <p>The train must be stopped at Coleraine Junction in order that clause (d), Rule 38, Electric Staff Rules, shall be complied with.</p>

Section.	Class of Train and Special Instructions to be Observed.
Geelong "B" Box to Up Distant Signal	<p>Goods trains. Bank engine to run coupled.</p> <p>No engine of less than 80 per cent. capacity must be employed in the rear. It should, if practicable, be run engine first, and, if available, an engine of the "Six-wheeled coupled" type must be used.</p> <p>When it is necessary to run the Bank engine tender first, the Driver must see that the sand-boxes on the tender are filled with dry sand, and that the sand-gear on the tender is in proper working order.</p> <p>When a Down Goods which is being assisted through the Tunnel by an engine in the rear has been stopped at the Up Distant Signal to permit the engine in the rear to be uncoupled, the Fireman of the rear engine must uncouple from the train.</p>
Geelong "B" Box to South Geelong	<p>Passenger trains—(a) The train must be signalled and dealt with in accordance with Regulation 173 and Rule 7 of Appendix VII. (Book of Rules and Regulations.)</p> <p>The Fireman of the Bank Engine must uncouple the engine at South Geelong, and the Guard, before giving a signal for a train to start, must see that the Bank engine is uncoupled and that the Air Brake is tested in accordance with Rule 23 of Appendix III, Book of Rules and Regulations.</p> <p>(b) Goods trains.—No engine of less than 80 per cent. capacity must be employed in the rear. It should, if practicable, run engine first, and, if available, an engine of the "Six-wheeled coupled" type must be used.</p> <p>When it is necessary to run the Bank engine tender first, the Driver must see that the sand-boxes on the tender are filled with dry sand, and that the sand gear on tender is in proper working order.</p>

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Section.	Class of Train and Special Instructions to be Observed.
Geelong "B" Box to South Geelong—continued.	<p>(c) The Geelong Pilot engine, with truck and Brake-van, may be utilised to assist a Down Goods train, subject to the following conditions:—</p> <p>(i.) The South Geelong trucks and Brake-van must be next in front of the Pilot engine.</p> <p>(ii.) At South Geelong the uncoupling of the Pilot must be performed by the Shunter or Guard in charge of the Pilot engine, who must ride in the Van of the Goods train.</p> <p>(iii.) The Guard of the Goods train, before giving the signal for his Driver to start, must see that the Pilot is uncoupled from his train and that the Air Brake is tested in accordance with Rule 23 of Appendix iii., Book of Rules and Regulations.</p>
Geelong Pier to Geelong Station Yard	<p>Goods trains, composed of loaded trucks. Load not to exceed 80 per cent. of the combined capacity of the two engines. Bank engine to run coupled, and to be detached at Box "A."</p>
Seymour to "Stop Board" at 63 miles 50 chains	<p>Goods trains.—Bank engine not to run coupled. See Special instruction, pages 794-795.</p>
Mangalore to Stop Board at 69½ miles.	<p>Goods train.—Bank engine to run coupled to Mangalore, thence uncoupled to Stop Board at 69½ miles. The train must be stopped at Mangalore for the Bank engine key. See No. 38, Electric Staff Rule.</p>
Wangaratta to Glenrowan	<p>2 p.m. Up (No. 48) Goods train.—When the load of this Goods train necessitates an assisting engine from Wangaratta to Glenrowan, the assisting engine may be coupled to the rear of the train on occasions when this train can reach Benalla to cross the Down Express; the load to be the combined load of the two engines less 5 per cent.; vehicular limitation, 60. Bank engine to run coupled.</p>

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Section.	Class of Train and Special Instructions to be observed.
Lilydale to "Stop Board" at 22 miles 20 chains	Passenger, Mixed and Goods trains. Passenger and Mixed trains in Clear weather only. Bank engine to run coupled to Passenger and Mixed trains, but not to run coupled to Goods trains.

No departure from the foregoing instructions is allowed without the special authority of the Chief Mechanical Engineer and the General Superintendent of Transportation.

FORWARDING ENGINES OR ENGINE GEAR FOR REPAIRS FROM DEPOTS TO NEWPORT OR OTHER WORKSHOPS; AND REPAIRED OR NEW ENGINES FROM WORKSHOPS TO HOME DEPOTS.

1. When an engine is forwarded to Newport or to any other Workshop for repairs, the Locomotive Depot Foreman must arrange with the Transportation Branch for a load to be provided wherever this is reasonably practicable, and the engine is in a fit condition to take a load.

2. Should it be found necessary to forward a "dead" engine to the Workshops, or from any Station to a Depot, every care must be taken. The connecting rods must be removed, and in the case of an engine with **inside** cylinders, the side, or coupling, rods are also to be removed. In the case of an engine with **outside** cylinders, the side or coupling rods are not to be removed unless they are broken, bent, or otherwise unfit; and if not removed, the bush provided for the purpose must be clamped on to the driving crank pin to prevent the side rods working off.

3. (a) Subject to clause 2 a "dead" engine may be attached to a Goods train which is not assisted by an engine in front; but only on such Lines or portion of a Line where engines of the same class as the Dead Engine are allowed to run (see pages 297-307), the speed of such train must not exceed a rate of 25 miles per hour when the "dead" engine has inside cylinders or 15 miles per hour when it has outside cylinders. The Locomotive Depot Foreman must arrange with the Station-master for a Special Time-table, and the Driver and Guard must be instructed in writing that the greatest care must be taken to see that the rate of speed referred to above is not exceeded.

(b) The "dead" engine must be placed immediately in the rear of the train engine, so that the Driver and Fireman can oil and otherwise attend to it, when necessary, during the journey. The Driver must carefully examine the "dead" engine at every Station at which the train may stop, and satisfy himself that it is in a proper condition to safely continue the journey.

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4. (a) After an engine has been repaired, or on the completion of a new engine, it must be run a trial trip from Newport to North Melbourne, and if then in good order it must be handed over (with a complete equipment of tools, lamps, etc.) to the Chief Foreman at North Melbourne; the Chief Foreman must arrange to have the tools checked (see form R.S. 228), and a proper receipt given, and he will then be held responsible for all the tools so signed for.

In every case of an engine received at a Depot direct from the Workshops at Newport, Ballarat or Bendigo, where it has undergone a thorough or general overhaul, the Locomotive Depot Foreman must arrange for such engine to be run by a selected Driver for three trial trips on suitable trains.

(b) Every engine that has been repaired must at first be booked on light running, such as Truck Shop Shunting Engine, Suburban Goods trains, or other suitable short runs.

5. Unless otherwise ordered, every new engine must be run by a selected Driver for at least 1,000 miles on regular trains.

6. When an engine is transferred from one Depot to another, or from a Workshop to a Depot, or vice versa, either permanently or otherwise, Card R.S. 228 must be forwarded with the engine, and the list of tools must be checked before its departure, and again at its destination; if detained more than one day at any intermediate Depot, a fresh card must be issued, and the tools again checked.

7. **Engine Gear Sent to Workshop for Repairs.**— Engine gear sent to any Workshop for repairs must be forwarded with as little delay as possible, so that it may be promptly repaired, and returned to the sending Station. It must be properly labelled, showing the number of the engine, the Depot to which it belongs, and be accompanied by a memo. setting out the nature of the repairs to be effected. The gear must be waybilled in all cases.

ENGINEMEN AND GUARDS ON DUTY IN EXCESS OF THE USUAL NUMBER OF HOURS, AND ARRANGEMENTS FOR THEIR RELIEF.

1. Trainmen must not be booked on shifts exceeding 12 hours' actual work, and when it is known that a trip, under normal conditions, will exceed 12 hours, arrangements must be made to book relief on the roster.

2. (a) When any Trainman is on a journey which does not usually involve his being on duty over twelve hours, but which from any cause is likely to require his being on duty over that period, he must, as soon as he becomes aware that such will be the case, lodge for transmission at the first available Station a telegram addressed to the official in charge at his depot, requesting relief to be arranged.

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(b) The authorised Code Addresses and Code terms must be used in the messages, viz.:—

Title.	Code Addresses.	Specify.
Dist. R.S. Superintendent Locomotive Foreman ..	"Roll" "Depot"	North Melbourne Geelong, Ballarat, or Seymour, as the case may be.
Superintendent Melbourne Yards	"Yard"	

Code.	Phrase.
Zoly	Arrange to relieve Driver and Fireman
Zona	Expect to be on duty over.....hours on arrival at.....

(c) Telegrams applying for relief must be written out by the employe who requires the relief, and the message must be handed to a responsible employe to be transmitted or dealt with as may be necessary. Trainmen have been supplied with books containing 100 telegraph forms, and the employe to whom the telegram is handed must sign for such message on the butt of the message Form, and arrange for it to receive attention without delay.

(d) In order that the Train Control Officers, Train Running Room, Spencer-street, may be advised of Relief arrangements in respect to train crews, etc., the Staff is instructed that before commencing the transmission of "ZOLY" and "ZONA" telegrams (addressed to Depot, North Melbourne, or "Yard" respectively) to Spencer-street, the Signal "Copy" must be given to the Receiving Telegraphist as an instruction so that the latter shall make a copy of the message by means of carbon at time of receipt.

(e) Telegraph messages for Relief must be dealt with as "Urgent," and where necessary the Signal "G.M." must be used.

3. When relief can be given, the responsible employe who arranges it, must telegraph particulars (using the code word "**Acid**," see end of this Instruction for text of message represented by code term), to the Station-master at each Station where it is anticipated the relief may be effected, and the Chief Train Control Officer; see page 249. The Station-master receiving this message must take steps to ascertain the whereabouts of the two trains concerned, so that in the event of either of them running out of course, the relief may be arranged to take place elsewhere, in which case he must telegraph full particulars to the Station-master concerned.

4. The relief crew must be furnished on the proper Form (G71) with full information respecting the Trainmen they are to relieve, the train or trains by which they are to travel, and the place where the relief is likely to be effected. This, however, will not free them from the responsibility of making such enquiries en route as will enable the relief to be effected at some other Station should either train run out of course. If from any cause the relief be not effected, the Form must be handed to

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the Station-master at the Station from which the return journey is commenced, and the Station-master must fill in the necessary particulars, sign the Form, and return it to the employes concerned, who must, before signing off duty at the Home Station, hand it in together with a report, stating why the relief failed.

Form (G71) is in three parts, each part being marked respectively "A," "B," and "C." "A" is the butt of Form, and will be kept at the issuing Station for reference. "B" provides for the men going to relieve. "C" provides for the men to be relieved, and will be handed to them by the men who relieve. "B" and "C" will also serve as passes for either journey. The Fireman's particulars will be entered on the Driver's copy.

5. The Guard in charge of a Goods train must not permit anyone to travel by his train without an order, ticket, or pass properly endorsed.

6. When arrangements are made in the Relief Roster to regularly relieve Trainmen who run certain trains, the men who are to be relieved will be responsible for promptly telegraphing to the employe in charge at their Home Station should they, on the return journey, be required to run a train other than the one by which they usually return. Similarly, when arrangements are made to relieve Trainmen, in accordance with these instructions, the employe in charge at the Home Station must be promptly telegraphed to by the Trainmen, who are to be relieved, should it be found necessary for them to return by a train either earlier or later than the one originally intended. In each case the train by which they return must be specified in the telegram, and, in addition, Drivers should give the numbers of their engines.

7. Relief crews who may be ordered from point to point to relieve Trainmen, or who may be returning home after having relieved Trainmen, or Enginemen and Guards who have been relieved short of destination and who require to proceed to their homes for rest, may be allowed to travel by Goods or Passenger trains as may be most convenient and expeditious.

8. Enginemen and Guards when supplied from the same Station to give relief should, when practicable, travel in the same Van or in the same compartment so that there may be no difficulty in detraining them, if necessary, at an Intermediate Station, en route, to give relief.

9. (a) Trainmen must not be booked off for "rest" for an interval of less than eight hours if the interval commence between the hours of 6 a.m. and 6 p.m. Neither must they be booked off for "rest" for an interval of less than eight hours if the interval commence between 6 p.m. and 6 a.m. except where the authority of the Head of the Branch is held.

(b) When it becomes necessary to book off, for rest, the crews of special Passenger and Goods trains, the following instructions must be strictly observed, unless otherwise ordered by the Commissioners:—

- (i.) Eight hours clear from all duty is the minimum time for which the enginemen of a special train may be booked off for rest.
- (ii.) The booking off for rest after 8 p.m. of engine crews for a period of 5 hours and up to 8 hours is only permissible with respect to certain regular timetabled Passenger and Mixed trains and to certain Goods trains that run with

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sufficient frequency to the same schedule to warrant authority being obtained from the Commissioners.

- (iii) In order to secure the release of an engine crew from duty for at least 8 hours, Station-masters and others arranging return journeys should make provision for engine time, to the extent of 45 minutes after passing T.R. point, inwards, and 60 minutes prior to passing T.R. point, outwards.

- (iv.) If one of the men booked off to rest is required to light up the engine, 1 hour additional to the foregoing should be allowed.

- (v.) Where it is necessary to divide an A2 engine to turn, 40 minutes additional should be allowed.

(c) Enginemen and Guards must not be required to work double shifts away from their Home Station until they have had a clear interval of 10 hours' rest, such interval to exclude the engine time allowed to Enginemen and the time allowed to Guards after arrival at destination and before the due time of departure of the return journey. If the men have been on duty for 12 hours, or will require to be on duty for 12 hours, there must be, as far as is reasonably practicable, a period of 12 hours for rest.

10. Trainmen who run special trips with Goods trains which involve long hours on the forward journey, must, when they arrive at their destination, inform the Station-master that they will be unable to commence the return journey until they have had a clear interval of 10 hours for rest. Arrangements should then be made to put the men on to a later train, or, if reasonably practicable, to put the return journey back so as to enable them to have the proper interval for rest. The Trainmen, however, before going off duty, must see the person making the arrangements, and receive from him written instructions as to the time they will be required to resume duty.

11. If Trainmen are likely to arrive at the Terminal Station after the time when lodging houses are closed, they should, if necessary, wire the Station-master in good time to order suitable sleeping accommodation, and the Station-master must, if it be at all reasonably practicable, so arrange.

12. Before altering or putting back a train, the Station-master must, if practicable, make proper arrangements with the responsible employe of the Rolling Stock Branch at least two hours prior to the time at which the train was originally booked to depart, and if the train be put back, advice must be sent to the Train Control Officer and to Terminal and Principal Stations en route giving particulars of the arrangements.

13. Whenever possible, the responsible employes must take into consideration the long hours on the forward journey, and make such arrangements as will avoid inconvenience or delay to return trains, or long hours to train crews.

14. Trainmen must not fail to take sufficient rest between the time of arrival at the destination of the forward train and the time of starting on the return journey.

15. The Station-master, Depot Foreman, or person in charge at a Station or Depot where Enginemen or Guards are stationed must furnish

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a Statement daily on the proper form (M133a) for the Transportation Branch, and R.S. 214 for the Rolling Stock Branch), giving particulars where any Engineman or Guard has been on duty over 12 hours; if there are no instances, the form must nevertheless be sent in, and a remark shown on it to that effect. It will also be necessary to show on Form T.N. (M. 133a) every instance in which relief was supplied.

Code word and Form of Message referred to in clause 3.

Code Word.	Text of Message represented by Code.
Acid	<p>*.....will travel to your Station by the †.....to relieve †..... who is on the §.....with Engine No. ||..... Arrange relief at yours, and in the event of trains not meeting at yours arrange relief at Station where trains meet.</p> <p>Signature.....</p>

* Here insert Driver, Fireman or Guard, as the case may be.

† Here insert name of train.

‡ Here insert name of Driver, Fireman or Guard to be relieved.

§ Here insert train that Driver, Fireman or Guard to be relieved is on.

|| Here, if practicable, insert No. of Engine.

Specimen message below. The details to be filled in are shown in brackets.

<p>To</p> <p>Acid (Driver Smith) will travel to your Station by the (12.15 p.m. Down) to relieve (Driver Jones) who is on the (7.20 a.m. Up Goods) with Engine No. (323 R). Arrange.</p> <p>Signature.....</p>
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GUARDS TRAVELLING TO OR FROM HOME STATION.

1. (a) When loading is not available on the forward journey and it is necessary to despatch an engine and Guard from their Home Station to return with a load, arrangements should be made to schedule the Light Engine at a time that will permit of the Guard travelling as a Passenger to the destination Station by a Passenger, Mixed or Through Goods train, if this can be arranged without the Guard having to wait an excessive period for the Driver (or vice versa) at the destination Station; when this is not practicable a Brake-van may be attached to the engine for the accommodation of the Guard.

(b) The Officer-in-Charge, before despatching an engine, must ascertain all the conditions existing as to loading, etc., and exercise wise discretion as to whether engine is to run "Light," with Van only, with Van

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and any through loading then available, or to work at not more than one Roadside Station and send telegraphic advice of its running to all concerned, using code word "Bona" or "Abuz" as the case may require. "Bona" trains must not work at Roadside Stations without permission of the District Superintendent, Depot Station-master, or the Train Control Officer.

(c) When a train is run with full load in one direction, it is permissible to utilise the engine, Van, and Guard in the opposite direction to clear any loading available, provided full loads are in sight for following trains, or when it is quite clear that the vehicles despatched by a train, which otherwise would be a "Bona" train, will be available for traffic purposes earlier than if the latter was not so utilised.

(d) If loading cannot be cleared by the next scheduled train, it should be despatched, without regard to the percentage of load, and, if necessary, the usual arrangements made for relief of the crew.

(e) It must not be overlooked that a Light engine, or engine with Van attached, runs to the schedule of the fastest stopping train on the particular section and its movements throughout the journey are in consequence expedited.

(f) Owing to the necessity of reducing the number of Goods trains arriving on the Receiving Roads in Melbourne Yard, the running of trains with light loads under the conditions referred to in paragraph (b) should not be adopted by Woodend, Geelong, Seymour, Warragul, or Nyora.

2. When an engine, after running a train in the forward direction, is not required for loading on the return journey and is being returned to its Home Station, a Van must not be attached for the accommodation of the Guard if another train be available for him to travel as a passenger, but if there is no train available by which he can return, a van may be attached to the engine for his accommodation, provided it is reasonably certain that he will reach his Home Station within 12 hours from the time he signed on duty; in no circumstances is a van to be attached when it is known that the Guard would be on duty more than 12 hours before reaching his Home Station.

3. The Officer in charge of despatching an engine with van attached must send telegraphic advice of its running to all concerned, using the code word "Bona," and such a train is not to be used to perform any roadside work en route unless authority from the Officer arranging its running has first been obtained.

4. When a Van is provided for the accommodation of the Guard, he will be in charge of the train, and will require to furnish the usual waybill and Running Statement for such trip, for which he will be credited with full time.

5. The Officer in Charge concerned will be held personally responsible for strict compliance with these instructions.

ENGINES HELD AT FOREIGN DEPOTS.

1. The practice of detaining an engine at a Foreign Depot and sending the Trainmen back to their Home Depot as passengers, is permissible only when the engine is not immediately required back at its

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Home Depot. Before an engine is detained in this way, the Foreman in charge of the Depot to which it belongs must be consulted as to whether it will be convenient, and the Station-master at the Foreign Depot must arrange to do this in sufficient time to prevent undue detention to either the Trainmen or the engine.

2. Where the Train Control System is in force, no engine must be worked Light from a Depot until the Train Control Officer has been consulted.

WHISTLING SIGNALS.

1. Use of Train Whistle.—Where, in accordance with any Rule, Regulation, or supplementary instruction, a Driver is required to make use of his train whistle, it must be understood that, unless otherwise specified, a long whistle is prescribed.

(a) The sound of the whistle should be distinct, with intensity, duration, or repetition, proportionate to the distance at which the signal is required to be heard, and the circumstances under which it is used.

(b) The standard Code of Whistles applicable to Fixed Signals and local Roads at Stations and Junctions, not otherwise specially provided for, is contained in the Book of Signals.

(c) The whistling signals prescribed hereunder are illustrated by "o" for short sounds and "—" for long sounds:—

When Engine or Train is not in Motion.

Signal.	Particulars.
O	Before moving an engine or train under any circumstances. (Clause (a), Regulation 157). When two or more Light Engines or two trains are coupled together, or when more than one engine is attached to a train. (Clause (b), Regulation 157):—
* O O	To move forward.
* O O O	To put back.
* O O	Starting of trains with one or more engines in front and one in rear of train. (Regulation 173.)
-- --	To recall Guard when Driver is prepared to proceed and Guard is protecting his train. (Clause (j), Regulation 239.)
-- -- --	By Driver of Electric train to call Guard to the front of train. (Clause (f), Regulations 68 and clause (j), Regulation 239.)
- O -	Driver of Bank engine to intimate to Driver of Train Engine that the Bank engine key is in his possession. (Rule 38 Electric Staff System, Book of Rules and Regulations.)

*Until these whistles have been given, and acknowledged by repetition, none of the engines or trains must move.

When Engine or Train is in Motion.

Signal.	Particulars.
-	When trains are passing each other at or close to Level Crossings. (See page 220).
-	When passing a Whistle Post in the direction in which it applies. (See page 229).
-	In accordance with Regulation 177:—
-	(a) When approaching or passing a Station, should another train be approaching or standing on the next adjoining Line, or should shunting operations be going on.
-	(b) To warn Workmen and others on or near the Line.
-	(c) On entering a Tunnel, and to be repeated occasionally when passing through long Tunnels.
-	(d) When entering and passing through deep cuttings situated on curves.
-	(e) When a train is at a standstill on the opposite Line partially obscured by steam or smoke.
-	When moving in the wrong direction, whistle to be used frequently. (Regulation 245.)
-	To notify the Guard or Station Staff when engine, after taking water, etc., is again available for work; if necessary, the Driver must repeat the whistle signal until he has gained attention.
- O	To gain the attention of the Guard so that he may exchange Hand Signals with the Fireman. (See clauses (f) and (i), Regulation 194, and page 365 of this Book.
- 000 -	Ballast trains, whilst men are in the trucks, whistle to be sounded before reducing speed preparatory to stopping. Clause (c), Regulation 157; also Regulation 297).
O - O	To signal to the Repairers that there is fire by the side of the Line or on adjoining land (see Regulations 215 and 289)
A succession of Short Whistles.	{ For Driver to indicate that his train is divided. Also as an acknowledgment of the Green Hand Signal moved in a vertical circle when given by either Guard or Signalman. (See Regulation 248.)

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When Engine or Train is in Motion.—Continued.

Signal.	Particulars.
A succession of Short Whistles.	(When a Driver requires the special assistance of the Guard's Brake. Regulations 199, clause (d), and 247, clause (b). When both Lines are obstructed, and the Driver is running forward with his engine, to stop any train that may be approaching in the opposite direction. (See clause (a), Regulation 240.)
	To indicate that the train is out of control, in which case, if it is safe and reasonably practicable to do so, the Line ahead must be cleared, and made available for the train, the Whistling Signals to be kept up as long as may be necessary. Sub-section (iii.), clause (b), Regulation 248.
	This signal must also be used when an engine is attached to the rear of a train, or when two or more engines are running coupled together, and the Driver of the rear engine requires to attract the attention of the leading engine.
O —	Air Brake on leading engine has failed, and Driver of second engine must take control of and work the Continuous Brake. After Driver of second engine has obtained control of the Air Brake, he must acknowledge the Signal by repeating it. When two engines are attached to a train in front and the Driver of the leading engine requires to intimate to the Driver of the second engine that:—
O	Steam should be shut off.
O O	Tender Hand Brake be applied.
O O O	Tender Hand Brake be taken off.
O O O O	Steaming be resumed.

FIREMEN ASSISTING IN TRANSPORTATION WORK.

1. Except where otherwise arranged, the coupling and uncoupling of the engine at a Terminal Station must be done by the Fireman.

Exception:—At St. Kilda the Transportation Branch employe who attends to the Traverser must uncouple, but the Fireman must couple up.

Note.—Filders-street Station.—Engine not to be uncoupled from train until instructed by an authorised employe. (See Special Instruction, pages 725-727.)

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2. Except where instructions are issued to the contrary, when a train arrives at a Terminal Station, and the engine is not required to take the same train out or to shunt the train, the Driver will be personally responsible for seeing that his engine is uncoupled from the train, before any other work, such as overhauling the engine or taking water, etc., is entered upon, and the engine when uncoupled must, if practicable, be drawn a short distance away from the train in order that Station-masters, Guards, and other employes may know that the engine has been detached. Before giving a Driver a signal to start, the Guard of a Suburban train must, if there be an engine at the rear of his train, satisfy himself by observation that it has been uncoupled.

3. At an Intermediate Station where the engine is uncoupled for Locomotive purposes, the uncoupling and coupling must be done by the Fireman.

At a Caretaker Station, and at any Siding where there is no one in charge, the uncoupling and coupling must in all cases be done by the Fireman.

4. During shunting operations at any Station, other than a Caretaker or No-one-in-charge Station, the coupling and uncoupling must, unless otherwise specified, be done by an employe of the Transportation Branch, except in cases where time could be saved by the Fireman performing the duty. See clause (b), Regulation 204.

5. Except as provided in clause 7 of this instruction, the Fireman must assist generally in the work of the Transportation Branch at every Station where there is a Caretaker, and at every Station (or Siding) where there is no one in charge, whether an Assistant Guard be with the train or not.

6. At small Stations where it would be advantageous to do so, the Fireman must assist to load dairy produce and van goods.

7. At Stations between Korumburra and Foster, and on No. 1 Down and 13 Up between Colac and Terang, the assistance to be rendered by the Fireman is not to include any work other than shunting.

8. When there are two engines on a train and a Fireman is required to assist in shunting operations, and it is not reasonably practicable for the leading engine to be uncoupled, the assistance must be rendered by the Fireman of the second engine.

TRAINS ENTERING TERMINAL OR DEAD-END STATIONS.

When entering a Terminal or a Dead-end Station, the Driver must bring his train to a stand four or five yards short of the buffer stops, or the rear or yard end of any carriage that may be standing on the platform Line. He must keep a good look out when entering a Platform Line to see how far such Line is clear, and the speed of the train must be regulated accordingly. Where there is a Traverser Table, as at St. Kilda, the train must be stopped clear of the Traverser. (See No. 12, Automatic Air Brake Rules, Appendix iii., Book of Rules and Regulations.)

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USE OF TRAIN ENGINES FOR SWITCHING WORK.

When Switching engines are not available, train engines may be used to convey Live Stock from Melbourne to Newmarket, or between Prince's Bridge, Flinders-street, Spencer-street, and Newmarket Stations, as follow:—

(1) Any train engine may be used except the engines of an Express or Country Passenger train.

(2) When the Driver informs the Yard Foreman that the trip cannot be made owing to want of coal or water, the Locomotive Depot Foreman must be at once advised by telephone, and he will then meet the engine at the coal stage, and make suitable arrangements with the Yard Foreman for what is required.

(3) When horses are loaded for Stations which will necessitate their being sent across the Viaduct between Flinders-street and Spencer-street, the sending Station must communicate by wire with the Superintendent of Melbourne Yards in good time, so that suitable arrangements may be made for transfer.

LIGHT ENGINES BROUGHT TO A STAND AT HOME SIGNALS FIXED SOME DISTANCE FROM THE SIGNAL-BOX.

When two or more Light Engines, coupled together, are brought to a stand at a Home Signal which is some distance away from the Signal-box, they must not be uncoupled while standing there; but when the necessary Fixed Signal to proceed has been exhibited, the whole of the engines coupled must go forward towards the Box, where they may be uncoupled, and worked to their respective destinations, in accordance with instructions from the Signaller.

PLACES WHERE CATCH POINTS EXIST IN THE RUNNING LINE TO CATCH TRAINS OR VEHICLES RUNNING BACK ON THE MAIN LINE, OR TO PREVENT TRAINS ON ONE LINE BEING PUSHED BACK FOUL OF OTHER LINES.—(See Regulations 83, 181, 246, 258, and 259.)

1. At each set of Catch Points in a Running Line an Indicator Board with the word "Catch" on the Board, is erected.

2. Whenever it is necessary for a train or portion of a train to be left on a Running Line from accident or inability of the engine to take the whole forward, or from any other cause, and it be found necessary for the engine to return to the train or rear portion of the train on the Wrong Line, in accordance with clauses (g) and (h) of Regulation 243, and Catch Points exist in the Running Line over which the engine will have to pass when returning, the Driver, when proceeding ahead with first portion, must arrange with his Fireman to place one (1) Detonator at 50 yards and two (2) Detonators 10 yards apart on one rail of the Line at least 200 yards ahead of such Catch Points to notify the Driver, when returning, of their position. (See Regulation 246.)

WORKING OF TRAINS.

Catch Points are in the Running Line at the following places:—

Station.	Where Fixed.
North Melbourne	... In the Up and Down Coburg Goods Lines, near Dynon-road Bridge
Wildwoods ..	.. In Down Line, at about 200 feet in advance of Down Home Signal.
Clarkefield ..	.. In the Down Line, near the Down Distant Signal
Macedon ..	.. In Down Line, at about 1,700 feet on Up side of Down Distant Signal.
Woodend ...	... In the Up Line, just inside the Up Home Signal
Chewton ...	... In the Up Line, just in advance of the Station platform
Lethbridge ...	... In the Down Line, just outside the Down Distant Signal
*Newmarket ...	... In the Up and Down Racecourse Lines, near the Up Home Signal
Glenroy ...	... In the Down Line, in advance of the Home Signal

*Flemington Racecourse Line.—During the time that Special Passenger Traffic is run over this Line, the Catch Points in the Up Line at Newmarket Junction must be properly secured by the authorised employees to lie for the Running Line.

ROADSIDE STATIONS WHERE THERE ARE CROSS-OVER ROADS BETWEEN THE UP AND DOWN RUNNING LINES.

No train, Light Engine or vehicle must be shunted through a Cross-over at any Station on a Double Line when the Station or Signal-box is "Switched Out." Hand Points of Cross-over Roads at every such place must be securely locked, and the keys placed in the office safe, or otherwise properly disposed of.

The list hereunder showing the number of Cross-over Roads at the Stations named is given, in order that arrangements may be facilitated in case of a train accident, or in the event of it being necessary to institute Single Line Working.

NOTE.—Employees responsible for instituting the arrangements for Working the traffic of a Double Line over a Single Line during repairs or obstruction in an electrified area must take care to see that, where practicable, the Cross-over Roads selected for Single Line operations are equipped with overhead electrical gear, and suitable for the Section Switches which may require to be operated; for list of Cross-over Roads provided with overhead equipment for Electric trains see pages 48-49. Attention is also directed to the instructions respecting Section Switches and the Sectioning of overhead equipment, and precautions necessary for the protection of tensioning points. See pages 37-45.

WORKING OF TRAINS.

Suburban Lines.					
Line and Station.			Line and Station.		
Williamstown Line:—					
South Kensington	...	1	Newport	...	1
Footscray	...	2	North Williamstown	...	2
Yarraville	...	2	Williamstown	...	2
Spotswood	...	2			
St. Albans Line:—					
Footscray "C" Box	...	2	Sunshine	...	2
West Footscray	...	1	St. Albans	...	2
Broadmeadows Line:—					
Kensington	...	1	Essendon	...	2
Newmarket	...	1	Broadmeadows	...	2
Flemington Racecourse Line:—					
Newmarket Cattle Yards (Up end)	1		Ascot Vale Road	...	1
			Epsom Road	...	2
Coburg Line:—					
Macaulay	...	1	Brunswick	...	1
Royal Park	...	1	Moreland	...	2
South Brunswick	...	1	Coburg	...	2
Clifton Hill—North Carlton Line:—					
North Richmond (see page 852)	1		Clifton Hill	...	2
Victoria Park	...	1	North Fitzroy	...	2
			North Carlton	...	1
Preston Line:—					
Northcote	...	2	Bell	...	2
Thornbury	...	1	Reservoir	...	1
Heidelberg Line:—					
Fairfield Park	...	2	Alphington	...	1
Ringwood Line:—					
Burnley	...	1	Box Hill	...	2
Hawthorn	...	1	Blackburn	...	2
Camberwell	...	3	Mitcham	...	1
Canterbury	...	1	Ringwood	...	2
Surrey Hills	...	1			
Dandenong Line:—					
South Yarra	...	2	Oakleigh	...	2
Armadale	...	2	Spring Vale	...	1
Carnegie	...	1	Sandown Park	...	2

WORKING OF TRAINS.

SUBURBAN LINES—Continued.

Line and Station.		Line and Station.	
Frankston Line:—			
Glen Huntly	... 2	Aspendale	... 2
Bentleigh	... 1	Chelsea	... 1
Moorabbin	... 2	Carrum	... 2
Cheltenham	... 2	Seaford	... 2
Meutone	... 2	Frankston	... 2
Mordialloc	... 2		
Sandringham Line:—			
South Yarra	... 1	Middle Brighton (Dendy-street)	1
Windsor	... 1	Brighton Beach	2
Elsternwick	... 2	Sandringham	1
North Brighton (see page 388)	... 1		
Port Melbourne Line:—			
Inglis St.	... 1		
St. Kilda Line:—			
Albert Park (see page 394)	... 1		

Country Lines.

Line and Station.		Line and Station.	
Geelong to Ballarat Line:—			
Bannockburn	... 1	Elaine	... 2
Lethbridge	... 1	Lal Lal	... 1
Meredith	... 1	Warrenheip	... 1
Bendigo Line:—			
Sydenham	... 2	Malmsbury	... 1
Digger's Rest	... 1	Taradale	... 1
Sunbury	... 1	Elphinstone	... 2
Clarkefield	... 2	Castlemaine	... 3
Riddell	... 1	Harcourt	... 1
Gisborne	... 1	Ravenswood	... 1
Macedon	... 1	Kangaroo Flat	... 1
Carlsruhe	... 2	Golden Square	... 1
Kyneton	... 2		
North Eastern Line:—			
Craigieburn	... 2	Kilmore East	... 2
Donnybrook	... 1	Broadford	... 1
Wallan	... 2	Tallarook	... 2
Wandong	... 2		

WORKING OF TRAINS.

ARTICLES TO BE CARRIED BY GUARDS, AND BRAKE-VAN EQUIPMENT.—(Regulation 186.)

1. (a) The Guard in charge of a train must, before starting, satisfy himself that he is in possession of the articles specified below (and such other articles, Books or Forms as may elsewhere be ordered), or that they are in his Van, or that his Van is equipped with them:—

(b) Suburban Passenger Trains.

1 Watch	1 Leather Kit-bag
1 Whistle	1 Step Ladder
1 Motorman's Carriage Key	1 Padlock and Key
1 Red and 1 Green Hand Signal Flag	1 Set of Side and Tail Lamps*
1 Box of Detonators (not less than 12)	1 Drag Chain (see pages 357-358)
1 Hand Signal Lamp (ready for use, and lighted as required)	1 Ambulance Stretcher
1 Sponge Cloth	1 Fire Extinguisher and Spanner
1 Special Tail Disc	1 Case containing a Saw, Bar, and Tomahawk
	1 Pintsch Gas Key (where train is lighted by Pintsch Gas)

*In the case of Electric Trains the Side Lights are electrically lighted; see page 238.

(c) Country Passenger and Country Mixed Trains.

1 Watch	1 Step Ladder
1 Whistle	1 Padlock and Key
1 Carriage Key	1 Screw Coupling
1 Red, 1 Green, and (on Single Lines) 1 White Hand Signal Flag	1 Set of Side and Tail Lamps
1 Box of Detonators (not less than 12)	1 Drag Chain (see pages 357-358)
1 Hand Signal Lamp (ready for use, and lighted as required)	1 Ambulance Chest or Box
1 Sponge Cloth	1 Ambulance Stretcher
1 Special Tail Disc	1 Fire Extinguisher and Spanner
1 Leather Kit Bag	1 Case containing a Saw, Bar, and Tomahawk
	1 Pintsch Gas Key (where train is lighted by Gas)

(d) Goods Trains.

1 Watch	1 Special Tail Disc
1 Whistle	1 Leather Kit Bag
1 Carriage Key	1 Step Ladder
1 Red, 1 Green, and (on Single Lines) 1 White Hand Signal Flag	1 Padlock and Key
1 Box of Detonators (not less than 12)	1 Screw Coupling
1 Hand Signal Lamp (ready for use, and lighted as required)	1 Drag Chain (see pages 357-358)
1 Sponge Cloth	1 Set of Side and Tail Lamps
	1 Fire Extinguisher and Spanner
	1 Case containing a Saw, Bar, and Tomahawk

WORKING OF TRAINS.

(e) In addition to the articles prescribed in clauses (b), (c), and (d), the Guard, when on duty, must have with him the following, viz.:—Train Book, Load Tables Book, Book of Gradients and Curves, Time Docket Book, six "Wrong Line Order" Forms, TR43, and such other Books or Forms as may be ordered.

2. (a) Sprags and Hand Scotchies.—Except as specified hereunder, the Van of every train running over the undermentioned Lines must be supplied with four Sprags, and each Guard will be held responsible for seeing that his Van is equipped with the required number:—

Stawell-Grampians
Cathkin-Alexandra
Everton-Yackandandah
Tallangatta-Cudgewa
Neerim South-Noojee
Koo-Wee-Rup-Strezlecki

*Korumburra-Coal Lines
*Korumburra-Outtrim
Mont Park Line see clause 4,
pages 854-856.
Bittern-Red Hill

*Passenger and Mixed trains only.

NOTE.—Employees are warned against attempting to place a sprag in a wheel of any moving vehicle; in such circumstances the sprag may rebound and inflict serious injury.

(b) **Narrow-Gauge Lines.**—On Lines specified below, the Guard of every train will require to be supplied with at least four **Hand Scotchies** instead of Sprags, and the Guard will be held responsible for seeing that his Van is equipped with the required number:—

Colac-Crowes; Wangaratta-Whitfield; Moe-Walhalla; Upper Fern Tree Gully-Gembrook.

(c) **Station-masters** at the first-named Stations in each of the Sections referred to in sub-clauses (a) and (b) must arrange to keep a supply of Sprags or Hand Scotchies, as the case may require, on hand so that Guards may obtain them when necessary. Application for the number required to keep up Stock to be made by memo. to the General Superintendent of Transportation.

The number of Scotchies to be kept in stock at the Stations are as follows:—

Wangaratta, 12; Colac, 12; Upper Fern Tree Gully, 24; Moe, 12.

(d) Employees are warned against attempting to place a sprag in the wheel of a moving vehicle; in such circumstances the sprag is likely to rebound, and may result in serious injury.

3. Drag Chains.—(a) Drag Chains must not be placed in Dog-boxes.

(b) **USE OF DRAG CHAIN.**—When used to replace broken couplings or draw-bars, the drag chain must be doubled, and the loop, or bight end, passed under the headstock and over the drawbar, and the loop pulled to within one foot of the next vehicle. The hook and link ends of the chain must then be passed under the headstock and over the drawbar of the same vehicle, and through the loop of the chain. The chain must then be pulled taut, and the single ends passed over the drawbar from right

WORKING OF TRAINS.

to left, and left to right, and secured by knotting together, or connecting the hook and eye. See clause 4 of Instructions, under heading of Automatic Couplers, pages 430-439, re use of Drag Chains in cases of failure.

(c) **DRA G CHAINS IN STOCK.**—Yard Foremen at Locomotive Depot Stations must keep one or more Drag Chains at a place known to employes concerned, and when a Guard finds it necessary to use the Drag Chain it must be replaced by another from Stock. Rolling Stock Branch employes must remove the Drag Chain from any damaged vehicle, and return it to the Depot Station-master or to the Superintendent of Melbourne Yards as soon as possible.

(d) Train Examiners must see that the Guard's Van on each train dealt with is equipped with a Drag Chain. This, however, will not relieve a Guard of the responsibility for seeing that his Van is so equipped, and, in the event of a Drag Chain being missing from a Van, the Guard must request the Train Examiner to supply one before the train starts. In order that Drag Chains may be readily accessible they must, in future, be carried around the column of the brake rod in Guards' Vans.

4. Guard's Reading Lamp.—The Guard of a Goods train must, before starting, examine his Van to see whether it is equipped with a bracket for the Guard's Reading Lamp; he must draw the attention of the Train-examiner to any case where the bracket is missing, and report the circumstances, giving the distinguishing number of the Van.

5. A set of Side and Tail Lamps comprises two Side and two Tail Lamps, and, when necessary, one of the Tail Lamps must be fitted with a white and a red glass. Before starting, the Guard must see that the Tail Disc and Lamps are in good order, and that the Oil Lamps are trimmed and ready for use.

6. Fire Extinguishers, and Saw, Bar and Tomahawk.—See under Ambulance Arrangements, pages 60-67, for instructions regarding the use of this equipment. The Guard must report every instance in which he uses the Fire Extinguisher.

7. The standard size of the Guard's Green Flags is 18 x 18 inches, and the handle should not be less than 27 inches in length, and half an inch in diameter. The Guard is responsible for his flags, etc., being of these authorised dimensions.

(b) The Hand Flags or handles of Flags must not be cut or altered in any way, and if any article be missing or unfit for use the Guard must at once inform the Station-master and obtain a duplicate; see instructions under "Guard's Hand Signal," pages 363-365.

8. Guards' Train Books.—When a Guard requires a new Train Book, he must return his old one to the Station-master or person in charge at his Home Station, and obtain the signature of the Station-master or person in charge in his new book for the old one.

WORKING OF TRAINS.

The Station-master or person in charge who supplies the new book must see that the old book is returned, and keep a record showing to whom the new book is supplied, together with the date of issue.

The old book must be neatly labelled and kept for six months for reference. At the expiration of that period it must be addressed and sent to the Despatch Officer (Transportation), Head Office, Spencer-street.

Every Guard must enter his name, Home Station, and Departmental number in his Train Book, and he will be held responsible for its safe custody.

Attention is directed to the Instructions respecting Portable Telephones in Brake-vans.

9. Unless otherwise arranged, the Station-master must each month examine the articles carried by each Guard under his charge, and see that each set is complete (every Hand Signal Flag must be provided with proper handle), and that each article is in proper condition, and fit for use. A report of such examination must be sent to the Transportation Stores Officer on the 15th of each month. Form M 150 to be used for the purpose.

The Station-master must also inspect the van equipment under his charge, and in the event of any article being missing, take the steps necessary to have it replaced, afterwards making proper enquiries in regard to the missing article.

PORTABLE TELEPHONES IN BRAKE VANS.

1. Portable telephones for use in the event of a train becoming disabled are provided in the Brake-vans of trains on the undermentioned Lines:—

Mildura (beyond Woomelang)	Mount Gambier
Beech Forest	Gembrook
Crowes	Walhalla

The Guard must see that the equipment is in good order, and always readily available. Should the Brake-van be changed at any time the Station-master must arrange for the transfer of the telephone and equipment complete.

2. The telephones and equipment will be examined periodically by an Electrical Fitter, but the instruments, etc., must be tested at regular intervals, according to the directions shown in clause 3 of these instructions. The Station-masters, Mildura, Woomelang, Beech Forest, Heywood, Upper Fern Gully and Moe must see that the instruments are tested at least once each week, and on each occasion must have an understanding with the Guard in respect to the place and time at which the latter will use the instruments. The result of each test must be registered by the Station-master in the Train Register Book.

WORKING OF TRAINS.

3. Instructions regarding the use of telephones are printed on a small card, a copy of which is enclosed in the box of each instrument. Instructions for the various Lines are shown hereunder:—

WOOMELANG-MILDURA.—By means of the jointed rod, hook one of the flexible connections to each of the two Railway line-wires (viz.:—the wire on top of the telegraph pole and the wire nearest the pole on the left-hand side of the top arm when looking towards Mildura); then connect the other ends of the flexible connections to the binding screws of the telephone, and screw the generator handle into its working position to operate the telephone.

Care must be taken to press the contact in the transmitter handle whilst speaking.

MILDURA-MERBEIN.—Hook the single flexible wire to the Railway line-wire—the top wire; connect the free end of wire to the binding screw of the telephone, and then proceed as per (iii.), (iv.), and (v.) hereunder:—

On tracks other than those shown above, the following instructions apply:—

- (i.) Hook the rod with the flexible wire attached to the Railway line-wire.
- (ii.) Connect free end of the flexible wire to the binding screw on telephone.
- (iii.) Drive the hollow iron spike well into the ground, in a damp place if possible; pour water into the hollow spike if the ground be dry.
- (iv.) Connect the wire attached to the iron spike to the terminal of the telephone.
- (v.) Screw the generator handle into the operating position and operate in the ordinary way, taking care to press contact in transmitter handle whilst speaking.

4. When communication has been established, the Guard must first give his own name, then the name of his train, and the mileage of his whereabouts, and after he has ascertained the name of the Station and the person answering the call, messages may be transmitted. Each message should be repeated back to the Sender.

5. The regular Guard on the Line must see that any Guard by whom he is relieved is fully instructed respecting the use of the telephone.

ASSISTANT GUARDS.

1. When a Second Guard or an Assistant Guard is travelling with a Mixed or Goods train, he should, as far as practicable, ride on the train engine, so that time may not be lost in starting work at Roadside Stations. Drivers are to understand that the fact of a Second or Assistant Guard being with the train is sufficient warrant for such employe riding on the engine.

2. When the Guard of any train is accompanied by an assistant, and the latter is not qualified as a Guard, the Guard in charge is not relieved of any responsibility for the safety of his train. This will not,

however, relieve such assistant of any responsibility for the proper performance of Shunting work or other duties allotted to him by the Guard in charge or prescribed by the Rules, Regulations, or other instructions. Except as prescribed in Regulation 238, the Head Guard is responsible for his train being protected in accordance with Rules, Regulations or other instructions, and before leaving his Van he must apply his Hand Brake.

GUARDS' HAND BRAKES.

1. The Guard must apply the Hand Brake, when necessary, to steady a train on a falling gradient, and on Narrow Gauge Lines must assist the Driver to steady the train on all falling grades.

2. (a) **Regulation 204.**—The Guard, before leaving the Vans for shunting purposes, or for the purpose of protecting the train, must see that the Van-brake has been properly applied and the handle secured by means of the chain to prevent the Brake becoming released. Before giving the Driver a Signal to start, the Guard must see that the Hand Brake is taken off.

(b) When any employe has occasion to apply or to release the Hand Brake in a Van, it will be his duty to see that the handle of the Brake is secured by means of the Chain.

3. **Passenger Trains Standing Overnight at Stations.**—At Stations where Passenger trains are permitted to stand overnight on a Running Line the Guard before leaving must see that the Hand Brake is fully applied at each end of the train, and lock both doors of each Van.

STARTING AND STOPPING OF TRAINS.

1. To prevent, as far as possible, any jerking in the starting and stopping of a train, the Station-master, Guard, and any other employe concerned must, before a train goes into running, see that it is properly coupled. Particular attention should be paid to vehicles which are coupled up in Sidings or on curves, as otherwise, when drawn on to the Running Line, the vehicles may be found to be loosely coupled.

2. At each Suburban Terminal Station, the Station-master must see that the couplings of Suburban trains are properly screwed up.

3. To prevent oscillation, and to secure the smooth and easy running of a Passenger train, all the vehicles composing it must, unless instructions are issued to the contrary, be so tightly coupled to each other or to the engine as to put sufficient strain on the drawbars to ensure the buffers being brought so firmly together as not to be separated by any change of gradient or by the starting of the train. If any coupling be too long, the number of the carriage to which it is attached should be noted, and the matter reported. If the coupling on the engine cannot be screwed up sufficiently to cause the buffers to touch, the number of the engine should be reported, and, to get over the difficulty temporarily, a short screw coupling should be obtained. The screw couplings on any vehicle which are not in use must be hung on the hooks provided for the purpose.

WORKING OF TRAINS.

4. In addition to the Driver using the Air Brake to stop his train at a platform, the Fireman must apply the Hand Brake, otherwise the weight of the engine may not only cause the draw gear of the leading vehicles to become unduly extended, but also when the Air Brake is released, cause a rebound. The Station-master must note if there is any rebound, and call the Driver's attention to it, and if there be a repetition the matter must be reported.

5: (a) If the Guard notice any rebound in the stopping of his train, or any jerking in starting, or if any passenger complain from the same cause, he must inform the Driver, so that the latter may endeavour to work his train in such a way as to ensure a more steady passage. As soon as it is reasonably practicable the Driver must examine his train, and, if possible, locate any defect, and take steps to remedy it.

(b) The Driver must call the attention of the Train Examiner at the first Examining Station to any irregularity in the working of his train, and every such case must be reported.

6. If when it is necessary for an engine with a train attached to take water, the engine stop short, or over-run the Water Crane, the Driver must not allow the train to move again, without first obtaining a signal from the Guard.

7. When a Mixed train calls at a Station, the Guard must be prepared to apply the Hand Brake immediately the Air Brake is released in order to prevent the passenger vehicles moving when the train stops. Guards of Goods trains by which passengers are conveyed must also be prepared to act in the same manner when necessary.

8. If for any reason the Driver of a Passenger or Mixed Train does not proceed when the Guard's Signal is exhibited, the Guard's Signal to start must be repeated when the Driver is ready to proceed.

9. When a train is moving at a slow rate of speed an undue strain is placed upon the draw-gear by the sudden application of the Air Brake. If it be necessary to stop a heavily loaded train at a particular place for the purpose of picking up or discharging Van goods, the "Move Slowly" Hand Signal (see Regulation 71) must be given prior to exhibiting the "Stop Signal."

This is particularly necessary in connection with the stoppage of trains by which passengers are conveyed.

Whenever it is reasonably practicable, outwards Van Goods must be placed on trollies or barrows, in order that they may be conveniently wheeled to the truck or Van in which they are to be loaded.

TRAINS NOT TIMED TO CALL AT STATIONS.

(Regulation 124.)

Unless specially authorised by the General Superintendent of Transportation, no train shall be stopped for the purpose of taking up or setting down passengers at any Station where it is not scheduled to stop; in any case of emergency, however, when there is not time to

WORKING OF TRAINS.

obtain permission from the General Superintendent, the Metropolitan or District Superintendent, as the case may be, may authorise a train to be stopped for this purpose, but this course must be limited to cases of urgency, and every instance must be reported.

In any case where, owing to an Automatic Signal being at the Stop position, or from any other cause, a train not booked to call at a Station is brought to a stand, or nearly so, at the platform, the Station Staff must take care that (except as provided in the preceding paragraph) intending passengers are not permitted to board the train. The Driver and Guard must carry out the provisions of clause (e) Regulation 194, and exercise due care to avoid risk of accident to persons who may be in the act of joining or leaving the train.

GUARDS' HAND SIGNALS.

1. REGULATION 194, CLAUSE (A).—(a) The Guard must always use a Green Hand Signal when giving the Signal for starting a Passenger train, and the Guard of a Mixed train must also use a Green Hand Signal whenever it is reasonably practicable for him to do so.

(b) Wherever practicable, the Guard's Signal for the Driver to start the train should be exhibited at a point slightly in advance of his Van, and as high as possible in order that the Signal shall not be obscured by people on the platform. See sub-clause 5, clause (b), Regulation 70, page 49, Book of Rules and Regulations.

(c) The Driver of an Electric train, when stopping at a Station, must not over-run the sign-post applicable to his train, and, except in the cases referred to in clause 3 hereof, a Motorman should not have any difficulty in seeing the Guard's Signal if the foregoing directions are observed.

2. (a) At some Stations where the platform is on the outside of a curve, the point from which the Guard's Signal must be exhibited is defined by a White post on which the letter "G" is shown, and subject to clause (d) of Regulation 194, the Guard of an Electric train that consists of six (or more) cars must display the Signal to the Motorman from the position indicated until it has been acknowledged by the Motorman sounding his train whistle.

At these places, in the case of a train of six (or more) cars, the Motorman must go to the outer door, and must lean out as far as practicable in order to obtain a view of the Guard's Signal, which he must acknowledge smartly by sounding the train whistle; before leaving the Driving compartment, the Motorman must apply the Brakes, and the Brakes must not be released until he has acknowledged the Guard's Signal to start.

(b) At some places a Platform Mirror is fixed near the 7-Car Stop Mark, and by stopping a train composed of 6 or more Cars at the correct position, the Driver may, without leaving the Driving compartment, obtain a view of the Guard's Starting Signal reflected in the mirror

WORKING OF TRAINS.

when exhibited from the post on which is fixed the letter "G." The Station-master must arrange for the mirror to be kept clean. Platform Mirrors are provided as specified hereunder:—

Station.	Location.	Line.	Stopping Place.
West Richmond ..	On abutment of Bridge ..	Up	7-Car Stop Mark
Richmond ..	On brick wall near steps leading to sub-way	Down Brighton Line	7-Car Stop Mark
Brighton Beach ..	On Post at Up end of No. 2 Road	Up Sandringham Line	7-Car Stop Mark
Westgarth ..	On picket fence at Down end of Platform	Down Line ..	7-Car Stop Mark
Auburn ..	Down end of Platform ..	Down ..	7-Car Stop Mark
Armada ..	Down end of Platform ..	Down ..	7-Car Stop Mark
Hawkeburn ..	Down end of Platform ..	Down ..	7-Car Stop Mark
Glenbervie ..	Down Platform ..	Down ..	7-Car Stop Mark
North Essendon ..	Down Platform ..	Up	7-Car Stop Mark

(c) The Motorman, when starting from the Stations referred to in sub-clauses (a) and (b), must, for a distance of about one car length, proceed slowly to enable the Guard to board his Van. Attention is directed to clause (a), Regulation 195.

3. (a) Clause (b) of Regulation 194 defines the manner in which the Guard's Green Signal should be given, and clearly implies that where a Fixed Signal is provided to control the starting of the train, the Guard's Signal does not authorise the Driver to start unless, at the same time, the "Proceed" Signal is also exhibited at the Fixed Signal.

(b) At some Depot Stations, such as Seymour, Bendigo and Geelong, a passenger train may not be ready to proceed at the scheduled time, and as the lowering of the Fixed Signal would prevent the performance of other local operations, it sometimes happens that the Departure Signal is at the "Stop" position when the train is ready to proceed. In such circumstances, the Guard, on receipt of the Station-master's Signal, is quite justified in giving his Green Signal to the Driver (see Regulation 195, clause "A") and on receipt of the Guard's Signal, the Driver must give the prescribed Whistle Signal for the Signaller to lower the Departure Signal.

Where there is direct Electric Bell communication between the platform and the Signal-box, the Station-master must, if necessary, send the prescribed Bell Signal intimating to the Signaller that the train is ready to proceed.

(c) REGULATION 195, CLAUSE "A."—At some places, it is not practicable for the Guard to see the Fixed Signal controlling the departure of the train from the platform. In such circumstances, the Guard, on receipt of the "Right-away" Signal from the employee in charge of the platform, may exhibit his Green Signal to the Driver, but this does not relieve the Guard of his responsibility for co-operating with the Driver as far as practicable in the observance of Fixed Signals whenever they are visible.

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(d) **REGULATION 164.**—At any Station where the Starting Signal is at the Stop position, and such Signal is a sufficient distance ahead to permit of the train clearing the platform when stopped at that Signal, the Driver of any train that has been stopped at the platform may proceed towards such Signal on receipt of the Guard's Hand Signal to start; in the case of a train not scheduled to stop at the Station it may, subject to the provisions of clauses (a), (b) and (c) of Regulation 61, be permitted to proceed towards the Signal. This instruction does not in any way modify the provisions of clause (d) of Regulation 67. See clause 16, page 159.

(e) During foggy weather when the fog is so dense that a view cannot be obtained between the engine or Motorman's compartment and Van, or between the engine or Motorman's compartment and the place from which a Guard's signal to start is ordinarily exhibited, the Guard's signal to start the train should be exhibited from a point where such signal can be seen by the Driver.

When the Guard's signal has been observed, the Driver must acknowledge such signal by a short whistle, and may then, provided the Fixed Signal is at the "PROCEED" position, start his train, but must not exceed a speed of 4 miles per hour until the whole of the train has passed the point from which the Guard's signal was exhibited.

(f) When, in accordance with Regulation 194, the Guard's Hand Signal has been given to start a Goods train from any Station or Yard, and the Signal is not promptly obeyed by the Driver, the Officer-in-charge must proceed to the engine and ascertain the cause of delay in starting the train.

4. Guard and Fireman to Exchange Hand Signals, Regulation 194, Clauses (f) and (i).—(a) The Hand Signal referred to in clauses (f) and (i), Regulation 194, and in sub-clause 6, clause (b), Regulation 70, must be exchanged as specified hereunder:—

To indicate by night to Driver of train, after starting, that his train is complete.

Green Light waved slowly up and down in the form of a semi-circle by the Guard from his Van.

(b) In order that the Green light shall not be obscured by cars or by wide loading on the train, the Guard must extend his arm to the full length when giving a signal from the Van.

(c) It will not be necessary for the Guard and Driver on a Suburban Passenger train to exchange the above-mentioned Hand Signal.

(d) At the commencement of the journey, or when re-starting from a Station, it will not be necessary for the Fireman on a Suburban Passenger Train to exchange Hand Signals with the Guard in the rear. The Driver (and in the case of a steam-operated train, Fireman) must, however, as laid down in Regulation 195, look back when leaving a Station to see that the whole of the train is following in a safe and proper manner, and to receive any Signal from the Station-master or Guard that may be necessary. The Guard after boarding his train must stand at the door of his Van with the window open and be on the look-out for any signal or intimation from the Station Staff until the train is clear of the platform.

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5. Guards' Hand Signal Lamps to be Lighted when Train in Tunnel.—The Guard of every train must have his Hand Signal Lamp lighted during the whole of the time his train is in the Tunnel on any of the following sections:—

Elphinstone and Chewton,
Ravenswood and Kangaroo
Flat,

Geelong and South Geelong,
Yea and Cathkin,
Healesville and Yarra Glen.

SYDNEY EXPRESS TRAIN.**Duties of Conductor of Parlor Car.**

1. (a) On account of the Brake-van on the Sydney Express train being next the engine, the duties specified will devolve upon the Conductor in charge of the Parlor Car, who must be an employe qualified to perform Guard's duties as far as the working of Passenger trains is concerned.

(b) The Conductor must carry out each or all, as may be necessary, of the duties laid down in sections (i) to (xiv.) hereunder. He must—

- (i) See that the Tail Signals and Side Lamps are in their proper positions on the train, that the lamps are kept properly burning when necessary; that the Tail Signals required in connection with the running of Special trains are duly exhibited, and to properly dispose of the Tail and Side Lights, as laid down in Regulation 205.
- (ii.) Examine all Special Train and other Notices as directed for the Guard in Regulation 185.
- (iii.) Have with him in the Parlor Car a Guard's kit complete.
- (iv.) Exchange Hand Signals with the Fireman as soon as practicable after the train has started. (See clause (f), Regulation 194.)
- (v.) Comply with Regulation 198 when necessary in regard to giving information to the Signalman that the whole of the train, with Tail Disc or Light attached, has arrived.
- (vi.) Perform the duties specified for Guards, in the event of the train being pushed, and the Parlor Car the leading vehicle. (See Regulation 201 and Instructions on pages 396 and 399 of this book.)
- (vii.) Secure the train by means of the Hand Brake if the engine be detached for any purpose. (See Regulation 203.)
- (viii.) Protect the train as directed in Regulations 239, 241, 243, and 261, and to issue a Wrong Line Order should it be necessary for the engine to return on the Wrong Line.
- (ix.) Protect the train in accordance with the Rules and Regulations, should it be brought to a stand by the use of the Communication Chain; the Head Guard must take steps to ascertain why the Communication was applied.
- (x.) Comply with the provisions of Regulation 247, in the event of failure or accident.

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- (xi.) Carry out the duties provided for the Guard in Rules 16 and 16C, and for the Under Guard in Rule 16B, Electric Staff and Tablet Rules. (See Appendix vii., Book of Rules and Regulations.)
- (xii.) Test the Hand Brake in the Parlor Car prior to testing the Air Brake, to satisfy himself that it is in good order, and to see in all cases that it is screwed off before starting.
- (xiii.) Test the Air Brake in the manner prescribed for the Guard in the Air Brake Instructions (see Rules 22 to 29 inclusive, Appendix iii., Book of Rules and Regulations.)
- (xiv.) Observe the instructions prescribed for the Guard in Rule 31, clause (a), Appendix iii.

The special attention of the Conductor is directed to Rule 12, Appendix iii., as to the use of the Hand Brake.

- (aa) When applying the Air Brake for testing purposes, the pressure shown in the Gauge must be reduced by twenty (20) pounds; see amendment of clause (b), Rule 23, page 8.
- (bb) The Train-pipes of the Air Brake connections at the rear end of Parlor Cars "Murray" and "Yarra" are extended up the railing of the Observation Platform, and a Brake cock connected with the Train-pipe is fixed near the Hand Brake to enable the authorised employe to apply the Air Brake from the Observation Platform should circumstances require it.
- (cc) The Cock and the Pressure Gauge in the Conductor's compartment must be used when necessary to test the Air Brake as prescribed in Rules 22 to 29, Appendix iii., Book of Rules. But when the train is being pushed, and the car is the leading vehicle, the employe whose duty it becomes to signal to the Driver (as prescribed in the instructions on pages 396 to 399 of this book) must ride on the Observation Platform.
- (dd) When the Air Brake has been tested as above by the Conductor, the Guard is not required to test the Air Brake by applying it from the Brake Van, but the Guard must not give the Driver a signal to start until he has ascertained verbally from the Conductor that the Air Brake has been tested, and that it is in proper order.
- (ee) If upon making the test the Conductor find that the Brake connection is interrupted, he must communicate with the Guard, and in the event of the Brake on any vehicle sticking he must not open the release valve without first consulting the Guard.
- (ff) If the Air Brake is not in use on the Parlor Car, the Guard must test the Brake as directed in Rule 23, Appendix iii.

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(gg) If the Conductor have occasion to apply the Air Brake from the Parlor Car, he must open the Cock, and allow the air to escape until the train is brought to a stand; but he should use the Brake only in cases of emergency (see Regulation 199, clauses (c) and (d), also Rule 22, Appendix iii.).

(hh) Should the Brake pressure fall below 45 lb., he must call the Guard's attention to the fact at the first opportunity; the latter to inform the Driver (see Rule 28, Appendix iii.).

2. (a) Guard's Duties.—The duties of the Guard in charge of the Express are modified to the extent mentioned above; but he is in no way relieved from the proper performance of his duties as regards the general working of the train, and must see, as far as reasonably practicable, that the duties herein specified are properly carried out by the Conductor.

(b) **If Parlor Car Detached.**—In the event of it being necessary to detach the Parlor Car from the train, the Guard must arrange for a Brake-van to be placed in the rear.

VESTIBULED TRAINS AND CORRIDOR VEHICLES.

1. (a) There are two types of curtains in use for the gangways of vestibules of corridor cars, viz., two fixed adjustable canvas screens and two vestibule curtains. The former are fixed, one on each side of the vestibule at each end of each car, and, when the car to which they are fitted is not coupled up to another vestibuled vehicle, the screens must be unrolled, placed across the vestibules, and secured together with the straps provided for the purpose, thereby forming a safety screen.

When the car is attached to another vestibuled vehicle the screens should be rolled up and secured with the straps provided for the purpose.

Mats are provided for use on the plates forming the floor of the vestibule, and the door leading on to the vestibule is fitted with a carriage lock.

(b) The vestibule curtains are in most instances fixed at one edge under a wooden cleat, but some cars are not so fitted, the curtains being portable and held in position with clips and studs. In either case the curtain must be stretched along the vestibule from one car to the other and secured to the studs provided for the purpose, as a protection to passengers passing from one car to another.

(c) When any passenger train containing vestibule cars is docked for departure from a terminus, or when a vestibule car is attached or detached at a Roadside Station, the Station-master must satisfy himself that the vestibule curtains are fixed from one car to the other, that a mat is provided in each gangway, and, when any vestibule car is not coupled to a similar vehicle, he must see that the fixed screens are fastened across the gangway, and that the door leading thereto is closed and locked.

At Stations where a Head Porter is in attendance, the Station-master may allot this duty to that employe.

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(d) Wherever possible, however, the screens and curtains should be placed in the required positions before the train is docked, but this will not relieve the Station staff from seeing that the screens and curtains are fixed according to requirements.

(e) **"Mann" Cars.**— When a "Mann" car is attached to a Vestibule car, great care must be taken to see that the screens of the latter are securely fastened to the hand rails provided on the "Mann" car, so as to complete the passage way between the two vehicles. "Mann" cars are used on the through trains between Maryborough and Mildura, and as stand-by sleeping cars on the Melbourne-Adelaide trains.

2. (a) The Guard, or the Conductor (if a Conductor be with the train), must see that the vestibules of carriages are all equipped with vestibule curtains and mats, and when an extra carriage is attached at a Road-side Station, satisfy himself that such equipment is properly fixed.

(b) Should vestibule vehicles on a train be separated for any purpose whatsoever, it will be the duty of the Guard or the Conductor, as the case may be, to see that the communicating doors are securely locked. When vestibule vehicles are in running without the adjoining vestibules being connected, the gangway doors must be always locked.

(c) A few vans of the "C" and "CV" classes have narrow vestibules, and where these adjoin vehicles with wide vestibules the communicating doors must be locked.

(d) The dividing doors between first and second class cars and between first and second class portions of "ABE," "ABW" and "Yankee" "AB" cars must be kept locked in order to prevent passengers with second class tickets availing themselves of first class accommodation.

(e) Should circumstances require passengers to pass through the Mail Sorting Compartment of a "BDSE" car, the Conductor or other official must accompany them, and this may only be done in the presence of the Mail Guard; the necessity for this course must, however, be avoided as far as possible. Conductors and others when checking tickets are to note any such passengers and arrange for and assist their transfer to another car at a suitable Station.

3. When vestibule cars are detached from trains away from their home station, the vestibule curtains and coir mats must always be retained in them. At each end of the Depot Stations where such cars terminate, one of the staff is to be deputed to check this equipment on the arrival of trains, and again on return of the cars by Up trains. Any instance of curtains or mats being missing is to be made the subject of immediate inquiry, with a view to locating the missing equipment. Conductors must report all shortages of curtains or mats, and specify the Station at which the car concerned was attached to the train; such reports to be forwarded the Chief Time Tables Officer promptly.

4. Guards and Conductors must see that the corridors are kept clear. Boxes, portmanteaus, and other heavy articles of luggage must, if possible, be placed in the racks or under the seats of the carriages when passengers desire to have their luggage with them, or, otherwise, be loaded in the Guard's van or other proper luggage compartments of the train.

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5. Passengers should not be permitted to stand in the open doorways at the ends of the cars while trains are running. The doors are to be kept closed.

6. Smoking must only be permitted in the compartment set apart for the purpose.

7. Male passengers must, except as provided on this page, be excluded from ladies' compartments, and must not be allowed to remain at the end of any carriage reserved for ladies.

8. When the weather conditions are favourable, Conductors must open the windows to ventilate the compartments, either before the trains are brought to the platforms, or, in the case of trains which stand at the platforms for some time, before the passengers are allowed to enter.

SMOKING ACCOMMODATION.

When necessary, extra compartments may be made available for smokers on Country trains, by the Station-master at a despatching or junction Station, or by the Conductor en route; it must, however, be clearly understood that such arrangement is only to be made or permitted, provided no inconvenience or discomfort is occasioned non-smokers. The compartments so set apart should be properly labelled. A compartment which would be separated from a non-smoking compartment by a partition which does not reach to the ceiling must not be reserved.

If ladies or youths be noticed travelling in the smoking compartments they should be requested to change to a non-smoking compartment. The attention of youths should be directed to By-law No. 11, which provides that:—"No person shall travel in any compartment of any carriage set apart for smoking unless he shall have paid the adult fare for the time being in force."

LADIES' COMPARTMENTS.

1. Whenever the accommodation provided in ladies' compartments on Country Trains is manifestly in excess of the room required by ladies, and the necessity arises to use such compartments for male passengers not otherwise provided for, the latter may be allowed to occupy the vacant seats. Care must, however, be taken to see that ladies are not inconvenienced in any way, and especially that male passengers are not placed in ladies' compartments which are provided with lavatory accommodation.

2. A ladies' compartment must always be one where the division goes right up to the roof of the carriage. The labels indicating ladies' compartments should be placed on the quarter light windows, and proper gummed labels should always be used.

3. The Station-master or person in charge of a Terminal Station must see that the notice "Ladies" is affixed to the windows of at least one first and one second class compartment of a Country train.

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CARRIAGE DOORS AND WINDOWS.

1. (a) Unless instructions are issued to the contrary, the doors of Carriages must not be locked except when a train is drawing in to a Ticket Collecting Station, and when entering such Stations the Driver must have the speed of his train well under control, and draw slowly along to the stopping place, so that the platform staff may, without risk or difficulty, lock all the doors before the train comes to rest. This does not apply to any train which is checked by travelling Ticket Collectors unless a portion of any such train is composed of non-corridor cars, nor does it apply to any train on which a Conductor is employed when it is provided elsewhere that the Conductor shall make the check. (See Book of Instructions issued to Train Conductors and Travelling Ticket Collectors.)

(b) When the train is arriving the platform staff must be in readiness to receive it, and where sufficient men are available one man should be told off to each car.

(c) The doors of compartments of non-corridor cars in which prisoners or lunatics are being conveyed must, if the officials accompanying such persons require it, be locked on both sides.

2. **Sliding Doors.** — In order to prevent the rain beating in and wetting the seats and mats, every effort must be made during wet weather to close the doors of these cars, and particular attention must be given to this matter by Guards and Station Staffs at Terminal Stations.

3. **Car Windows.** — (a) Certain outer windows of suburban sliding door cars, and of country APL and BPL cars are hinged at the top, and fitted with a carriage lock at the bottom to keep them closed. The windows referred to are those on the outside of the casing into which the door slides. These windows should not be unlocked except for the purpose of cleaning the window surfaces that are not otherwise accessible; when the cleaning has been done, the windows must be at once securely locked.

(b) Any such window noticed unsecured must be immediately closed and locked, otherwise it may swing outwards and cause damage or personal injury. All concerned, particularly those engaged in carriage cleaning, must give this matter close attention.

4. (a) In connection with Race, Show, Football, and other special traffic, all windows, and in addition, all Sliding Doors, are to be opened (weather permitting) on the platform side before trains are docked at the platform of the entraining station, on both forward and return journey, so as to obviate breakage of windows by rush of passengers.

5. Officers-in-Charge must see that the foregoing directions are complied with, and specially instruct Guards and Platform Staff according to requirements.

EXHIBITION OF NOTICES IN CARRIAGES.

Carriages which stand at Stations must be examined from time to time in order to see that the proper Notices are exhibited in each compartment. This refers more particularly to the Notices offering a reward for information which will lead to the conviction of any person who may

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damage carriage fittings. It is important that such Notices be plainly exhibited, and if any be missing, the Chief Time Tables Officer must be advised, the class and number of the carriage being given.

SANITARY ACCOMMODATION ON TRAINS.

1. In addition to the examination of carriage lavatories at Terminal Stations, the Guard, if there be no Conductor with the train, must inspect such lavatories at all Refreshment Room Stations where the train stops for a sufficient time to enable this to be done. If there be a Conductor with the train, then the Conductor must perform this duty.

2. In any case where the pipes are found to be blocked or the appliances out of order, the services of the Train-examiner should be obtained, and he must promptly render any assistance required by the Transportation Staff.

PASSENGER ACCOMMODATION IN TRAINS.

1. Attention is at times called to the want of sufficient accommodation on Country trains, more particularly in connection with Country Race and Excursion traffic. The Guard working any such train and Station-masters generally should maintain a close watch on the Passenger traffic, and keep the District Superintendent advised of requirements, both first and second class.

2. The Station-master at a Depot Station must be prepared to provide additional accommodation without delay whenever it is reasonably practicable to do so.

3. The Guard should be particular in promptly advising the Depot Station of the state of his train, so that, if necessary, additional accommodation may be provided or spare cars may be detached to avoid unnecessary haulage. He should also, when working a Country Special or Excursion train, submit a report stating whether the train was heavy, moderately heavy, or light in each class, also whether the special arrangements made in connection with his train fully met the requirements of the traffic, or if there were too much or too little room, together with any suggestions for a possible improvement on future occasions.

4. On any train on which a Conductor is employed he will be responsible, instead of the Guard, for giving the necessary advices as required by clauses 1 and 3.

5. The Porters at Metropolitan and Suburban Stations must point out to passengers where there is room in the trains so that certain compartments will not be overcrowded while others are more or less empty. At Spencer-street, Flinders-street, Prince's Bridge, and the more important Stations, Porters should, before a train arrives, inform Passengers where, in accordance with their experience, carriages with the most room generally stop.

PASSENGERS TRAVELLING IN VANS.

1. **Passenger and Mixed Trains.**—(a) The attention of Guards of Passenger and Mixed trains on Country Lines is called to the notice which is posted in their Vans, prohibiting passengers from travelling therein, and they are directed to see that it is strictly carried out, and that each passenger travelling in the Van is in possession of a ticket or free pass for the journey.

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(b) Except on Suburban Lines, no passenger other than authorised officers, holders of Parliamentary Gold Passes, and other persons who have been granted special permission, must be allowed to travel in the Guard's Van.

(c) **Suburban Trains.**—Provided there is no accommodation in the carriages, a few passengers may be allowed to travel in the Guard's Van of ordinary suburban trains and suburban race and show trains; but the number of passengers in the Van must be strictly limited to eight, so as not to interfere with the Guard in any of his duties; and he must reserve sufficient space to enable him to move readily from side to side of the Van to observe Fixed Signals and to apply the Air Brake or Hand Brake when necessary.

(d) Telegraph Line Repairers in the employ of the Postal Department may be allowed to travel in the Guard's Van when on duty. Second class tickets to be held.

(e) Parcels Coach No. 3CM has been fitted with observation windows in the roof and a removable platform in order that inspection of the Overhead Equipment may be carried out by the Overhead Staff whilst the coach is in service. Any member of the Overhead Staff requiring to use this coach must hand to the Guard a permit signed by the Overhead Superintendent, Assistant Overhead Superintendent, or Overhead Inspector, specifying the name of employee, date and trips to be run, and the Guard must then permit him to travel in the Parcels Coach and use the removable platform. On completing the trips specified the removable platform must be replaced by the Overhead Employee in the rack provided for it, and the Guard must then cancel the form by writing the word "Cancelled," with his signature, time and date, across the face. The Form must be attached to and handed in with the Guard's Running Statement.

2. Electric Trains.—(a) The Motorman for the time being in charge of an Electric train must not allow any unauthorised person to ride in the leading Brake-van, and not more than six persons, exclusive of the Motorman, shall be allowed to ride in the leading Brake-van at the same time.

Except in case of actual necessity, no official must converse with the Motorman whilst the train is in motion.

(b) In addition to the Heads and Assistant Heads of Branches, the officials named hereunder are hereby authorised to ride in the leading Brake-van of an Electric train on presentation of their official Pass, Badge, or Special Permit:—

(i.) Supervising Officers—

Outdoor Superintendent
Workshops Manager, Jolimont
Supt. of Loco. Running
Supt. Goods Train Service
District Engineer
Metropolitan Superintendent
Overhead Superintendent
Safe Working Officer
Supervisor of Signals and Telegraphs
Maintenance Engineer
Maintenance Foreman

Electric Running Inspector
Brake Inspector
Rail Motor Foreman
Roadmaster, North Melbourne or Oakleigh
Road Foreman (Arden-street, Flinders-street, or Oakleigh)
Asst. to Metropolitan Supt.
Block and Signal Inspector
Metropolitan Traffic Inspector
Travelling Foreman

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- (ii.) Equipment Examiner — See specimen of Badge hereunder:—

<p>ELECTRIC TRAIN EQUIPMENT EXAMINER 1</p>	<p>Equipment Examiner's Badge.</p>	<p>ACCESS PERMIT to all Vans of Electric Trains 1</p>	<p>Reverse Side</p>
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- (iii.) Officials who may be required to travel for special work at infrequent intervals. See specimen Form of Permit hereunder, which must be signed by the Chief Mechanical Engineer or Chief Electrical Engineer.

Specimen of Form referred to in sub-section (iii).—

<p>Permit to Ride in Leading Brake-van. Mr., whose title is is hereby authorised to ride in the leading Brake-van of an Electric train until 19..</p>
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- (iv.) Employees acting under the directions of the Motorman and authorised as prescribed in clause (f) of Regulation 68, or clause (c) of Regulation 154, or instructions supplementary to such Regulations.

(c) No person other than an official, whose duty actually necessitates his doing so, must be allowed to ride in an intermediate Van; the name and address of any unauthorised person found therein must be obtained, and the circumstances reported. The Driving Compartments and outer doors of these Vans must be kept locked.

(d) The door of the Driving Compartment in the rear Van must be kept locked.

(e) Van Goods, Parcels, etc.—Unless specially authorised, Milk Cans or Parcels must not be placed in the leading Van; in exceptional cases, the Guard may place such goods in an intermediate Van, but the doors must not be left unlocked; see Instructions under the heading of Loading of Milk, Eggs, etc., and Parcels in Brake-vans on page 180.

3. Goods Trains.—(a) When any Passenger (other than an authorised Officer, holder of a Parliamentary Pass. Postal employe on duty, or other person who has been granted special permission) desires to travel in the Van of a Goods train, he must, before being allowed to do so, sign the authorised Indemnity (Form TR 88) relieving the Commissioners of all liability, which must be duly witnessed (the **FULL** name being signed) by the Station-master or other responsible official.

- (i.) No person under twenty-one (21) years of age shall be permitted to ride in the Van of any Goods train unless an Indemnity relieving the Commissioners of all liability, duly signed by the Parent or Guardian, be lodged.

- (ii.) A female passenger unaccompanied by a male passenger shall not be allowed to travel in the Van of any Goods train except by special permission of the General Superintendent of Transportation.
- (iii.) Except in the case of Drivers holding a Ticket or Pass, and travelling in charge of Live Stock, no passenger shall be allowed to travel by any train by which any loaded Powder Van is being forwarded. See clause 9.
- (iv.) Holders of Periodical Tickets with the monogram of the Commercial Travellers' Association or the word "Van" shown thereon, have lodged a general guarantee with the General Passenger and Freight Agent, and, subject to sub-clauses (b) and (c) of clause 2 hereof, are to be allowed to travel in the Van of a Goods train without signing the guarantee; this does not, however, entitle them to travel in the Vans of Passenger or Mixed trains.
- (v.) Passengers must hold a Ticket or Free Pass for the journey.
- (b) Except as shown hereunder, Goods trains specially enumerated in the Working Time-table may be stopped to pick up or set down passengers at any Station outside the Suburban Residential Area, viz., outside 20 miles from Melbourne.

(i.) No train of which the number of vehicles shall exceed 25 must be stopped for the purpose of clause (a) hereof at any of the Stations named herein:—Riddell,* Macedon,* Chewton, Myer's Flat, Trantham, Musk, Grovedale, Jung, Wandong, Great Western,* Armstrong,* Clyde, or Loch.

(ii.) Goods trains, other than those shown in the list in the Working Time-table, and Live Stock trains, must not, except in cases of emergency, be specially stopped for passengers, but passengers may travel by any Goods train (other than a Ballast train) provided the train is for other reasons required to stop at the entraining and alighting Stations. In the event of any of the trains shown in the list being altered, it is to be understood that these instructions will apply to the altered train.

Station officials should bear in mind that although a Goods train (not a regular Goods train) may be originally scheduled to stop at certain Stations, exigencies may subsequently require that the Stopping Stations shall be altered. Before booking a passenger, proper inquiries should be made to ascertain whether the Goods train is for other reasons required to stop where the passenger is to board and alight; if the train shall not stop at these Stations the passenger must not be booked.

(iii.) **Fast Goods Trains.**—Passengers are not allowed to travel by Fast Goods trains to Ballarat or Bendigo unless specially authorised by the Commissioners, or the General Superintendent of Transportation. Members of the Federal or State Parliament are, however, exempt, and may be permitted to travel as required.

(c) The fly-leaf of the book of Indemnity Forms must be duly filled up, signed by the responsible employe and handed to the passenger, who must at the same time be informed that he will require to

*Up journey only, prohibited at stations marked thus.

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deliver it up at his destination along with the Ticket; a separate Form must be filled in for, and signed by, each passenger. Guards of Goods trains must, at the commencement of the journey, sight the permit, and Ticket or Pass, which allows the passenger to travel.

When Goods trains other than those listed are stopped for passengers either to entrain or detrain, Guards must note the fact on Statement of Running, and show the Station at which the passengers entrained.

(d) The Station-master must report to the General Superintendent of Transportation any instance in which a Goods train, other than one specified in the list in the Working Time-table, or one scheduled to stop at both the entraining and alighting Stations, is specially stopped to pick up or set down passengers. The reason therefor must also be stated.

(e) Passengers who desire to proceed to Melbourne by a Goods train must not be booked beyond Footscray on the Bendigo and Ballarat Lines, Essendon on the North-Eastern Line, Newport on the Geelong Line, Camberwell on the Healesville Line, Oakleigh or Caulfield on the Eastern or South-Eastern Lines, and Ballarat East for Ballarat on Down journey. They must alight at the Stations named, and proceed thence by the next Suburban Passenger train. With these exceptions, no Goods train must be stopped at any Suburban Station for the purpose of setting down passengers; nor must they be stopped at any other than the Suburban Stations named in this clause for the purpose of picking up passengers who desire to proceed to a country Station.

(f) Passengers joining or leaving a train in the Goods Yard at any Station should be properly directed, and, if necessary, accompanied either to or from the train. Passengers booked to Geelong by a night Goods train are to be informed that they may have to leave the train at a point some distance from North Geelong Station.

4. Members of Parliament, and Departmental Officers with Metal Free Pass Tickets, and Departmental Officers with Book Free Passes, are to be allowed to travel in the Brake-van of any train, including trains by which loaded Powder Vans are conveyed.

5. Officers and employes whose duties require them to travel in the Van should not take possession of the lookout seats required by the Guard.

6. The Guard must not permit a passenger to ride in the Guard's seat, i.e., on the left hand side of the train in the direction in which it is travelling.

7. (a) No unauthorised person must be allowed to enter a Brake-van for the purpose of posting a letter in the loose mail bag.

(b) No person except the Travelling Postmaster or Postmasters, on duty, are allowed to travel in any Postal Van, or in the portion of any bogie Van reserved for Postal Work.

8. Except as prescribed in clause 4, passengers must not under any conditions be allowed to travel in the Vans of Ballast Trains.

9. Seating Accommodation for Drivers.—(a) The following Stations have been supplied with seats for the use of Drivers who travel in the Brake-vans of trains by which Live Stock is conveyed:—Wodonga, 2 seats; Benalla, 2 seats; Seymour, 2 seats. Should more than the number shown be required at Wodonga, seats may be procured from Benalla or Seymour.

(b) The Station-masters, Seymour and Benalla, to arrange for seats to be supplied as may be required on their Sections, and to draw on one

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another when necessary. On arrival at Newmarket, the seats must be removed from the vans and returned promptly to their respective Stations. In every instance they must be waybilled.

(c) Every van in which a Drover travels at night must be supplied with a Roof Lamp properly trimmed and lighted.

TRAIN CREWS CHANGING OVER.

1. Engine crews of Passenger and Mixed Trains are allowed 5 minutes to change over, and any time occupied in excess of that period is to be regarded by Station-masters as overtime, and included accordingly in the running reports.

2. Where train crews change over each train must, unless special instructions are issued to the contrary, be drawn clear into the Station Yard if the proper signals are exhibited.

VICTORIAN AND SOUTH AUSTRALIAN VEHICLES.

1. **Between Murray Bridge and Adelaide.**—(a) Victorian vehicles with a rigid wheel base of more than 11ft. 6in. are not allowed to run beyond Murray Bridge.

(b) Victorian Passenger Stock with side chains of less than 1 inch in diameter, and on which the Air Brake is not in operation, must not be taken beyond Murray Bridge by any Passenger train. If attached to a Goods train, such vehicles must be placed in front of the rear Brake-van.

(c) Trucks loaded for Stations beyond Murray Bridge should, as far as possible, be fitted with the Air Brake apparatus. Trucks on which the Air Brake is not in operation must not be attached to a Passenger train.

(d) South Australian trucks attached to a train en route must be placed as near to the rear as possible.

2. **Victorian Lines.**—South Australian vehicles, if fitted with the Air Brake Apparatus or with the Air Brake Pipe only, may run over the Victorian Lines, subject to the instruction, "Trucks fitted with Pipes not Operating Brake Blocks"—Sub-clauses (c) and (d), page 601.

3. **South Australian Vehicles, Etc., to be Promptly Returned to Border Station.**—(a) In order to avoid interchange charges, it is important that South Australian vehicles be returned to the Border Stations with the least possible delay, and in the event of any such vehicle being detained owing to its being damaged, or to a hot axle box, the Superintendent of Goods Train Service and the Station-master at the Border Station must be informed by wire, giving—

(i.) The number and description of vehicle, the date and train by which it was received, and

(ii.) The cause of delay, and the date and train by which it was despatched, after having been attended to.

(b) A report giving the above-mentioned particulars must be forwarded to the Chief Mechanical Engineer, Spencer-street, by the officer in charge of the Depot concerned.

(c) Screw couplings, hose pipes, tarpaulins, lashings, and any other gear belonging to the South Australian Railways (particularly any gear that has been detached from vehicles by employees of the Rolling Stock Branch) must be promptly returned to South Australia, waybilled direct to the Chief Mechanical Engineer, Adelaide.

Note.—This instruction does not apply to the gear of JOINT STOCK vehicles.

(b) It must be understood that payment is only to be accepted when it is quite clear that the damage has been accidental. In any case in which it appears to have been of a wilful or malicious character, the name and address in full of the person concerned, and, if possible, witnesses must be obtained; special precaution must be taken to verify by means of the person's card, or an addressed envelope which has passed through the Post, the correctness of the name and address furnished.

(c) Whenever any damage to carriage fittings is discovered on a Suburban train, the Guard must communicate with the Stations through which the train has passed, to enable the Station Staff, if possible, to recall to mind any passenger who has alighted, and whose appearance may have created suspicion.

(d) Compensation for damage to Departmental property other than that above specified will be assessed by the Head of the Branch concerned.

(e) The Station-master, Guard or Conductor, as the case may be, must in every instance at once report full particulars of any damage or breakage.

2. If a request be made for the recovery of any article that has dropped down the window recess of a carriage door, a charge of 2s. 6d. must be made for the work to be done.

CARRIAGE CLEANING.

The cleaning of all passenger stock, Brake-vans, Horse-boxes, and Hearse trucks, stabled at Flinders-street and at terminal Stations other than the Northern Suburbs, is under the supervision of the Workshops Manager, Jolimont. The cleaning of all other passenger stock, and, in addition, the cleaning of Brake-vans, horse-boxes and hearse trucks within the Metropolitan area is under the supervision of the Chief Foreman of the Metropolitan Car and Wagon Shops, North Melbourne. At Ballarat and Bendigo, it is under the supervision of the Locomotive Foremen; and at all other Stations the Station-masters are responsible for seeing that all such vehicles standing at their respective Stations are kept clean.

In order to avoid any misunderstanding as to the proper method to be adopted in cleaning carriages, the following instructions are to be observed:—

1. Inside of Carriages.—The inside must first be dealt with in the following manner:—

(a) The rugs or mats and the cushions must be removed in every case. The rugs or mats must be shaken and the cushions brushed outside the compartment, and if the cushions require beating, the work must be done sufficiently far away from the carriages to prevent the dust entering the compartments.

(b) The compartment must then be swept, particular attention being given to all crevices, to that portion of the flooring under the seats, and to the seats under the cushions. The lavatory pans, basins, spittoons, metal fittings and floors must also be thoroughly cleaned, and all metal fittings

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polished. Whiting must be used for cleaning lavatory basins and metalware; no preparation that is likely to scratch silver of lavatory basins, etc., must be used.

- (c) The windows, mirrors, and inside ventilator lights must be well cleaned and polished.
- (d) When the compartment has been swept, the rug or mat, and cushions replaced, and time has been allowed for the dust to settle, the dusting of the compartment must be proceeded with, for which purpose hand brushes and dusters are provided. This duty must be thoroughly performed, attention being given to the cushions, arm-rests, window-ledge, window louvres, and curtains, racks, ventilators, panels, and every part of the interior where dust is likely to accumulate. The backs of each cushioned compartment must be well brushed, the leather cushions and backs must be well rubbed with a clean cloth, and all buttoned holes freed from dirt.
- (e) The floor must be mopped or scrubbed out regularly as required. Smoking compartments to be scrubbed out, if necessary, when carriages are cleaned. The walls or wood-work of second-class compartments to be well dusted with a clean cloth every time such carriages are cleaned. Lavatory compartments must be well washed out and disinfected, care being taken to see that no paper or other substance is left to obstruct the exit pipe of the lavatory or wash basin. The whole of the inside must be thoroughly washed with water and sponges every six months.
- (f) **Deodorisers.**—In all Special Sleeping, Parlor, AE, BE, ABE, BDSE, AW, BW, and ABW cars a deodoriser is fitted in each W.C. compartment.

Every machine must be kept in proper working order by the staff concerned in the cleaning of cars. The container must be regularly filled with a special preparation described as deodorising liquid, which must be kept on hand at all Depots where carriages are cleaned; on no account must any liquid other than that authorised be used. Provided the machine is filled and operating properly, the liquid should last at least two weeks. The following directions should be observed in refilling:—

- (i.) Only the authorised deodorising liquid must be used.
- (ii.) To open the top lid, press a nail or match through the small hole in the side of the container to push back the spring catch, at the same time lifting the hinged lid.
- (iii.) Unscrew the cap in the top of the container, taking care that the leather washer is not lost.
- (iv.) Using a funnel, fill the container to within one inch of the top, taking care not to spill the liquid over car fittings, then replace the washer and cap, and screw down firmly.
- (v.) See that a wick of small diameter is in the correct position, i.e., one-half hanging in the circular

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tube and the other half hanging in the liquid, in the space between the tube and the edge of the container.

NOTE.—In some machines, which have two circular tubes, only one tube is to be provided with a wick, the other tube is to be left vacant.

(vi.) Replace the lid in the closed position.

- (g) All breakages or damage to fittings, etc., must be promptly reported.
- (h) Unless specially authorised no employe is allowed to enter a Motorman's compartment. Switching on or off of electric lights on Cars in the yard for cleaning must be done by authorised employes only.

2. Outside of Carriages.—(a) Unless specially authorised, no employe is allowed to go on to the roof of a Car within the electrical area; employes authorised to work on the roof of Cars must make themselves conversant with the special instructions respecting that work.

(b) The first duty of the men appointed to clean the outside of carriages is to see that the doors, windows, and ventilators of every compartment which is about to be cleaned are properly closed.

(c) At Spencer-street, Flinders-street, and where practicable at other Depots where there is a cleaning shed, the outside of all carriages must be thoroughly cleaned every six months with an acid solution of a strength not greater than one part of acid to nine parts of water, which must afterwards be hosed off with clean water. The outside must then be cleaned with soap and water, and afterwards the whole of the outside must again be thoroughly hosed off with clean water. Any carriage that had been previously waxed must be re-waxed after being thoroughly cleaned in the above manner and the date of the re-waxing written on the underframe. Joint Stock carriages and carriages forming the Sydney and Albury express trains must be cleaned and re-waxed every four months.

(d) When the cars are not washed they must be thoroughly wiped on the outside with a dry sponge cloth, which must be clean, and which must be well and frequently shaken to get rid of the accumulated dust, otherwise the varnish will be injured by being rubbed with a dusty cloth. Sponge cloths should be washed with soap and dried in spare time, so that they may be used time after time, until worn, when they may be further utilised for buffer cleaning.

(e) All windows must be well rubbed with a clean damp sponge cloth, and polished with a dry one, care being taken to clean the corners of the panes. When the glass is wet, either from rain or dew, chamouis leather may be used. The latter is expensive, and must not be used at any other time. The use of kerosene on window panes is strictly forbidden. After the panels and windows of the carriages have been attended to, the brass work must be cleaned, and polished with the authorised preparation, and rubbed with a cloth kept for the purpose, and thoroughly dried, to prevent early tarnish.

(f) Ventilator lights must be kept clean, and any accumulation of engine ash must be regularly swept or brushed off the roofs to prevent it being blown inside when the ventilator lights are opened by passengers.

(g) The white face of Tail Discs attached to cars must be washed, and attention must be drawn to any that require repainting.

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(h) Foot-warmers when in use must be placed in such a position that passengers will not be liable to trip over them. Leading hands must specially see to this.

3. Brake-vans, Passenger Trains.—Brake-vans on Passenger trains must be washed down on the outside in the same way as is provided in the foregoing for carriages; they must be swept and cleaned out daily, and be washed out once a week.

4. Brake-vans, Mixed and Goods Trains.—(a) In the Melbourne Yard, and at Ballarat, Bendigo, Geelong, and Maryborough, arrangements must be made, as far as is reasonably practicable, for the Brake-vans to be collected and placed for washing out early on Sunday morning. Any Vans required for out-going trains on Sunday night or early Monday morning, must be replaced prior to the Yard being closed after the completion of the late shift on Saturday.

(b) At Stations and places other than the Melbourne Yard, Bendigo, Ballarat, and Maryborough, the Station-master or other responsible employe must arrange for the vans to be swept out daily, and washed out weekly. Where the work is done by employees of the Rolling Stock Branch, the Station-master must confer with the Locomotive Depot Foreman as to the most suitable times, etc.

5. A Statement must be forwarded to the Metropolitan or District Superintendent, as the case may be, weekly, showing the number and class of any Van that could not be washed out and the reason therefor. The Superintendent must forward the Statement to the General Superintendent of Transportation, with any necessary remarks; Stations where the Van for Branch Line train is the only Van on hand will not be required to furnish a weekly statement, but in the event of the Van not being washed out the full circumstances must be at once specially reported to the Metropolitan or District Superintendent.

6. (a) A record of the Brake-vans attended to must be kept as under:—

Week Ending—	No of Brake-vans attended to.	§ No. of Employees Engaged in the Work.		Cost of Work.		
		No. of Employees.	Total Time Involved.	£	s.	d.

§Includes Shunters if they are kept on duty for the sole purpose of placing vans.

The money column must be totalled, and a statement compiled from the record forwarded to the General Superintendent of Transportation on the 1st July every year. This statement is independent of that furnished annually in April in respect of Car Cleaning.

7. It is important that special attention be paid to the cleanliness of the Guards' look-out windows of all Brake-vans.

8. Dog Boxes.—Dog-boxes must be scrubbed out and disinfected regularly.

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DISINFECTION OF CARRIAGES.

Sleeping Cars.—Sleeping cars must be disinfected once monthly with Formaldehyde Gas, by the aid of the Alformant Lamp, in which, by burning Paraform or Formalin Tablets, the gas permeates throughout the whole car.

Lavatories and Smoking Compartments.—Lavatories of cars on country trains, after being cleaned, should be deodorised with the authorised deodoriser to keep them in good order. It is also necessary to frequently spray the lavatories, and also the smoking compartments adjoining the lavatories, with a solution of Formalin (1 to 50), to neutralise the odor peculiar to them. At every Station where cars are cleaned, a supply of Formalin must be kept on hand for this purpose.

DEFECTS TO ROLLING STOCK.

1. (a) If an Officer or other employe should observe any defect in the condition of Rolling Stock he must at once inform, or arrange for the Driver or Guard to be informed of the circumstances.

2. (a) Any defect in a passenger car involving discomfort to passengers should be remedied as soon as practicable, and to ensure this Conductors (or Guards where no Conductors are on train) must give particulars of any faults to the Station-master at the terminal Station or at the Station where the car is detached; the Station-master, on receipt of this advice, will arrange for repairs being effected as follows:—

Defects.	Full particulars to be reported to—
Broken windows ..	Nearest Depot Foreman, if he has a Car Builder under him; if not, the nearest Works Foreman.
Other defects ..	Nearest Depot Foreman or Train Examiner.
Electric light faults ..	The nearest Depot Foreman or Train Examiner, and also the Train Lighting Inspector.

(b) Car Builders are engaged at the following Depots:—Ballarat, Bendigo, Stawell, Benalla, Maryborough, the Car and Wagon Shops, North Melbourne, and the Jolimont Workshops.

(c) On Lines where there is no Loco. Depot, the Station-master must communicate by wire with the Chief Time Tables Officer (Cars) and the Chief Foreman, North Melbourne Car and Wagon Shops (Axle), should urgent repairs be required to any carriage due to broken windows or to other damage. Where a Station is at or adjacent to a Loco. Depot, the Station-master must arrange locally for repairs being promptly effected.

(d) Officers and employes when travelling on the Suburban Lines (whether on duty or not) are specially desired to make a short note of any carriage defects, such as loss of or damage to, fittings, defective swing or sliding doors, catches, windows and sun screens, etc., and to enable repairs to be made promptly, report the particulars direct (by

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telephone, if possible) to the Workshops Manager, Jolimont. The number of the car, the train, and date, as well as the nature of defect, should be specified so that the car may be quickly located.

3. (a) Cleanliness of Passenger Cars.—The attention of Station-masters, Inspectors (Rolling Stock and Transportation), Guards and others concerned is specially directed to the matter of Carriage Cleaning. In any instance where it is noticed that a proper standard of cleanliness is not maintained or where there is cause for complaint in regard to the condition of the Passenger Rolling Stock, the matter should be reported.

(b) Class Letters and Numbers of Cars.—It is essential that the class letters and numbers painted on passenger rolling stock should be kept clean so that they may be conveniently read at night. To effect this the lettering must be washed with soap and water at least once per month, and in addition it should be wiped over daily with a damp cloth to remove dust and dirt. This duty must be closely attended to by the staff doing car cleaning work.

4. At Stations where the Carriage Cleaning is performed by employees of the Transportation Branch, Station-masters are reminded that they are responsible for the efficient performance of this duty, and that frequent personal supervision is necessary to ensure the proper standard of cleanliness being maintained.

SUPPLY OF WATER FOR CARRIAGES.

In order to ensure a supply of clean water for the use of passengers, the following instructions must be strictly observed:—

1. In every case in which the drinking water tanks in the carriages require to be refilled at Terminal Stations, the water must first be tested by drawing a glass-full and observing and tasting it in order to see whether it is clear and palatable. If the water show any sign of impurity, the tank must be flushed out at once and refilled with fresh water.

2. Special attention must be paid to the water supply in the vestibule carriages, and at every Station from which this class of carriage is in running the tanks, both drinking and lavatory, must be flushed or wiped out daily. The tanks can be examined when the large plug is removed. After replenishing the tanks, the covers on all the filling pipes must be replaced in their proper positions.

3. The water bottles in all cars must be given special attention; the bottles must be cleaned, and re-filled with fresh water by the Transportation Staff, as frequently as opportunity offers. On all regular trains this should be done at least once a day.

4. Filtered water must be supplied for drinking purposes whenever it is available, and before the filling is commenced a little water should be allowed to run to waste through the hose so as to ensure its cleanliness.

5. The water for the tanks on the cars attached to trains which run from Flinders-street and Spencer-street Stations, must be supplied by the Carriage Cleaners under the control of the Workshops Manager, Jolimont, and the Chief Foreman of the North Melbourne Car and Wagon Shops respectively. That for trains which run from Bendigo, Maryborough and Ballarat, by the Carriage Cleaners at those Stations. At

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all other places the water must be supplied by employes of the Transportation Branch, and the Station-master is responsible for the proper performance of the work.

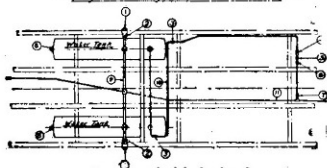
6. Special Instructions in regard to the supply of ice for carriages will be issued from time to time as may be necessary.

7. On Lines equipped with overhead electrical conductors, only such employes as are specially authorised are allowed to go on to the roof of any vehicle, or under any car fitted with electrical equipment.

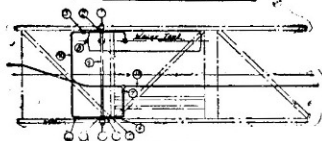
8. **Directions for Filling Water Tanks on Cars having the Water Supply under Air Pressure.**—(a) The following instructions must be observed by Officers and Employes concerned in the handling of cars equipped with the pressure flushing system:—

(b) In order that these cars may be supplied with water either side, they are provided on each side with Filling Nozzle (1), Main Cock (2), and Three-way Cock (3). See diagrams and detailed instructions thereunder.

—Diagram Showing the Location of Parts.—



—Sleeper, BE, BE & ABE.—



—APR & D.C.—



—DIPPER.
Index to Parts.—

NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Filling Nozzle.	5	Check Valve.	9	Water Filling Pipe.
2	Main Cock.	6	Strainer.	10	3-Way Pipe to Water Tanks.
3	3-Way Cock.	7	Isolating Cock.	11	Train Pipe.
4	Pressure Reducing Valve.	8	Hand Door.		

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- (c) Cars having a Tank (or Tanks) fitted with End Cocks—
- (i.) To cut off air supply to tank, operate the Cut Out Cock (3) in the pipework (10) leading to the tank.
 - (ii.) To release the air in the tank, open the Top Tank Cock (12) on the end of the tank. (The lower Cock is only for ascertaining the amount of water remaining in the tank.)
 - (iii.) Open the Main Cock (2) near the Filling Nozzle (1), and insert the Nozzle of the water hose.
 - (iv.) Turn on water.
 - (v.) Turn off the water immediately the water commences to run from the Tank Cock (12).
 - (vi.) Withdraw the hose and close the Main Cock (2) and Tank Cock (12).
 - (vii.) Open the air supply to the tank by operating the Cut Out Cock (3).
 - (viii.) In cases where a car has not been in use for some days, and there is a possibility that the water remaining in the tank may have become discolored or unfit for use, the tank should, before being refilled, be cleaned out as follows:—
Cut off air supply (see (i.)). Open the Tank Cock (12), and the discharge cock under the tank. Thoroughly drain the tank. Open the Main Cock (2) near the Filling Nozzle (1), insert nozzle of water hose, turn on water and allow fresh water to run out of tank through the discharge cock until perfectly clear; after which close the discharge cock.
- (d) Cars having a Tank (or Tanks) not fitted with End Cocks—
- (i.) To cut off the air supply to the tank and, at the same time, release the air in the tank, operate the Three-way Cock (3) in the pipe work (10) leading to the tank.
 - (ii.) Open the Main Cock (2) near the filling nozzle (1) and insert the nozzle of the water hose.
 - (iii.) Turn on the water.
 - (iv.) Turn off the water immediately water commences to run from the Three-way Cock (3).
 - (v.) Withdraw the hose and close the Main Cock (2).
 - (vi.) Open the air supply to the tank by operating the Three-way cock (3).
 - (vii.) In cases where a car has not been in use for some days, and there is a possibility that the water remaining in the tank may have become discolored or unfit for use, the tank should, before being refilled, be cleaned out as follows:—Cut off air supply (see (i.)), remove the plug in the "T" piece under the tank. Thoroughly drain the tank. Open the Main Cock (2) near the Filling Nozzle (1), insert the nozzle of water hose, turn on water and allow fresh water to run out of tank through the plug hole until perfectly clear, after which the plug should be replaced.

(c) **For both Types of Service.** — Should a leak or defect develop in any part of the water or air supply system, shut off the air supply at the

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Isolating Cock (7) in the pipework near the Train Pipe (11), but, if the leak or defect be confined to the wash basin or closet fittings, the Isolating Cock inside the car, near such fittings, should alone be closed.

(d) For the purposes of clause (c), Special Keys are provided at the following places, and the officers named shall be responsible for the Key or Keys being kept in a place of security known by and readily accessible to the Staff concerned:—

Workshops Manager, Jolimont	3	S.M., Dimboola	1
Chief Foreman, N.M. Car and		S.M., Serviceton	1
Wagon Shops	6	S.M., Ararat	2
Depot Foreman, Ballarat	1	S.M., Seymour	1
Depot Foreman, Bendigo	1	S.M., Benalla	1
S.M., Maryborough	1	S.M., Wangaratta	1
S.M., Mildura	1	S.M., Wodonga	1
S.M., Stawell	1		

(e) **Pan Flushing Valve.**—Care must be taken to see that the projecting spindle which is connected to the handle of the Pan Flushing Valve is properly lubricated with oil in order to guard against the valve sticking thus causing a leakage; all surplus oil must be removed after application.

INSTRUCTIONS FOR THE PROTECTION OF CARRIAGE CLEANERS WHEN ENGAGED IN THEIR DUTIES.

1. Whilst carriages are being cleaned or when ice is being placed in Dining Cars on a Line on which it is possible for other vehicles to be pushed against them, a Red Flag or Red Disc by day, and a Lamp with a square glass showing a Red Light by night, must be fixed on the end of the vehicle against which any other vehicle might be shunted. If it be possible for vehicles to be shunted against both ends of the carriages which are being cleaned, a Red Flag or Red Light, as the case may require, must be fixed on each end.

(a) If the carriages be standing on a Line parallel to a Running Line, the Red Lamp at night must be fixed on the lamp iron (or on the side of the Car) farthest away from the parallel Running Line.

(b) The person in charge of the Carriage Cleaners, for the time being, will be responsible for seeing that the men are protected in accordance with the foregoing clauses before commencing the work of cleaning carriages or placing ice into the roof wells, and during the time they are so engaged.

(c) An employee must not rely on the Red Hand Signal placed on a vehicle by another employee, except where two or more employees are working together as a gang, when the man in charge will be held responsible for the Red Signal being exhibited before he commences or permits the work to be commenced.

(d) Except where special instructions are issued to the contrary, no person is allowed to go on to the roof of a vehicle for the purpose of cleaning, placing ice or water in such vehicle, or any other purpose on any Line equipped with overhead electrical equipment. Special

Overhead wires are all charged, and always dangerous.

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Instructions for the protection of Employees required to go on to the roof of Vehicles at Spencer-street and Flinders-street will be issued by the Chief Mechanical Engineer and the Chief Electrical Engineer; employees concerned must make themselves conversant with such instructions.

2. The Lamps or Flags provided for the protection of the Carriage Cleaners must be removed from the vehicles after the work has been completed, and if not further required they must be taken to the lamp-room, or other appointed place.

3. If a man has to go from one side of a train to the other, he must either pass round at the end of the train furthest away from the buffer-stops, or else pass through a van or compartment, in all cases closing and fastening the doors after him.

4. (a) Carriage Cleaners are prohibited from riding on the engine and from getting on, off, or riding on the outside of vehicles in motion.

(b) Carriage Cleaners must not open the door of a Car on any train in motion.

5. Shunters or other employees conducting shunting operations must not shunt on Platform Lines, Sidings or into Car Sheds where carriages are standing, nor attach an engine or vehicles to the carriages until they have ascertained that no Red Flag or Light (indicating that Cleaners or other employees are at work) is exhibited. Shunters must also keep a good lookout when shunting on Lines adjacent to those on which carriages are being cleaned. Special attention is directed to Regulation 131.

The attention of Carriage Cleaners is directed to the instructions under the heading of "Car Windows." See page 371.

6. Attention is specially drawn to Regulation 24.

PROTECTION OF TRAIN-EXAMINERS AND OTHER EMPLOYEES ENGAGED IN EXAMINING OR TESTING BRAKES OR EXAMINING, LIFTING, OR REPAIRING CARRIAGES, TRUCKS, OR OTHER VEHICLES.—(Regulations 127 and 131.)

1. (a) Every employee engaged in examining, lifting or repairing carriages, trucks or any other vehicle (hereinafter described as Repair-work) is hereby instructed that, before commencing any work of this description on any Line or in any Siding where risk of injury to himself is involved, must, except as provided in clauses 4 and 6 of this instruction, give notice, according as the circumstances of the case may require, to the Station-master, Yard Foreman, Signaller, or Shunter, that he is about to perform such Repair-work, and that shunting towards such vehicles must be stopped until the Repair-work has been completed.

(b) The employee so notified must take the necessary action to afford the required protection, or else inform the employee to be safeguarded of his inability to do so, in which case the vehicle must, if necessary, be

Beware of overhead electrical gear and dangling wires; all are charged and always dangerous.

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labelled with a "Not to go" (Red) Card, so that it may at the first opportunity be placed in a position where the work can be performed with safety.

(c) Unless specially urgent, the work should not be carried out during foggy weather, even though Flagmen are appointed to protect the employe and prevent shunting movements from approaching.

NOTE. — The foregoing clauses will not apply to Repair Shop Sidings specially set aside for repair work; at these places the Points giving access to the Repair Sidings must be secured in a safe position by the employe in charge of Repair-work to prevent the entrance of other vehicles, otherwise, the Repair-work must be protected by a Scotch Block. The key of the lock by which the Points or Scotch Block is secured must be retained by the employe in charge of the Repair-work.

2. (a) The employe performing any Repair-work must fix a Red Flag by day and a Red Light by night on the end of the vehicle which is nearest to the entrance to the Siding, or if there be more than one entrance, then on the vehicle nearest to each entrance to the Siding, and he must remove such Red Flag or Red Light when the work is completed.

(b) No employe must rely on a Flag or Light placed on a vehicle by another employe, except in cases where two or more employes are working together as a gang, when the man in charge will be held responsible for the Red Signal being exhibited before he commences or permits the work to be commenced.

(c) If the vehicles be standing on a Line parallel to a Running Line, the Red Signal must be fixed on the side farthest away from the parallel Running Line in order that Trainmen shall know the purpose of the Signal.

3. (a) In addition to placing a Red Signal on the end of the vehicle, a Flagman must also be stationed when and where necessary to protect the employe carrying out the work; where, however, only a slight examination or repair requires to be made, and the employe effecting it is satisfied from the position of the vehicle that the work can be safely carried out without the services of a Flagman, a Flagman need not be employed.

(b) The Lamps or Flags provided for the protection of the man or men must not be removed until after the work has been completed and the man or men concerned are in a place of safety; if the Lamps or Flags be not then further required, they must be taken to the place where they are usually kept.

4. **Spencer-street.**—(a) As far as practicable, the Repair-work shall be performed in Banks Sidings "Y" and "Z," and, in connection therewith, the instructions shown hereunder must be observed by all concerned:—

(i) Before the Repair-work is commenced the employe about to perform such work must, in every case, obtain permission

Beware of overhead electrical gear and dangling wires; all are charged and always dangerous.

from the Yard Foreman in charge of the Cabin (Latrobe-street) near the entrance to the Banks Sidings; and before giving such permission, the Yard Foreman must make all necessary arrangements for local requirements.

- (ii.) On receiving permission for occupation, the employe before commencing Repair-work must see that the Hand Points that govern entrance to the Siding on which the work is to be performed, are set so as to prevent any engine or vehicle from entering upon the Siding, and that the Points are secured in that position by means of the special bolt and padlock provided for that purpose. During daylight he must also fix a Red Banner a short distance clear of the fouling point in the Siding; when it is not clear daylight a Red Light must be erected in the place of the Banner. For particulars as to height and design of the Banner see sub-clause (c), clause 7.
- (iii.) After having secured the Hand Points as prescribed in sub-section (ii.) hereof, the employe performing the Repair-work must not allow the Key of the special padlock to pass out of his possession until the work has been completed.
- (iv.) When the Repair-work has been finished, the employe who erected the Banner must, before removing it, satisfy himself that the Siding may be used for ordinary movements; he must then release the Hand Points and inform the Yard Foreman that the Repair-work has been completed, and that the Siding is again open for use.

(b) If necessity should arise for Repair-work to be performed on any Siding other than the Banks Siding "Y" or "Z," the responsible employe whose duty it is to supervise such work must communicate with the Yard Foreman supervising train movements in such other Siding, and, when necessary, a Flagman, equipped with the necessary Hand Signals and Detonators, must be appointed to protect the employe performing the Repair-work.

(c) The Yard Foreman must inform all Shunters concerned respecting the point of the obstruction and the character of the Repair-work.

(d) The employe requiring protection under these instructions must in every instance strictly comply with clause 3, whether a Banner, Deraill or Flagman be provided or not.

5. Flinders-street.—(a) At the Flinders-street Yard (which comprises all Running Lines and Sidings between Flinders-street Viaduct and Jolimont Junction and between Flinders-street and the River Yarra) the instructions shown hereunder will apply:—

- (i.) The Workshops Manager, Jolimont, will supply the employes who may be required to perform Repair-work with special bolts and padlocks by which the Hand Points governing the entrance to certain Sidings may be secured

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in either the normal or reverse position so as to prevent the shunting of vehicles into a Siding where the Repair-work is to be performed.

- (ii.) Before the Repair-work is commenced, the employe about to perform such work must, in every case, obtain the permission of the Yard Foreman, and before giving such permission the Yard Foreman must make all necessary arrangements for local requirements. When the Yard Foreman is prepared to give permission for the Siding to be closed he must first notify the Signaller in charge of the Box (or Boxes) controlling movements to the Siding, and, unless otherwise arranged by the Yard Foreman, the Signaller must at once take steps to prevent any movement towards the closed Siding, unless such movement is supervised by a Shunter, and the latter has been verbally informed of the Siding being closed for Repair-work.

- (iii.) On receiving permission from the Yard Foreman the employe who is to perform the Repair-work must see that the Hand Points that govern the entrance to the Siding on which the Repair-work is to be performed, are set so as to prevent any vehicle from entering upon the Siding and that the Points are secured in that position by means of the special bolt and padlock provided for such purpose. During daylight he must also fix a Red Banner a short distance clear of the fouling Point in the Siding; when it is not clear daylight a Red Light must be erected in the place of the Banner. For particulars as to height and design of the Banner, see sub-clause (c) of clause 7.

(b) Where it is not practicable to make provision for the Hand Points to be secured by the special bolt as prescribed in clause (a), a portable Derail is provided for the protection of the employe performing the Repair-work:—

- (i.) The employe performing the Repair-work must, before commencing such work, see that the portable Derail is secured on one rail of the Siding by means of the special padlock and must place two Detonators ten yards apart on one rail at a sufficient distance outside the point at which the Derail is to be secured, and erect the Red Banner between the Detonators and the Derail.

In the event of an engine or vehicle exploding a Detonator, the Driver or Shunter, as the case may be, must see that the Detonator is replaced.

- (ii.) The Derail must be fixed on the rail farthest from an adjoining Running Line and in each case the employe responsible for fixing the Derail must take care that it is one that in the event of a derailment would divert the derailed vehicle away from the adjoining Running Line.

(c) After having secured the Hand Points or Derail prescribed in sub-section (ii.) hereof, the employe performing the Repair-work must not allow the Key of the special padlock to pass out of his possession until the work has been completed.

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(d) When the Repair-work has been finished the employe who erected the Banner (or Red Light) must, before removing it, satisfy himself that the Siding may be used for ordinary movements and, if so, he must then remove the Derail Block (if one be in use), release the Hand Points and inform the Yard Foreman that the Repair-work has been completed, and that the Siding is again available for ordinary use.

(e) The employe requiring protection under these instructions must in every case comply with clause 2, whether a Banner, Derail or Flagman be provided or not.

(f) As far as practicable the first "Off" trains shunted should be placed into the left-hand Roads of each set of Sidings, looking to the east (towards Richmond) and in like manner the work on the left-hand Road should be completed before closing any other Road for Repair-work.

6. Train Examiners are provided with Brake Testing Tablets, and wherever it is necessary to examine or test the Brakes of a train having a locomotive attached, the following instructions must also be observed:—

- (a) Before proceeding to examine and test the Brakes of a train, the Train Examiner must inform the Driver that the examination and testing of Brakes are about to be made. The Driver must then see that the reversing gear of the locomotive is in the "mid-gear" position, and that the Hand Brake on the tender is applied; the Train Examiner must attach his Brake-Testing Tablet to the Regulator Handle on the Driver's side of the locomotive controlling the Train Brakes.
- (b) After the Brake-Testing Tablet has been attached to the Regulator Handle, and until such time as it is removed by the Train Examiner, the Driver must not alter the position of the reversing gear from "mid-gear," nor release the Tender Hand Brake, or move the locomotive.
- (c) When the examination and testing of the Brakes have been completed, the Train Examiner must so inform the Driver and detach his Brake-Testing Tablet from the Regulator Handle of the locomotive.
- (d) In the event of two Train Examiners being engaged on the examination and testing of Train Brakes, the Senior Train Examiner must obtain his assistant's Brake-Testing Tablet, and attach it with his own to the Regulator Handle of the locomotive. When the examination and testing of the Brakes have been completed, the Senior Train Examiner, after satisfying himself that his assistant has completed his work, must remove both Brake-Testing Tablets from the Regulator Handle of the locomotive.

7. General.— (a) All Wash Dock Sidings, Car Shelter Shed Sidings, and Repair Sidings, must be regarded as Sidings at which employes may be working and require to be warned in accordance with Regulation 131.

WORKING OF TRAINS.

(b) The Flagman appointed to protect an employe engaged in Repair-work must place and keep two Detonators on one rail of the Line on which the Repair-work is to be performed, and must stand exhibiting his Red Signal at a point where his Hand Signal will be seen ahead after the explosion of a Detonator.

The employe who requires the protection of a Flagman must satisfy himself that the Flagman thoroughly understands his duties, and prior to commencing the Repair-work he must inform the Flagman of the position of the vehicle or vehicles to be protected and the Siding on which they are standing, and give any other information that is considered necessary in the interest of safety.

As an additional precaution to prevent the vehicle or vehicles being moved, a sufficient number of Brakes, if available on vehicles in the same Siding, must be applied. If Brakes be not available, the wheels must be scotched.

(c) The Banners prescribed in clauses 4 and 5 for Repair-work at Spencer-street or Flinders-street, or hereafter supplied for similar use elsewhere, are of the design shown in the margin hereof; the Banner or (when used in place of the Banner) the Red Light must be at least 3 feet 6 inches above rail level.

<p style="text-align: center;">DANGER</p> <p style="text-align: center;">ROAD CLOSED</p>
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No person other than the employe who erected or fixed it, must remove the Banner, Red Light, or Derrail.

(d) Employes engaged in Shunting operations must keep a good look out for any vehicle which is protected by Hand Signal or Derrail, and must exercise great care to prevent any engine or vehicle from coming into contact with any vehicle that is so protected; a good look-out must also be kept when shunting on Lines adjacent to those occupied by vehicles on which an employe is at work, and as far as is reasonably practicable, such employe must be advised of the shunting operations to be performed.

8. (a) On Lines equipped with overhead electrical conductors, only such employes as are specially authorised are allowed to go on to the roof of any vehicle, or under any car fitted with electrical equipment.

(b) Special instructions will be issued by the Chief Mechanical Engineer and Chief Electrical Engineer with regard to the protection of employes examining and repairing electrical stock; employes concerned must make themselves familiar with such instructions.

(c) Every employe is, however, reminded that, in accordance with Regulation 24, he must exercise proper care in the performance of any duty which exposes him or a fellow employe to danger or risk of personal injury, and, further, every employe must prevent, as far as possible, reckless exposure to danger on the part of any other employe.

WORKING OF TRAINS.**PROTECTION OF EQUIPMENT-EXAMINERS OR ELECTRICAL MECHANICS WORKING AT PANTOGRAPHS UNDER LIVE WIRES.**

1. Where, in cases of emergency, it is necessary to lubricate or perform other work at a Pantograph whilst the Car is under a Live Wire, the Equipment Examiner or Electrical Mechanic who is required to perform such work, must in every case first obtain written authority from the Senior Equipment Examiner then in attendance, and unless otherwise ordered the following instructions must be observed:—

Before going on the roof of the Car the Equipment Examiner, or Electrical Mechanic, as the case may be, must take all necessary precautions for his safety; he must:—

- (i.) Lower the Pantograph.
- (ii.) Close the Isolating Cock leading towards the Magnet Valve.
- (iii.) Open the Pantograph Cut-out Switch, the Air Compressor and Protective Relay Switch and the Dynamotor Switch.
- (iv.) Close and secure the door of the Driving Compartment, which must be unoccupied.

2. (a) If a Motorman be in charge of the train, the Equipment Examiner or Electrical Mechanic must, in addition to carrying out the provision of clause 1, personally inform the Motorman of the character of the work about to be performed, and the Motorman must endorse the written authority held by the Equipment Examiner or Electrical Mechanic.

- (i.) If the Pantograph, at which the work is to be performed be at the leading end of the train, the Motorman must leave the Driving Compartment; he must, however, remain in the Van and prevent any person from entering the Driving Compartment until he has been informed by the same Equipment Examiner or Electrical Mechanic that the work has been completed and the directions laid down in sub-clause (b) hereof have been carried out.
- (ii.) If the Pantograph be at the rear end of the train, the Guard must act as laid down above for the Motorman.
- (iii.) If the Pantograph be on an intermediate car, or if the Motorman be not on the train, a competent man must be stationed in the respective Van compartment with instructions to act as laid down above for the Trainmen.

(b) When the work at the Pantograph has been completed, the employe who performed such work must descend, and personally inform the Motorman (or Guard), and must open the Isolating Cock of the Magnet Valve, close the Pantograph, Cut-out Switch, and raise the Pantograph for the Motorman.

3. The foregoing instructions do not apply to the Car Sidings at Spencer-street or Flinders-street, nor to the Jolimont Workshops Sidings; specific instructions for employes engaged in train-repair work will be issued by the Chief Mechanical Engineer and Chief Electrical Engineer in respect of these places; employes concerned must make themselves familiar with such instructions.

PROTECTION OF EMPLOYEES ENGAGED IN ERECTING OR REPAIRING BUFFER STOPS.

1. Every employe in charge of the repairing or erecting of Buffer Stops on Sidings where shunting operations might take place during the progress of such repairs or erection must, before commencing such work, see that the following precautions are observed:—

(a) He must personally inform (as the circumstances of the case may require) the Station-master, Yard Foreman, Signaller, Leading Shunter or Shunter or other employes in charge of shunting operations or movement of engines or vehicles on to the Siding on which the repairs are about to be effected; he must make it quite clear which Siding is referred to, and after having been so informed any employe going off duty prior to the completion of the repairs, etc., must, before leaving duty, inform the employe by whom he is relieved, of the circumstances.

(b) Temporary Buffer Stops must be placed across the Siding at least 50 feet from the Buffer Stops being repaired, and, where practicable, the employe in charge of the work must arrange for four vehicles (if available) being placed in front of the temporary Buffer Stops, and see that the Hand Brake on each vehicle is pressed hard down and secured by pin or ratchet.

(c) In Country Sidings or where four vehicles are not available, the employe in charge of repairs must place a Hand Derail 50 feet in advance of the temporary Buffer Stops.

(d) The employe in charge of repairs must see that the Hand Derail or vehicles are not removed until completion of the repair work, and, in the event of it being necessary to remove them temporarily, the repair work must not be continued until they are replaced.

(e) In addition to the above precautions, a Red Flag with a handle four feet in length, must be exhibited alongside the Hand Derail, or, if trucks are provided, the flag must be securely lashed horizontally across the front buffer of the vehicle which is furthest away from the temporary Buffer Stops, in such a way that the flag shows prominently towards the entrance of the Siding; when it is not clear daylight a lamp showing a Red light must be used in the place of the Flag.

2. When the work is completed, the employe in charge must so inform the employes in charge of shunting operations and remove the temporary Buffer Stop, Red Signal, and, if used, the Hand Derail.

3. Unless specially authorised, the repair work referred to above must not be performed at night.

PUSHING TRAINS ON RUNNING LINES.—(Regulation 201.)

NOTE.—These instructions also apply in the case of an Electric Train which is being driven from any cab other than the leading cab, except when the movements of the train are being controlled by the Motorman in the leading cab by means of the Air Brake.

When permission has been given for a train to be pushed on any Running Line in the ordinary working of traffic, or when trains are

pushed in accordance with Regulation 201, the following directions must, unless instructions are issued to the contrary, be strictly adhered to:—

1. The Air Brake must be continuous throughout the train, and not more than 3 trucks fitted with pipes not operating Brake blocks must be together; the leading vehicle must be fitted with the Air Brake in operation.

2. When in accordance with sub-section (ii.) of clause (a) Regulation 201, permission is given for a train to be pushed, on a Line worked under the Train Staff and Ticket system, the Driver must be in possession of the Train Staff for the Section, and unless otherwise ordered the pushing must be done during daylight only.

3. On Broad Gauge Lines the speed must not exceed a rate of 10 miles per hour, and on Narrow Gauge Lines it must not exceed half the rate shown for the respective sections in pages 295-296.

When passing around any curve of less than eight chains radius the speed must not exceed a rate of five miles per hour.

4. (a) A Guard, Shunter, or other competent employe with the necessary Hand Signals must always ride on the leading vehicle, and in such a position as to be able to signal to the Driver. If the train be of such a length that the Driver cannot keep the employe or the employe's Hand Signal on the leading vehicle in sight, an additional man or men must be placed on the train to repeat such employe's Signals to the Driver.

Where pushing is authorised during darkness, a Lamp showing a White Light must be attached to the leading vehicle, irrespective of the Hand Lamp of the Guard or Shunter.

(b) The Driver must not continue to push the train, which must be promptly brought to a stand, unless the Hand Signal of the Guard or Shunter on the leading vehicle, or the Hand Signal of the employe who has been intermediately placed, is in view.

5. The Driver must keep a good look-out for Fixed Signals, and must be careful not to push the front vehicle past any Fixed Signal that applies to the Road or Siding on which the operation is being conducted when such Signal is at Stop. The Guard or Shunter whose duty it is to ride in the leading vehicle must be prepared to apply the Brake should the necessity so arise, in order to prevent the leading vehicle passing the Signal at the Stop position.

Where the Fixed Signal is controlled by a Track Circuit and such Signal has been placed to the Proceed position, the Signal will be reversed to the Stop position when the leading pair of wheels enters the Track-circuited Section to which the Signal applies. In such circumstances the Driver may continue to push the train, unless he receive a Hand Danger Signal to stop, in which case the train or vehicles must at once be brought to a stand.

6. Should it become necessary during the pushing operation to foul or pass over any Public Crossing where gates are not provided, or where Gates are provided and they are not shut across the Roadway (see list of such Gates, on page 231), the Guard, Shunter, or other employe, must walk over such Crossing in front of the leading vehicle, and see that pedestrians, animals, and vehicles are kept clear.

WORKING OF TRAINS.

7. (a) Parcels Coaches.—Whenever practicable, a parcels Coach must be driven from the leading compartment. Where it is not practicable for the Motorman to change ends the Guard must ride in the leading compartment, being prepared to stop the car by means of the brake, or to signal the Driver as may be necessary.

(b) Except where special instructions are issued to the contrary, the Driver must always be in the Motorman's compartment at or nearest to the leading end of the train, when shunting the cars of Electric trains. (See instructions respecting Disabled Electric trains, pages 487-492.)

8. Subject to the foregoing, permission is given for trains to be pushed on Running Lines at the following places—for instructions re Pier Lines, see pages 403-405:—

Places.	Additional Orders.
Between Bendigo and the Bendigo Gas Company's Siding	Number of vehicles not to exceed 10. Work to be performed by Bendigo Yard engine and in daylight only.
Between Bendigo and the Bendigo Brick and Tile Company's Siding	Number of vehicles to be limited to 13. Bendigo Yard engine to do the work.
Swan Hill to Swan Hill Cattle Siding	Number of vehicles not to exceed 10.
Ballarat to Selkirk's Siding ...	Number of vehicles not to exceed 10. Worked by Ballarat Yard engine.
Ballarat to Eureka Siding and Eureka Tile Co.'s Siding	Number of vehicles not to exceed 10. Worked by Ballarat Yard engine.
Great Western to Irvine's Siding	One or more trucks, during daylight only.
Grampians Line ...	See Special Instruction, pages 785-786.
Between North Geelong and Eynesford	Number of vehicles not to exceed 30.
Between North Geelong and Moronga Coal Dump	During clear daylight; vehicular limitation, 20.
Gerang to Gravels Siding ..	Any Goods train.
Between Port Fairy and Rosebrook	Number of vehicles not to exceed 8.
Between Port Fairy and Cattle Siding	Number of vehicles not to exceed 8.
Between Camperdown and Cattle Siding	Number of vehicles not to exceed 25.
From Lethbridge to Lethbridge Quarry Siding	Number of vehicles not to exceed 12.
Penshurst and Ballast Pits ..	Number of vehicles not to exceed 8.
From Sale to Pumping Station (Up side)	One vehicle only.
McDougall to Broadford ..	Number of vehicles not to exceed 20.
Between Bairnsdale and B.I.O. Siding	Number of vehicles not to exceed 4.

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PUSHING TRAINS ON RUNNING LINES—continued.

Places.	Additional Orders.
Korumburra—Cattle Siding to Korumburra	During daylight only.
Leongatha Ballast Siding to Leongatha	During daylight only.
Between the State Mine and the North Woolamai Coal Company's Junction	No. of vehicles not to exceed 14 Two competent employes must accompany the train.
State Mine to Wonthaggi ...	Number of vehicles not to exceed 12.
Newport Power House to Spotswood	During daylight only.
Newport to Thomas' Mill Siding	Any Goods train.
Thomas' Mill Siding to Brooklyn	Any Goods train.
Blackburn ...	Goods train returning to Blackburn from Co-operative Brick Co.'s Siding. See pages 857-858.
Kemp and McGregor's Siding to Mitcham	Number of vehicles not to exceed 8.
Herman's Siding to Upper Fern Tree Gully	During daylight only.
Lilydale to Cave Hill ...	Number of vehicles not to exceed 12.
Warburton to La La Siding ...	Number of vehicles not to exceed 10. See instructions, page 863, as to Speed of Train, and Working of Level Crossing.
From Intermediate Loop Siding (Naval Base Line) to Naval Base	Vehicles must be hauled to and from the Intermediate Loop Siding and Crib Point. Vehicles may be pushed from the Intermediate Loop Siding towards the Down end of the Line.
Port Melbourne, New Pier Line	Any Goods train.

Note.—See pages 472-479 for instructions regarding Trains on Running Lines without a Brake-van in the rear.

DISTRIBUTION OF MATERIAL FOR OVERHEAD EQUIPMENT, TELEGRAPH POLES, OR SIGNALLING MATERIAL, BY GOODS TRAIN.

1. (a) All trains scheduled to stop for the purpose of discharging or erecting material must be accompanied by:—

- (i.) A Road Foreman or his representative if the loading be Permanent-way material or material to be discharged for

WORKING OF TRAINS.

the Postal Department, Postal Contractors, Consignees other than the Railway Department, or mixed consignments for various Branches.

- (ii.) A Works Foreman or his representative—Way and Works Branch—If the loading be bridge or works material.
- (iii.) A Signal and Telegraph Supervisor or a Signal and Telegraph Foreman if the loading be Signal and Telegraph Branch material,
- (iv.) An Engineer or his representative if the loading be Electrical Branch material.

(b) It will be the duty of the Officer accompanying the train to see that the loading is handled without damage to the Way and Works and discharged well clear of the track.

2. Depot Stations supplying these trains or arranging for their working in Sections (whether by direction from the Head Office or otherwise) must ascertain definitely that the representative of the Way and Works Electrical Engineering, or Signal and Telegraph Branch is available before allowing such train to depart on its journey.

3. Attention is directed to Regulations 237, 238, and 239; on Lines worked under the Train Staff and Ticket System, the Driver of the Goods or Plant train must be in possession of the Train Staff for the Section.

WORKING BALLAST TRAINS ON LINES OPEN FOR TRAFFIC.

1. Every Ballast train must be worked strictly in accordance with the following instructions, and must be under the personal control of the Road Foreman, unless the safety of the Line or other special circumstances require his presence elsewhere, in which case he must place an experienced and reliable Ganger in charge of the train, and give him explicit instructions how to act.

2. Ballast trains and men employed with such trains, must not work on the Running Lines during a fog, except when authorised under special circumstances, and no Ballast train must be used if possible to avoid it, except during daylight, and when the weather is sufficiently clear for a Signal to be distinctly seen at a distance of 800 yards.

3. (a) In the event of a Ballast train which has a long distance to run without doing work, overtaking, at a Station, a Goods train which has to work at an intermediate place, the latter should be shunted, if reasonably practicable, to allow the Ballast train to proceed, but the work of the Goods train must not be materially hindered by so doing.

(b) Ballast trains may be used for the conveyance of back loading for the Transportation Branch provided the Road Foreman or Ganger in charge considers that this can be done without unduly interfering with the work of the train or causing loss of time to the men employed in connection therewith. In such cases, the Guard must show the usual information on his Train Waybill.

(c) Station-masters and others concerned must give the working of Ballast trains, loaded or empty, close attention with the view of expediting the working, but due regard must be given to the running of other important trains.

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4. With regard to clause (b) of Regulation 238, it is only necessary to have a Flagman to assist the Guard of the train when it has to stop to do work in a Section. The Flagman need not join the train until it arrives at the Signal-box at the entrance to the Block Section in which it has to stop to work. (See Regulation 271.)

5. Care must be taken not to overload Ballast trucks, especially in wet weather when the weight of ballast is likely to be affected. If trucks are loaded with gravel, and there is a weighbridge available anywhere on the route of the Ballast train, a truck-load must be weighed from time to time. If a weighbridge is not available, the measurements must be checked, and the truck springs observed, in order to avoid overloading.

Weights of Materials.

The weights of material are as shown hereunder:—

Gravel	1.3 tons per cubic yard
Sand	1.08 " "
Metal, 1½ in., 2½ in., and Screenings	1.1 " "
Earth	1.0 " "
Spalls	1.06 " "
Scoria . . . . .	.7 " "
Ashes . . . . .	.6 " "
Sleepers, 9ft. x 10in. x 5in.	10 per ton.
Sleepers, 9ft. x 9in. x 4½ in.	12 " "
Fence Rails, 9ft. x 7in. x 2½ in. to ½ in.	52 " "
Fence Posts, 6ft. 6in. x 8in. x 3½ in.	26 " "
Bricks (machine pressed)	286 " "

6. When a Ballast train has to be moved during loading or unloading operations, the Road Foreman or Ganger will give the necessary Signals for controlling the movements of the train, and the Driver must promptly obey them, unless he see danger in so doing.

Before the train is moved whilst men are in the trucks, the Road Foreman or Ganger must warn the men, and the Driver must sound the train whistle.

7. On every Ballast train the Air Brake must be in operation throughout, and not more than three trucks with pipes not operating Brake Blocks must be together on the train. The Guard must inform the Driver of the total number of trucks on the train, and, at the same time, whether it is composed entirely of vehicles the brakes of which can be applied from the engine, or whether it is composed of Air Brake and other trucks mixed, and the proportion of each.

8. Screw couplings will not be supplied with Ballast trucks unless a special requisition is made for them by the Way and Works Branch. When screw couplings are in use, they must be oiled and kept clean. The Road Foreman must detail a man for this purpose.

9. When a Ballast, Plant, or Material Train is provided with a Van, the workmen accompanying such train must travel in the Van when not actually engaged in discharging.

In cases where a Van is not provided and workmen are compelled to ride in the trucks, they must sit down so as to avoid the possibility of injury; the men must not be allowed to ride on the buffers nor on any projecting portion of the vehicles.

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10. (a) Whenever practicable "N," "NN," or "QN" Ballast Wagons must be used for Ballast trains engaged in loading or unloading ballast or other material on any Line. When trucks with swing doors are used for the above purpose the doors must not be opened on the side next to any adjoining Running Line which may be fouled by such operation until a competent Flagman appointed by the Ganger or Road Foreman has been stationed on that Line to protect the operations.

(b) The Flagman must fix two Detonators ten yards apart on one rail of the Line for which he is signalling at 800 yards or, if necessary, further from where the Line is to be obstructed by the open doors. He must then return to a position, not less than 400 yards from the work, where he must also place two Detonators and exhibit a Red Hand Signal to stop any approaching train until a Green Hand Signal is exhibited by the Ganger or Road Foreman as an intimation to the Flagman to allow the train to proceed. The Ganger or Road Foreman must satisfy himself that the Flagman understands his duties; he must not allow the swing doors to be opened until the Flagman has been stationed as above directed; and before allowing the train to approach must satisfy himself that all the doors are closed and secured with their ordinary fastenings.

(c) If, when proceeding to protect the operations, the Flagman arrive at or near to a Signal-box, he must act in accordance with clause (e) of Regulation 271.

(d) Care must be taken that ballast or other material is kept clear of the rails, and the men must cease working whilst any train is passing on the adjoining Running Line. When the work is being performed within Station limits where there are Fixed Signals, the Flagman must act in accordance with clause (a) of Regulation 275.

11. Unless specially authorised, no vehicle is to be detached from a Ballast train outside of Station limits.

12. (a) Except as provided in Regulation 201, and where special instructions are issued to the contrary, no engine must push a Ballast train when outside of Station limits, but must draw it.

(b) When, in the ordinary course of working, permission is given for a Ballast train to be pushed outside of Station limits, the instruction relating to "Pushing Trains on Running Lines," pages 396-399, must be strictly observed. The Air Brake must be continuous throughout the train, and the Brake-van must be fitted with the Brake apparatus in operation. The Road Foreman must see that the Brake-van is, as far as possible, uniformly loaded with three tons dead weight.

The Van must in all cases be the leading vehicle and **ALL TRUCKS MUST BE LOADED.**

13. (a) Before a Ballast train is put into running, the Locomotive Depot Foreman concerned and the Chief Foreman of the Car and Wagon Shops, North Melbourne, will be notified by the Chief Mechanical Engineer, and informed where the train will stable.

(b) The Chief Foreman of the Car and Wagon Shops, North Melbourne, and the Depot Foreman concerned, must then arrange for the regular examination of all vehicles composing such train as they pass

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through an Examining Station, but should the train be employed in a district in which there is not an Examining Station, then the above-named Officers must confer with the Road Foreman in charge of the train and mutually arrange for the vehicles being examined as often as is considered necessary (at least once in each week) by a competent Train Examiner; the Driver must, however, personally examine the train and test the Air Brake before starting work each day, if there be no Train Examiner on duty.

(c) The Guard in charge of the train must examine the vehicles daily, and, so far as he is able, see that they are in a safe condition for traffic. If he consider any vehicle unsafe, he must arrange for it to be taken out of running, and inspected by a competent employe of the Rolling Stock Branch.

(d) On Narrow Gauge Lines, the Fitter in charge will (where a Fitter in charge is stationed), in addition to his other duties, be responsible for carrying out the examination of the train as prescribed in the Book of Instructions issued by the Chief Mechanical Engineer.

(e) Notwithstanding the examination provided for in sub-clause (h) of this Clause, the Guard and Train Examiner are not in any way relieved from the proper examination of the vehicles composing the train, nor is the Road Foreman relieved thereby from the responsibility of seeing that the Ganger placed in charge is competent.

14. Every truck that has been employed on a Ballast train must be swept out and thoroughly cleaned before it is returned to the Transportation Branch. In every instance where the hoppers of "QN" Trucks contain Ballast or require cleaning, the Station-master must request the Road Foreman (by wire) to have the work performed and the circumstance must be reported to the Superintendent of Goods Train Service, giving the truck numbers, etc.

15. Where a Ballast train is in regular running, the Road Foreman must arrange for the necessary Ambulance equipment.

16. The maximum rate of speed at which a Ballast train may run, while being pushed, is shown on page 294 for Broad Gauge Lines, and page 296 for Narrow Gauge Lines.

INSTRUCTIONS FOR WORKING LINES TO PIERS AND WHARVES.

1. Except where otherwise provided only one engine in steam must be on the Running Line leading to or from any Pier or Wharf at any one time.

2. The rate of speed must not exceed that laid down in the instructions relating to "Speed of Trains." See pages 271-294.

3. If the engine be employed pushing trucks, the Air Brake must be continuous throughout the train, and not more than three trucks fitted with pipes not operating brake blocks must be together, and the

WORKING OF TRAINS.

leading vehicle must be fitted with the Air Brake apparatus, which must be in operation. The following additional instructions must also be observed:—

(a) A Guard, Shunter, or other competent employe, with the necessary Hand Signals, must always ride on the leading vehicle, and in such a position as to be able to signal to the Driver. If the train be of such a length that the Driver cannot keep in sight the Hand Signal of the employe on the leading vehicle, an additional man or men must be placed on the train to repeat such employe's Signals to the Driver. The Driver must not continue to push the train, which must be promptly brought to a stand, unless the employe's Hand Signal, or the Hand Signal of the employe who has been intermediately placed, is in view.

(b) A Shunter must walk over any public crossing and along any public thoroughfare (also through any subway where such exists) in front of the engine when it is drawing vehicles, and in front of the leading vehicle when the train is being pushed, in order to see that pedestrians, animals, and vehicles are kept clear; in the case of a Light Engine not accompanied by a Shunter, or an engine drawing vehicles, and the only Transportation employe available is riding on the rear vehicle, the Fireman must walk in front of the engine. Every care must be taken to avoid risk of accident.

(c) The Driver must keep a good look-out for Fixed Signals, and stop the leading vehicle well clear of such Signals should they be at the Stop position.

4. Unless instructions are issued to the contrary, when vehicles are being drawn, the Shunter must always ride on the rear vehicle.

5. Where the number of vehicles is specified, each bogie vehicle is to count as 2.

Pier and Wharf Lines.

Line.	Additional Instruction.
†Geelong Pier Line	<p>(a)---The Line between Signal-box "A" and the Pier is a Running Line and no vehicle must be left uncoupled from the train between Box "A" and foot of Grade near weighbridge.</p> <p>(b)---Trucks must always be drawn from the Station Yard to the Pier</p> <p>(c)---(i.) Except as shown in sub-clause (ii.) No engine of greater axle load than 11 tons 10 cwt. is to be allowed on the Pier. (ii.) An "Old R" class engine (Light) may be allowed on to the</p>

* See pages 307 and 308 for particulars of Engine Axle Loads.

† See pages 763-764 for Special Instructions.

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PIER AND WHARF LINES—Continued.

Line.	Additional Instructions.
†Geelong Pier Line—continued.	Pier, but only so far as is necessary for the Light engine to clear the Trailing Points of the cross-over road near the entrance to the Pier.
Warrnambool Pier Line ...	<p>(a)—Except in a case of urgency, no Engine must be allowed to run tender first on this Line during darkness, and in every such case if pushing any vehicle, sub-clause (b), clause 3, must be complied with; see section (d) hereof.</p> <p>(b)—Number of vehicles to be limited to 20.</p> <p>(c)—When it is necessary to stop on Pier Line for engine to perform shunting work, the Brakes of all the vehicles left standing on the Running Line must be secured.</p> <p>(d)—Engine must not push trucks on Pier Line without Special permission from the General Superintendent of Transportation or the District Superintendent.</p> <p>(e)—See page 768 for Special Instructions regarding the Warrnambool Woollen Mill Siding, and the Western District Factories Co-operative Produce Co.'s Siding.</p> <p>The grade at this place is 1 in 70.</p>
Port Fairy Pier Line ...	Number of vehicles to be limited to 10 when engine is pushing.
Portland Pier Line ...	<p>(a)—*Engines of a greater axle load than 13 tons 12 cwt. are not allowed on the Pier.</p> <p>(b)—Vehicles not exceeding 10 in number at any one time may be pushed from the Station Yard to Ships' berths on Pier Lines.</p>
Echuca Wharf Line ...	Engines must not go on to the Wharf.
Swan Hill Wharf Line ...	When engine is pushing, number of vehicles to be limited to 10.
Sale Wharf Line ...	When engine is pushing, number of vehicles to be limited to 10.
Bairnsdale Wharf Line ...	When engine is pushing, number of vehicles to be limited to 10.

* See pages 307 and 308 for particulars of Engine Axle Loads.

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MARSHALLING INSTRUCTIONS.

(For instructions respecting the composition of Passenger and Mixed trains, see page 311.)

1. Roadside Stations. — (a) To expedite marshalling at Depots, and by Guards en route, it devolves on each Roadside Station-master to so arrange the loading of trucks at his Station that the loaded trucks shall fall into, or may be placed in, their respective groups without unnecessary waiting or delay; the following principles should be observed:—

- (i.) As far as practicable load so as to avoid all transfer.
- (ii.) Avoid light loading of trucks: it is much more economical and expeditious to hold freight over one day to secure consolidated tonnage.
- (iii.) The loading of freight into suitable trucks, especially with a view to quick handling and full tonnage.
- (iv.) Careful consideration of Goods train schedules and circulars referring to clearing arrangements and the time that Roadside loading must be completed.
- (v.) The proper stowing of freight to withstand transportation and to facilitate discharge in proper sequence, thus avoiding the time lost in searching for freight required to be discharged en route, the unnecessary unloading and re-loading and the claims for damage arising from this work having been done hastily; lack of care in this connection leads to accumulation of standing time, and on a Single Line may cause a train to miss its scheduled Crossing Station.

(b) The Station-master should see that trucks for the same Station are loaded together. This particularly applies to trucks loaded with Bricks, Sand, Stone, etc., for Melbourne, and to Firewood for Suburban Stations. Arrangements should be made with senders accordingly.

Whenever it is reasonably practicable, "through traffic" must be worked by "through trains" to its destination, and not to Stations intermediate.

In forwarding trucks, consideration should be given to connecting trains, particularly in respect of long distance traffic.

(c) Station-masters and other responsible officers in charge must see that Cards are removed from Inward trucks, and that proper destination cards are fixed in the proper position on Outward trucks.

(d) The attention of Officers-in-charge, Guards and Shunters is directed to the instructions on pages 538-541 respecting the marshalling of trucks conveying inflammable Goods, Lime, etc.; see also section (f), clause 5, hereof.

2. Depot Stations. — (a) When marshalling loading for Melbourne Goods Yard, it must be borne in mind that the order of marshalling that makes for the expeditious handling of transfers at Melbourne is of greater importance than any local consideration, and as far as practicable such loading must be marshalled accordingly, otherwise serious loss of time en route, and duplication of work at Melbourne, is incurred.

(b) The Melbourne Yard is grouped into five Sections, and Inward loading is received in, and despatched from, each Section according to its destination. The ideal marshalling of a train reaching Melbourne is for the loading to be grouped on the train for the various Sections in the order shown hereunder, which permits of an arrival train being disposed of in a few moves, eliminates the numerous cross shunts which, otherwise, are involved, and allows of freight being promptly placed for discharge or for despatch to its destination:—

FIRST (GRAVITATION) SECTION.—Loading for Fitzroy, West Footscray, Footscray, Kensington, Newmarket, Arden-street, South Kensington to Williamstown, South Brunswick to Fawkner, Melbourne "A" Transfers, Melbourne "A" Perishables, Melbourne "A" Potatoes, Melbourne "A" Hay and Straw, Chaff, Cement, Sand, Metal, Bricks, Tiles, Timber, etc., Victoria Dock, Government Cool Stores, Piggott-street, Victoria Butter Factory, Stevedore Shed, City Market.

SECOND (BANK) SECTION. — Melbourne Grain, Wool, Furniture, Hides and Skins, Empty Returns, Kirwin's Siding, Long-road Outside platforms transfers, St. Kilda, Flinders-street and Port Melbourne Line loading.

THIRD (LOWER LEVEL) SECTION. — Loading for Northern Line, Sunshine and beyond, North-eastern and Essendon and beyond, North-west Western, South-west, Laverton and beyond, North Fitzroy, North Carlton, and Whittlesea Line.

FOURTH (NEW YARD) SECTION.—Loading for Eastern, South-eastern, Healesville, Warburton, Gembrook and Stony Point Lines, Elsternwick, Sandringham, Camberwell, Riversdale, Toorak, Malvern, Caulfield, Murrumbena and Oakleigh.

FIFTH (SPION KOP) SECTION. — Loading for Victoria Park, Hurstbridge Line, Burnley, Hawthorn, Kew, Windsor, North Brighton and Middle Brighton.

3. Goods trains arriving at Melbourne, must, unless otherwise ordered, be marshalled as under:—

(a) Through Goods Trains arriving by way of North Melbourne Junction or Weighbridge Junction—

Engine
Perishables
*Live Stock for Melbourne.
Live Stock for Stations beyond Melbourne.
Trucks loaded with Motor Cars.
First Section Loading
Second Section Loading
Third Section Loading
Fourth Section Loading
Fifth Section Loading

*On Up North-Eastern trains, however, Live Stock requiring to be detached at Newmarket should be placed in front of Perishables.

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(b) Through Goods Trains arriving by way of Viaduct Junction—

Engine
 *1st Section Loading.
 2nd Section Loading
 3rd Section Loading
 4th Section Loading
 5th Section Loading
 Trucks loaded with motor cars
 Live Stock for Melbourne
 Live Stock for Stations beyond Melbourne
 Live Stock for Newmarket
 Perishables

(c) All Roadside Goods Trains to Melbourne—

Live Stock next to Brake-van,
 Perishables next to Live Stock,
 Other loading:—As shown for Through Goods trains,
 except that trucks ex suburban Stations containing
 goods for transfer at Melbourne sheds or platforms,
 must be marshalled next to the engine.

4. All trains except those arriving at Melbourne—

- (a) Unless otherwise specified the order of marshalling roadside trains must be that trucks (including van trucks) for the Stations at which the train terminates, shall be next the Brake-van; Trucks for intermediate Stations to be so marshalled, that when a train arrives, the trucks for any such Station shall be together next the engine.
- (b) On Through trains, trucks loaded with Live Stock must be kept together next the engine.

5. General Instructions—

- (a) Loaded Powder Vans must not be forwarded by Passenger or Mixed trains. See sub-clause (e) hereof.
- (b) **Gas Trucks.**— Unless specially authorised a Pintsch Gas Truck, when charged with gas, must not be attached to any Passenger Train.
 - (i.) Pintsch Gas trucks, which, when charged with gas, may be hauled by Mixed or Goods Trains, must not be marshalled next the engine, unless the placing of them in some other position is likely, in attaching or detaching, to cause serious delay to the train.

*Trucks for St. Kilda, Graham, Port Melbourne, Flinders-street, for detaching at Flinders-street, to be next to engine.

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- (ii.) When a Pintsch Gas truck is attached to a Mixed train, it must be so marshalled that not less than two trucks not loaded with inflammable material shall intervene between the Gas truck and the Passenger cars.
- (iii.) It is important that Gas Trucks should be expeditiously despatched whether charged with gas or otherwise, and all concerned must see that no undue delay occurs to these trucks. On the Up journey Pintsch Gas Trucks must be marshalled next to the trucks containing perishable loading.
- (c) **"QR" Trucks on Passenger Trains.** — In cases where the necessity arises to run a "QR" truck on an Express train, it should be attached next the engine, and then only those trucks which have strengthened draw gear, viz.:— (Nos. 202 to 351 inclusive) should be used. Trucks are not, however, to be attached to Passenger trains at any time, unless specially authorised in each case by the General Superintendent; whenever any truck is to be attached to a Passenger train, the Train-examiner must be notified as early as possible, so that he may specially examine the truck before it is placed on the train.
- (d) **High-Capacity Trucks.**— Unless special Instructions are issued to the contrary, whenever High Capacity trucks are being forwarded, they must be assembled together and placed next the locomotive.
- (e) **Cars of Mixed Trains.** — On Mixed trains the Passenger cars must, unless instructions are issued to the contrary, be next in front of the rear Brake-van.
Whenever it is necessary to convey truck loads of pigs by Mixed trains, such vehicles must be placed next the engine.
- (f) **Explosives.**— On Mixed and on Goods trains, not less than three trucks (see sub-clause (i.), clause (b)) must intervene between the engine and the nearest truck conveying Explosives, and also between the Passenger vehicles and the nearest truck conveying explosives, and between any two trucks, either of which is carrying over 300 lbs. of explosives, or over 10,000 Detonators; when less quantities than these are carried, one or more trucks must intervene —trucks containing Oil, Hay, Straw, Chaff, or other inflammable loading, must not be used as intervening trucks.
- (g) **Workmen's Cars.**— When Workmen's Cars are placed on Mixed trains they should be next the Cars, or as near the Cars as possible. When they are placed on Goods trains they should be next the Van, or as near the Van as possible.
- (h) **Electric Trains.**— When marshalling Electric trains, the Pantograph ends of Motor Cars must not be placed together, otherwise a disarrangement of overhead equipment may be

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caused. When an Electric train is being assisted by another such train, and the Pantograph ends of the trains are to be coupled together, the rear Pantograph of the leading train must be lowered.

- (i) **Victorian Vehicles with non-standard draw-gear, and South Australian Vehicles to be placed near the rear of Trains.**— On Mixed or Goods trains, it is desirable that vehicles with light draw-gear be placed near the rear. Victorian vehicles that are fitted with non-standard draw-gear have a notice to that effect painted on the sides.

When marshalling trains in Yards, or attaching such vehicles, or those of South Australian stock, to trains en route, they must, if practicable, be placed close to the rear of the train.

- (j) **Bogie Cars on Goods Trains.**— A twelve-wheeled bogie Passenger vehicle must not be attached to a Goods train unless the special permission of the General Superintendent of Transportation has been first obtained.
- (k) **"CE" Vans.**— The use of "CE" Vans on the Healesville Line is prohibited.
- (l) **Horse-boxes and Carriage trucks,** whether loaded or empty, may be marshalled in the same order as Goods trucks.
- (m) **"Mallee" and "American" Cars.**—The Mallee and American "AB" and "B" cars indicated below when being hauled on trains must have not more than equal to $7\frac{1}{2}$ vehicles behind them. When it is necessary to attach one of these to a heavy train, the cars must be marshalled to comply with this direction, and if such a car requires to be attached at a Roadside Station, it is to be placed between the rear van and other cars if necessary.

"AB" Cars 1, 2, 3, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24, 33, 34, 47, 48, 49.

"B" Cars 10, 73.

6. Waybill Envelopes and Cards.— To facilitate the marshalling of trucks in accordance with the preceding instruction, special care must be exercised in endorsing waybill envelopes and truck cards, and the following directions must be strictly complied with:—

(a) Trucks containing goods for Melbourne, together with goods requiring transfer at Melbourne, must have the envelopes and cards marked "**Melbourne**," without regard to the class of goods.

(b) Trucks containing transfers only, which have to be distributed at Melbourne, must have the envelopes and cards marked "**Melbourne Transfers**," and in the case of any such truck loaded with high smelling manures, oils in unprotected tins, agricultural machinery, or heavy articles, for handling at one of the Outside Platforms at Melbourne, the envelope and cards should have the name of the platform following the words "**Melbourne Transfers**." Goods for the North-Eastern and Eastern Lines are dealt with at the "North-East Platform," and may be

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loaded together; whilst goods for Stations on the Northern, Midland, and Western Lines are dealt with at the "Main Line Platform," and may also be loaded together. Envelopes and cards for transfer goods of the classes enumerated must be marked accordingly.

(c) Trucks containing grain, empty returns of all kinds, dried fruits, broom corn, wool, hides, and skins for different consignees, non-perishable sundries and pyrites for Melbourne, must have the envelopes and cards marked "**Melbourne Grain Shed.**"

(d) Trucks containing hides and skins only, and for one consignee, also trucks containing bones, bricks, empty returned crates and jars, bark, manures, pitchers, screenings, piles, staves, felloes, clay, coke, hay, straw, chaff, gravel, sand, horns, bottles, road metal, ashes, asphalt, bone dust, gypsum, pottery-ware, and lime, for Melbourne, must have the envelopes and cards marked "**Melbourne Straw Siding.**"

7. With a view to minimising the time necessary at Roadside Stations in loading and discharging Van goods, the use of non-ridge pole "I" trucks as Van trucks is to be reduced as far as practicable; with these vehicles much time is lost in handling and re-arranging the covers, which can be avoided with "U," "H" and ridge-pole "I" trucks.

8. See also clause 11, page 406, for instructions relating to the loading and conveyance of articles of exceptional shape, dimensions, or weight, and to the order in which trucks conveying such loading are to be marshalled. See also page 469 re "Unequal Height of Buffers," and clause 3, Air Brake Orders, pages 601-602.

SINGLE LINE CROSSING STATIONS.

(For Working of Unattended Crossing Stations on Lines worked under the system of Train Section Orders, or on Lines where Automatic Signalling is in force, see pages 562-579 and 580-600 respectively.)

Passenger Trains not Booked to Call.—1.—INTERLOCKED STATIONS
(a) An Express train, or a Passenger train not booked to call, and which does not require to cross another train, must, unless instructions are issued to the contrary, be run through on the Straight Road.

Exceptions.—(i.) The Up Adelaide Express train (No. 10/X) may be run on No. 1 (the Loop) Road at Ballan.

(ii.) The 5.0 p.m. Down Sydney Express (No. 41/X) may be run through No. 1 (the Loop) Road at Wangaratta: attention is directed to the special rates of speed when running on Lines that diverge from the straight track.

(b) When two Express trains, or two Passenger trains not booked to call, require to cross each other, the train which is to be first admitted to the Station must be brought to a stand at the Home Signal and then be turned into the Loop, whether the Loop be No. 1 Road (the Platform Road) or No. 2 Road. After it has come to a stand in the Loop, and the Signaller has seen that the Line on which the other train will arrive is quite clear, the necessary Fixed Signals for that train may be placed to the Proceed position.

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(c) When an Express train, or a Passenger train not booked to call, requires to cross a train which is booked to call and which is running in the opposite direction, the train booked to call must be first admitted to the Station via the Loop, and the other train must be kept outside the Home Signal until the Signalman has seen that the Straight Road is clear for it to run through. If, however, the platform be on the straight Road and the train booked to call arrive first, it may, if required, be admitted to the platform road and be afterwards set back and shunted into the Loop, but unless such operations can be performed without causing delay to the non-stopping train, the train booked to call must be turned direct into No. 2 Road.

The Guard must be in the Van when his train is being shunted, and he must give the Driver the Signal to set back from one Road to the other. For additional precautions at places where there is a Level Crossing not provided with Gates, see also clause 2, under the heading of "Level Crossings at Stations," page 227.

(d) The Signal to Proceed must not be exhibited for the through train until the Signalman has seen that the Straight Road is quite clear through the Station.

2. NON-INTERLOCKED STATIONS.—At Stations where the Points and Signals are not worked from an interlocking Frame, trains not booked to Call must be run on the Line for which the Hand Points are normally secured.

3. A Departmental Special running as Express Train must be run through on the Straight Road except when it has to stop to cross a Passenger or a Mixed train, in which case the Departmental Special must be turned into No. 2 Road, and the Passenger or Mixed train into the Platform Road.

4. Passenger or Mixed Trains Booked to Call.—(a) Except as shown below, when two Passenger trains (Express or otherwise) booked to call, or two Mixed trains, or a Passenger train (Express or otherwise) booked to call, and a Mixed train, have to cross each other, the train which has been first admitted to the Station must, after passengers have been picked up and set down, be set back, for the purpose of being shunted, to allow the other train to draw up to the platform:—

EXCEPTIONS.—(i) At the undermentioned Stations the train arriving first may remain at the platform while the other train runs through No. 2 Road, and sets back to the rear of the train standing at the platform, or waits until the train at the platform departs; see further instructions clause 5.

ARARAT
BACCHUS MARSH
BIRCHIP
BRANXHOLME
CAMPERDOWN
DIMBOOLA
FOSTER
HAMILTON
HEYWOOD

KOROLT
KORUMBURRA
LEONGATHA
MARYBOROUGH
ST. ARNAUD
STAWELL
STRATFORD
WARRNAMBOOL

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- (ii.) At the Stations shown hereunder the instructions specified in each case will apply:—

ARMSTRONG.—A Passenger or Mixed train may be turned into No. 2 Road whilst a Passenger or Mixed train is at the platform. Passengers may be allowed to alight from or join the train whilst it is standing in No. 2 Road by means of the Guard's step-ladder. The Station-master and the Guard must see that every precaution for the safety of the passengers is taken.

BADDAGINNIE.—When the Up Albury Express and the 6.30 a.m. Down cross at Baddaginnie the second train to arrive may be signalled to run through No. 2 Road, whilst the other train is standing clear on No. 1 Road; the second train must not be set back until No. 1 Road is clear.

BIRCHIP.—When No. 15 Down and 4 Up have to cross at Birchip, the latter may be run through No. 2 Road, whilst the former is standing clear on No. 1 Road; the Up train must be brought almost to a stand on No. 2 to exchange the Train Staffs, and it must not be set back until No. 1 Road is clear.

BUNGAREE.—When Passenger trains are to cross each other the Up train may be brought direct into No. 2 Road whilst the Down train is standing clear on No. 1 Road; the Up train must not be set back until No. 1 Road is clear.

COLAC.—A Down train may be run through No. 2 Road, and be set back to the platform, and an Up Passenger or Mixed train with a limited load may be similarly dealt with, but a fully loaded Up Mixed or Goods train cannot do so owing to the grade.

CRANBOURNE.—No. 9 Down may be permitted to run through No. 2 Road at Cranbourne, whilst No. 6 Up is standing clear of fouling points on No. 1 Road, and the Driver of No. 6 Up has been instructed not to move his train. The speed of the Down train, when entering or leaving No. 2 Road, must not exceed 5 miles per hour.

CRESWICK.—No. 1 Up from Daylesford may be allowed to remain at the platform until departure time, No. 8 Down to be turned into No. 2 Road, and set back to the platform after No. 1 Up has left. See page 697.

GREENSBOROUGH.—When Passenger trains cross at Greensborough during holiday traffic, the Up trains will arrive in No. 2 Road during the morning, and Down trains will arrive in No. 2 Road during the evening, as arranged by the Officer-in-charge.

Step-ladders must be provided for the convenience of passengers who may desire to enter the train or leave it while in No. 2 Road. Metropolitan Superintendent to arrange and to provide an employe to warn passengers not to enter or leave the train until the ladder is properly

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placed; the train which arrives in No. 2 Road may be despatched from that Road without going to the platform.

IRREWARRA.—When No. 11 Down is running late and No. 20 Up is brought on to cross at Irrewarra, the second train to arrive may be signalled through No. 2 Road, and set back to the rear of the train standing at the platform.

JUNG.—A Passenger or Mixed train may be turned into No. 2 Road whilst a Passenger or Mixed train is at the platform. Passengers may be allowed to alight from or join the train standing in No. 2 Road by means of the Guard's step-ladder. The Station-master and the Guard must see that every precaution for the safety of the passengers is taken.

LILYDALE.—A Down Passenger train (Saturdays only) may run through No. 2 Road, whilst an Up train is standing clear at the platform; the Down train must not be set back to the platform until the Up train is proceeding on its journey and the rear vehicle is clear of the Fixed Signal at Up end of the Platform.

MELTON.—When trains meet at Melton, the second train to arrive may be signalled to run through No. 2 Road, whilst the first train is standing clear on No. 1 Road; the train which runs through No. 2 Road must not be set back until the other train has departed from No. 1 Road, and is well clear of the yard.

MITIAMO.—When trains meet at Mitiamo, the second train to arrive may be signalled through No. 2 Road, whilst the first train is standing clear in No. 1 Road; the second train must not be set back until No. 1 Road is clear.

PARWAN.—Owing to the heavy grade, Up trains, with full tonnage, must not be set back out of No. 1 Road for the purpose of drawing into No. 2.

PORT FAIRY.—Whilst No. 34 Up is standing clear at the platform, No. 11 Down (13 on Tuesdays) may be run through No. 2 Road, and set back to the platform; this permission shall not, however, apply whilst an engine is on the Wharf Line.

VIOLET TOWN.—When the Up Albury Express and the 6.30 a.m. Down cross at Violet Town, the second train to arrive may be signalled to run through No. 2 Road, whilst the first train is standing clear on No. 1 Road; the second train must not be set back until No. 1 Road is clear.

WAUBRA JUNCTION.—A Passenger or Mixed train may be turned into No. 2 Road whilst a Passenger or Mixed Train is at the platform, and passengers may be allowed to alight from or join the train standing in No. 2 Road by means of the Guard's step ladder. The Station-master and Guard must see that every precaution for the safety of

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the passengers is taken. As far as practicable, passengers for Waubra Junction must be placed in the same car at Ballarat or Creswick.

(b) **Working of Temporary Staff Stations not provided with Fixed Signals.**—Should a Temporary Staff Station not be provided with Fixed Signals, the following precautions must be taken when it is necessary for trains to cross:—

- (i.) **Trains Crossing During Daylight.**—At least 20 minutes before either train is due, two Detonators, 10 yards apart, must be placed upon the Line at a distance of 100 yards from the outer Facing Points on each side of the Station, and three Detonators, 10 yards apart, at a distance of 400 yards from the outer Facing Points on each side of the Station. The explosion of the first Detonators will indicate to the Driver of an approaching train that the Facing Points are 400 yards in advance, and he must then proceed cautiously, having his train well under control, to where the inner Detonators are fixed, and there await a Hand Signal from the person in charge. See sub-clause (v.). Should the Metropolitan or District Superintendent, as the case may be, consider that further precautions are advisable to ensure safety, he must arrange to provide Hand Signalmen to act, as prescribed in sub-clause (ii.) hereof.
- (ii.) **Trains Crossing at Night time or in Foggy Weather.**—A Hand-signalman must be appointed for each end of the Station, and they must each place two Detonators upon the Line 10 yards apart, at a distance of 100 yards from the outer Facing Points, and three Detonators, 10 yards apart, at a distance of 400 yards from the outer Facing Points. Each man must then place himself in such a position (just within where the inner Detonators are fixed) as will enable him to see any Hand Signal that may be given by the person in charge, and must exhibit a Danger Signal to stop the train that is approaching on the side on which he is employed until it is signalled forward by the person in charge, in accordance with sub-clause (v.) hereof. Each Hand-signalman must be at his Post at least 20 minutes before the train or trains are due.
- (iii.) The explosion of the outer Detonators referred to in sub-clause (ii.) will indicate to the Driver of an approaching train that the Facing Points are 400 yards in advance, and he must then proceed cautiously, having such control of his train as to be able to stop it short of any obstruction that may exist between the place where the Detonators were exploded and the inner Detonators.
- (iv.) If there be only one other Road in addition to No. 1 Road at the Station, the first train to arrive must be admitted into No. 1 Road, and after the platform work is completed set back and turned into No. 2 Road, the Driver being cautioned as to the state of the Road. See also Regulation 131.

- (v.) The "All Right" Signal of the person in charge—vide sub-clauses (i.) and (ii.)—to indicate that the train may draw forward to the Station, must always be **GREEN** for **UP** trains and **WHITE** for **DOWN** trains. At night, the **WHITE** light must be moved slowly up and down.
- (vi.) The Driver of the train which first arrives must, after complying with Regulation 205, clause (j), satisfy himself by enquiry from the person in charge, that his train is properly protected in front in accordance with the above, and the Driver of the second train to arrive must, when moving his train forward, satisfy himself that the Points are in proper position for his train to draw ahead.
- (vii.) **Specially Locked Sidings.**—When a train is to be turned direct into a specially locked Siding, it must be brought to a stand at the Facing Points, and the Driver informed that there are Catch Points or a Derail Block, as the case may be, at the far end of the Siding. At night time or in foggy weather, a **RED** light must be placed three feet clear of the Facing Catch Points.

5. (a) One Train Setting Back Towards Another.—Where special authority is given for one train to be set back toward another train that is standing at a platform, the Station-master must in every case see that the Line is clear to the Point to which the train usually sets back. The Driver must not set his train back until the proper Fixed Signals are exhibited, and where Fixed Signals are not provided for the purpose of signalling such operation, not until he receives an All Right Hand Signal from the Shunter or other person in charge of the movement.

(b) In addition to seeing that the proper Fixed Signals are exhibited, or receiving an All Right Hand Signal from the Shunter, the Driver must not move his train until he receives a "Move Back Slowly" signal from the Guard, and the Guard before giving such signal must see that the rear vehicle has cleared the Trailing Points, and that the Facing Points are properly set and secured for the set-back movement.

(c) The Guard (or if more than one Guard, the Head Guard) must ride in the Brake-van farthest from the Driver, and keep a good look-out all the while the train is setting back. He must be prepared to apply the Air Brake to stop the train if necessary.

(d) The Driver must push back slowly and cautiously, and both he and the Fireman must keep a good look-out for any Hand Signal that may be exhibited.

(e) The whole of the operation must be conducted under the personal supervision of the Station-master, who must exhibit a Red Hand Signal to the Driver in sufficient time to permit of the latter bringing his train to a stand at the required position.

(f) If the Line at the platform be not clear to the Point to which the train usually sets back, the Driver and Guard must be verbally instructed as to how far the Line is clear before a Signal is given to set back; the Station-master to arrange accordingly.

6. (a) When a Passenger train (Express or otherwise) booked to call, or a Mixed train has to cross a Goods train at a Crossing Station, the Passenger or Mixed train must, unless instructions are issued to

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the contrary, be admitted to the platform road, and the Goods train to No. 2 Road. If, however, the Goods train arrive first, it may, if required, be admitted to the Platform Road, and be afterwards set back and shunted into No. 2 Road, but unless such operation can be performed without causing delay to the Passenger or Mixed train the Goods train must be turned direct into No. 2 Road.

(b) The Guard must be in the Van when his train is being shunted, and he must give the Driver the Hand Signal to set back.

(c) The Fixed Signal must not be exhibited for the second train to be admitted to the Station until the first train has been shunted clear of the Running Line, and the Signaller has seen that the Line on which the second train will arrive is quite clear.

7. Lever Sleeves.—Where sleeves or other appliances are provided to act as reminders to the Signaller that certain Roads are occupied, such appliances must in every instance be used in connection with the passing or crossing of trains.

8. (a) Protection of Trains.—In addition to the duties prescribed in Regulation 205 for Drivers, Firemen and Guards, the Driver of a train or engine standing on a Running Line at a Station or Siding will be held responsible for ascertaining, as far as he is able to do so from the footplate, that the front of his train is properly protected by Fixed Signals; and the Guard, Shunter, or other person in charge of a train, or Driver, in the case of a Light Engine, will be held similarly responsible for ascertaining, as far as is reasonably practicable, that the rear of the train or Light Engine, as the case may be, is properly protected.

(b) If the train be not protected in front, or a Light Engine be not efficiently protected, the Driver must at once send the Fireman to inform the Signaller or take such other steps as may be necessary to prevent accident, and the Guard, Shunter, or other person in charge of the train must do likewise in respect of the rear of the train.

9. Level Crossings.—Should it be necessary for a train to be set back over a Level Crossing where gates are not provided, the Guard must ride in the leading vehicle and keep a good look-out and be ready to apply the Brake or to signal to the Driver, as may be necessary. During darkness or foggy weather, the Station-master must take steps to see that the Crossing is properly protected before instructing the Guard that the train is to be set back; if there is a Conductor with the train, it will be his duty to protect the Crossing.

The rate of speed when the train is setting back must not exceed 5 miles per hour, and both the Driver and the Fireman must keep a good look-out for any Hand-Signal that may be exhibited.

10. Defective or Damaged Staffs or Tablets.—(a) The attention of Station-masters, Signallers, Drivers, and all concerned is drawn to the necessity for promptly reporting any damage or defect noticed in connection with the Staffs or Tablets. Special care must be taken to see that the rings of Train Staffs are quite firm on the tubes; that the nibs on the Tablets are not damaged, and that the Staffs and Tablets are intact with the names clear and legible. It will be the duty of all

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concerned to examine carefully each Staff or Tablet as it passes through their hands—Tablets or Miniature Staffs should be examined when being placed in or taken out of the Carriers. Signalmen must examine the Electric Staff, and if, owing to the feather being loose or burred, a Staff is unsuitable for use at a Staff locked Siding, the Staff must be retained in the Instrument, and the defect reported to the Fitter.

The Staffs or Tablets must always be placed on the hooks provided for them in the engine cabs. Any defects in connection with the Staffs or Tablets must be immediately noted in the Train Register Book, with the time and date that advice is sent to the Electrical Fitter.

(b) If the name of the Section to which an Electric Staff or Tablet applies become illegible, or should the name plate become detached, the Staff must be dealt with as a damaged Staff and not used for traffic purposes. Under similar circumstances, in the case of an ordinary Train Staff, the name of the Section must be written on a label signed by the Stationmaster or other person in charge, and attached to the Train Staff. The attention of the Driver must be directed to the circumstances necessitating the use of the label, and the Superintendent of Goods Train Service must be at once notified by telegraph in order that the Staff may be repaired.

(c) When the name of the Section to which the ordinary Train Staff applies is illegible, the Driver must not accept it, unless a label showing the names of the Staff Stations to which the Staff applies is attached, and every such case the Driver must report the circumstances.

(d) When from any cause an ordinary Train Staff is broken, Pilot-working must be established in accordance with Rule 14 of Appendix II, Book of Rules and Regulations, until a new Staff is provided. The pieces of the broken Staff must be locked away by the Station-master who institutes Pilot-working, and he must enter a note to that effect on each of the Pilot-working Forms; the pieces of the broken Staff, tied together, may, however, if time can thereby be saved, be used, for one journey only, to establish Pilot-working.

11. Exchanging Staffs or Tablets.—(a) At night time some difficulty is experienced in taking the Tablet or Staff if the Transportation Branch employee who delivers it stands in such a position that a shadow is thrown on the Tablet or Staff. In order to avoid this, the employee who delivers the Tablet or Staff should, having regard to his own safety, so place himself, and in good time, that the Driver of an approaching train will have as good a view as possible. Employees engaged holding Points must not under any circumstances receive or deliver any Tablet or Staff.

(b) The Tablet or Staff must not be placed on the Engine by the Transportation employees; in all cases it must be handed to the Driver.

(c) When exchanging Staffs or Tablets each man should hold out his hand to receive, but should watch the receiving hand of the other man, each taking special care in the delivery of his Staff or Tablet. The smooth end of the Train Staff should always be handed to the Receiver.

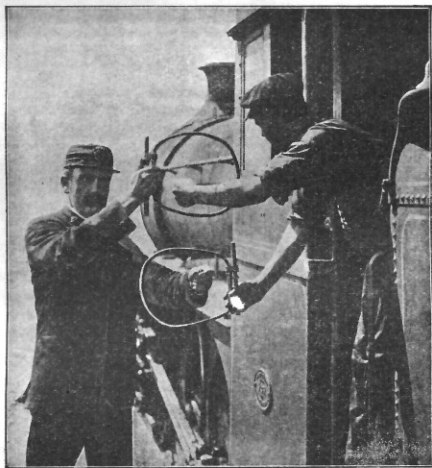
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Enginememen must see that the Safety Chain is fastened across the gangway of the cab of the engine when about to exchange the Staff or Tablet.

(d) Employes must not attempt to receive or deliver a Train Staff or Tablet whilst holding Hand Points.

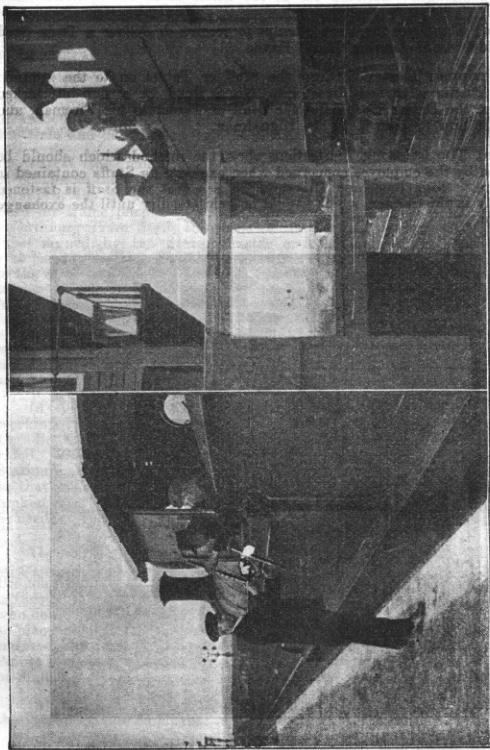
Trainmen must not throw the Staff or Tablet on to the ground; when a train is turned direct into No. 2 Road at a non-interlocked Station, the Driver must hand the Staff or Tablet to his Fireman, and instruct him to take it to the Signalman.

(e) The following illustrations show the method which should be adopted by the employes concerned when exchanging Staffs contained in Carriers. Signalmen and Drivers must see that the Staff is fastened securely in the Carrier, which should be held steadily until the exchange is made.



(See page 9 for amendment of Rules re Trains assisted by an Engine in front, or two or more Engines (under steam) coupled together proceeding through a section.)

Two illustrations showing the correct method of exchanging the large type of Train Staffs are shown hereunder :—



Exchanging Staffs at Passenger Platform.

Exchanging Staffs at Staff Exchange Platform.

(See clause (c), pages 417-418.)

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MINIATURE TRAIN STAFF AUTOMATIC EXCHANGING APPARATUS.**(Method of Working.)**

1. (a) The Staff Exchange Apparatus at Stations is in a Box in the ground; in its normal position the exchange arm of the apparatus is lowered, and the arm must only be placed at the vertical position when required for exchanging the Staff. After the train using the apparatus has passed, the exchange arm must immediately be carefully lowered to its normal position and the box closed. In fixing the Staff pouch on the Exchange Arm, it must be placed in the brass pocket with the back of the pouch facing the direction from which the train is approaching, and the ring of the pouch held in the clips; care should be taken to see that the end engraved with the name of the Section is not inserted into the pouch, but is left out at the open end, and the straps over the Staffs should be buckled as tightly as possible to secure the Staff.

(b) To indicate to Drivers that the Staff is in the Apparatus, a White Disc by day, and a White Light by night, must be fixed in position on the Ground Exchanger, and, in the absence of such Disc or Light, Drivers must reduce the speed of their trains to the rate prescribed for exchanging the Staff by hand.

(c) The White Disc or White Light must not be placed on the Ground Exchanger until the Staff is ready for exchange, nor must the Fixed Signals be put to Proceed for the train which requires to use the Exchanger, until the Staff has been placed in position on the exchange apparatus and the Disc or Light fixed in position.

(d) At Stations where trains are crossing the Exchange Apparatus will be in use for the train which has a clear run through the Station.

(e) Where the Ground Apparatus is fixed in the six foot, between the Running Line at any Station where an Express train will cross another train, the exchange apparatus must not be placed in position for the Express until the train it has to cross has been stopped, and the exchange arm must again be lowered before such train is allowed to start.

(f) It will be the duty of the Station-masters at Depot Stations, including Flinders-street, Spencer-street, or the Superintendent Melbourne Yards, to satisfy themselves that an engine fitted with the Exchanging Apparatus is provided for trains scheduled to use the Staff Exchange Apparatus in the area over which these officials have control, and when the train is being run by an engine not fitted with the Exchanger, they will be held responsible for advising all concerned; see Code terms hereunder:—

Code.	Phrase.
AKLA ..	Engine running to-day, not fitted with Automatic Staff exchange apparatus.

WORKING OF TRAINS.

2. (a) Enginemmen must make themselves thoroughly familiar with the position of the Ground Exchangers at each Station. Lists showing the locations of the apparatus at each Station, and the trains on which the exchanging apparatus will, ordinarily, be used, are contained in the Working Time Tables.

(b) When a train has more than one engine in front, or when two or more Light Engines (under steam) are to run coupled together, the leading engine will carry the Staff, and if only one of such engines is equipped with the Exchanging Apparatus, it must be the leading engine.

(c) Enginemmen when fixing the Staff in the Exchange apparatus on the engine must place the leather pouch inside the brass pocket with the strap buckle of the leather pouch facing the rear of the train, and must also see that the pouch ring is properly placed in the spring clip; the Exchange arm must then be lowered carefully to its proper position so as to ensure the exchange being properly effected.

(d) The exchange apparatus on the engine must be kept thoroughly clean. It must be carefully examined and tested by the Driver each day to see that it is in perfect working order before the engine leaves the shed, and care must be taken on the journey to see that no obstruction, such as pieces of coal, etc., are allowed to accumulate on the footplate, which would be liable to prevent the exchange arm being lowered to its proper position.

(e) It is very necessary to correct any distortion in the pouch ring before use, and due care must be exercised to fix the pouch on the Exchangers in the correct position for exchanging; neglect of these precautions may result in the Staff being missed, and serious delay to traffic.

(f) The exchange arm on the engine must be lowered before reaching the Ground Exchanging Apparatus, and in sufficient time to effect the exchange, but wherever it can be avoided, it must not be lowered when passing along a Station platform. Immediately the exchange is effected, the arm must be raised to and secured in its normal position; the Staff pouch must then be taken off and the Staff examined to see that it applies to the Section, and then hung in its appointed place in the Driving compartment. The Staff must not be placed in the Exchanger again until the train is approaching the Ground Exchanging Apparatus, and it is observed that the White Disc or White Light is in position.

(g) The maximum rate of speed permissible when exchanging Staffs by means of the Automatic Exchanging Apparatus is 40 miles per hour.

3. (a) To avoid the risk of personal accident when the Staff Exchange Apparatus is being used, Station-masters must, as far as practicable, take special care that no person is standing either in the six foot or near the Line, within at least 100 feet of where the Staff Exchangers are fixed.

(b) The working of the Staff Exchanger at Stations must be closely observed by the Signaller, and any defect must at once be reported by wire to the District Superintendent, Signal Supervisor, and Electrical Fitter for the District.

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4. STAFF EXCHANGER POUCHES.—(a) Each Automatic Exchanging Station is provided with four pouches for use in the Exchangers. Spare Pouches must be kept available for emergency purposes by the Station-masters at the following Stations:—Benalla 6, Wodonga 3, Geelong 3.

(b) Station-masters must inspect the pouches regularly to see that they are in good order, and see that no pouch in need of repair is used in the Exchanging Apparatus; rings that are out of shape must be made round before being used.

(c) Pouches must not be allowed to accumulate at any Station, and those in excess of the specified number must be promptly redistributed.

(d) Damaged pouches, clearly addressed and showing on the label the name of the sending Station, must be forwarded to the Block and Signal Inspector, Flinders-street, who will recoup the Station for the number sent in. The Block and Signal Inspector must also be advised by telegram as to the number that is being forwarded so that no delay will be caused in obtaining a fresh supply.

5. MAINTENANCE OF APPARATUS ON ENGINE.—The Staff Exchanging Apparatus on each engine must be examined at least once a week at the Depot by the Leading Hand Fitter. The apparatus must be tested to ascertain that it is in proper working order, and any defects noted must be rectified. With the engine standing on a straight and level track over a pit in the shed, the position of the Exchanger relative to the track must be checked. With the Exchanger in position for exchanging the Staff the vertical distance from the top of the rail to the point of the horn and the horizontal distance from the centre of the track to the point of the horn must be in accordance with the standard dimensions laid down, and all adjustments necessary to ensure standard must be made.

NO. 2 ROAD AT STAFF OR TABLET STATIONS.

1. At all Staff or Tablet Stations (Permanent and Temporary), No. 2 Road, as well as No. 1 Road, must be regarded as a Running Line, and except as specially authorised under clause 2 hereof, No. 2 Road must always be kept clear for trains to cross. It is not intended that this order shall prevent No. 2 Road being used for shunting purposes when required, but, unless attached to an engine under steam, vehicles must not be allowed to remain in that Road after the shunting has been completed. This instruction will also apply to dead-end extensions of Nos. 1 or 2 Road.

2. Exceptions.—Vehicles may be allowed to stand in No. 2 Road at—

- (a) Stations open permanently or temporarily as Staff Stations where there is only one other Road in addition to No. 1 Road. If at any time, owing to unforeseen circumstances, the number of vehicles in No. 2 Road will not allow of trains being crossed, the Signaller must advise the Staff Station on each side in good time.

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(b) At the following Stations, but only when there is not sufficient Siding accommodation:—

Asoa	Katunga	Rushworth
Bairnsdale	Korumburra	Rupanyup
*Beeac	Lalbert	Swan Hill
Belgrave	Maffra	Sea Lake
Ben Nevis	Manangatang	Tatura
Berriwillock	Merrigum	Tocumwal
Bet Bet	Minyip	Ultima
Bruthen	Mysia	Underbool
Cope Cope	Nandaly	Wandin
Cowangie	*Newtown	*Warburton
Crib Point	Nyahwest	Warracknabeal
Donald	Orbost	*Watchem
East Natimuk	Ouyen	Wycheproof
Gembrook	Quambatook	Yarra Junction
Heywood	Ringwood	Yarram
Hopetoun	Robinvale	Yea
Jeparit		

(c) At Stations shown hereunder, but only under the conditions specified in each case:—

Station.	Conditions under which No. 2 Road may be used for Vehicles to stand in.
Benalla ..	Branch Line train only. See further instructions, page 796.
Bet Bet ..	On dead-end extension Up end, but for Ballast Train only
Boort ..	Water trucks, but only when water supplies are being sent down the Manangatang Line
*Charlton ..	Water trucks, but only whilst being filled
Chillingollah ..	Van of No. 2 Down train
Foster ..	Car taken off the Down Mixed train
Goornong ..	On dead-end Down end, but only surplus loading of Up trains and subject to the condition laid down in sub-clause (b)
Hattah ..	Water trucks, but only when supplies are being distributed
Kaniva ..	South Australian loading off Down Goods that terminates at Kaniva—between 8 a.m. and arrival of a later train—the engine of which must clear No. 2 Road. Note.—This permission applies only when it is not possible for the Goods engine to place the loading on No. 3 without interrupting loading operations of customers.

*During daylight only.

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(c) At Stations shown hereunder, but only under the conditions specified in each case—continued:—

Station.	Conditions under which No. 2 Road may be used for Vehicles to stand in.
Lubeck ..	Branch Line train only.
Leongatha ..	Vehicles arriving on No. 21 Down
Lockington ..	State Rivers Department's site, Up end of No. 2 Road
Mildura ..	Only for a train that requires to be washed
Murchison East ..	Branch Line train only
Murrayville ..	South Australian vehicles on Mondays and Fridays, for the purpose of transferring consignments to or from Victorian vehicles.
Natimuk ..	Between 10 a.m. on Wednesdays and 2 p.m. on Thursdays
Noradjuha ..	Surplus loading awaiting clearance.
Nowa Nowa ..	Only trucks loaded with Sleepers awaiting despatch
Numurkah ..	Cars off No. 7 Down, but only till arrival of No. 10 Up train
Penshurst ..	Ballast train only
Traralgon ..	Branch Line train only
Yarra Glen ..	Only trucks containing Live Stock and marshalled for straight pick up by Up Mixed train

Notes:—

1. Although vehicles may stand in No. 2 Road at the above-mentioned Stations under the conditions laid down, it is to be understood that the practice must be limited as far as possible, and **due care** must be taken to see that no train is turned direct into No. 2 Road without it is first ascertained that such Road is clear.

2. When it is necessary to cross a train and No. 2 Road is occupied, the first train to arrive must be admitted into No. 1 Road, and then be set back and turned into No. 2 Road, the Driver being cautioned as to state of the Road. Regulation 131 must be complied with, and where there is a Dead-end on No. 2 Road, a Red Light must be exhibited as prescribed in Regulation 133.

3. Scotch Blocks which can be locked back clear of the rails must be provided at each end of No. 2 Road at Stations where authority is given for vehicles to stand on that Road, and the Station-master or person in charge will be held responsible for the Scotch Block being properly secured. Should vehicles be standing in this Road after dusk, or during foggy weather, a Red Light must be placed on the end vehicle on the buffer farthest from the Clear Running Line, so as to face any approaching train.

4. When No. 2 Road is occupied at any Station where the levers working the Points and Signals are Interlocked, a sleeve must be placed on the lever or levers of the Signal or Signals which control the entrance of trains into that Road.

RUNNING LINES BETWEEN PLATFORMS.

1. At the Stations named hereunder, all Lines between the platforms must be regarded as Running Lines:—

Ballarat
Bendigo
Caulfield
Clifton Hill
Flinders-street

Geelong (including No. 5 Road)
Mordialloc
Oakleigh
Ringwood

(b) When one or more vehicles are left on any of these Roads, the Signalmen, or both Signalmen where there is a Box at each end, must be notified at once, and after dusk, or in foggy weather, a Red Light must be exhibited at the rear and at the front of such vehicles. The Signalmen must immediately place sleeves on the levers of the Signals applying to that road, and the sleeves must not be removed until the Signalmen receive information that the Road is again clear.

(c) Should it become necessary to remove a portion of the train, the Guard or Shunter in charge must again have a clear understanding with the Signalmen and must see that the Red Light is exhibited on the leading vehicle of the rear portion before the front portion is removed.

2. After dusk or in foggy weather should a train be shunted to the centre Road for another train to pass at Clifton Hill, Oakleigh, or Ringwood, the Side and Tail Lights must not be taken off or obscured; and should it be necessary for the engine to leave its train standing on this Road, the Guard in charge must place a Red Light on the front vehicle of the train so left.

COUPLING OF VEHICLES.

1. (a) Between Melbourne and Serviceton the screw couplings on the Express and other Interstate trains must be so tightly coupled as to bring the buffers of the vehicles together. Special attention should be paid to vehicles which are coupled up in Sidings or on curves, as otherwise when drawn on to the Running Line the vehicles may be found to be loosely coupled. The loose coupling of vehicles causes uneasy travelling, and gives rise to complaints from passengers, and employees must therefore give this matter careful attention.

- (i.) All trains from South Australia must be examined at Serviceton, and, when necessary, the couplings between the vehicles adjusted so as to comply with the conditions laid down in clause 1.
- (ii.) When an ordinary Victorian vehicle is attached to a South Australian vehicle, the coupling on the Victorian vehicle must be used in preference to the other, unless it be a "Mann" Sleeping Car, in which case the coupling of the South Australian vehicle must be used.
- (iii.) When a Victorian or Joint Stock vestibule car is attached to a "Mann" sleeping car, the screw coupling on the vestibule car must be used.
- (iv.) In order to allow of sufficient play when the train is travelling round curves, the couplings on the "Mann" sleeping cars must be used for attaching these vehicles to all vehicles

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other than the 12-wheeled vestibule bogie cars and Vans; the screw couplings on the sleeping cars are made with a wider link for this purpose. When a "Mann" sleeping car is attached to a 12-wheeled vestibule bogie car, the screw coupling of the latter vehicle must be used.

- (v.) The side chain hooks on the South Australian Passenger vehicles are larger than the side chain hooks on the Victorian vehicles, and consequently are liable to be jammed when linked together. In order to avoid this the side chain hooks on the Victorian vehicles must be dropped into the links on the side chains of the South Australian vehicles.

(b) Except as shown hereunder, all vehicles on which screw-couplings are used must be so tightly coupled as to keep the buffers of the vehicles together:—

TALLAROOK-MANSFIELD AND ALEXANDRA. — When vehicles on the Tallarook to Mansfield and Cathkin to Alexandra Line trains are attached by means of screw couplings, a space of two inches must be left between the buffers. Vehicles arriving at Tallarook for either of these Lines must, if tightly screw coupled, have the couplings eased to the extent mentioned.

TALLANGATTA-CUDGEWA. — When vehicles (other than the Passenger and Workmen's Sleeping Cars referred to hereunder) on Tallangatta-Cudgewa Line are attached by means of screw couplings, a space of three (3) inches must be left between the buffers. In the case of four-wheeled passenger vehicles or Workmen's Sleeping Cars, having a wheel base of 15 feet or over, the full amount of slack that the coupling will permit must be allowed between any two (2) such vehicles, or between any vehicle of this type and the adjoining vehicle. The Officer in Charge will be held responsible for seeing that vehicles arriving at Tallangatta for this Line, if tightly screw-coupled, have the couplings eased to the extent mentioned.

BAIRNSDALE-ORBOST. — When vehicles on the Bairnsdale-Orbost Line are attached by means of screw couplings a space of two (2) inches must be left between the buffers. Vehicles arriving at Bairnsdale for this line must, if tightly screw-coupled, have the couplings eased to this extent.

WARRAGUL-NOOJEE. — When vehicles on the Warragul to Noojee Line trains are attached by screw couplings, a space of two and a half inches must be left between the buffers. Vehicles arriving at Warragul for this line must, if tightly coupled, have the couplings eased to this extent.

STREZLECKI LINE. — Between Triholm and Strezlecki when vehicles are attached by screw couplings a space of two and a half inches must be left between the buffers. The Guard must adjust the couplings at Strezlecki on Up journey, and tighten them at Triholm.

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On Down journey the Guard must, if there are vehicles on train tightly coupled on arrival at Triholm, ease them to the extent of two and a half inches.

RESERVOIR LINE.—The screw couplings of all Electric trains running to or from Clifton Hill or Merri via the Northcote Loop, must be adjusted to, as far as practicable, allow one inch of slack between the buffers. To ensure uniformity in this respect, the couplings should be adjusted when trains are at rest on a straight level Road, and if the buffers are then found to be touching the couplings should be slackened out by two turns of the adjusting screw; the Yard Staff and Guards at the terminal Station must give this matter due attention.

2. Coupling and Uncoupling Vehicles.— (a) When coupling Cars of Electric Trains, the screw coupling must always be coupled and screwed up before inserting the train cable jumpers in the coupler sockets, and when uncoupling a car, the Train-cable Jumpers must first be uncoupled, before "easing up" for the screw coupling to be disconnected; these precautions are necessary to avoid damaging the electrical equipment.

(b) When coupling cars of an Electric train, employees must exercise due care to see that the jumpers are pushed fully home in their respective sockets, and properly secured by the retaining clips. If the jumper cannot be pushed home by hand, a light wooden mallet may be used for this purpose; a mallet is provided at every Station, where, ordinarily, coupling is performed, and the Station-master must see that the mallet is always available for immediate use.

(c) A spare nine-core cable jumper must always be carried between the second and third cars of the "Block" portion of the train, and when uncoupling these cars, both jumpers must not be left attached to the same car; each jumper must be secured in the Dummy Coupling Head of its respective car. See sub-clause (e), of clause 15, page 613.

(d) When uncoupling passenger cars the coupling must not be allowed to swing against the end of the car; this applies particularly to electric stock, in which case electric fittings are liable to be damaged. Station-masters and other supervising officers must see that proper care is exercised.

When uncoupling cars, the jumpers must not be allowed to hang down; in every case the loose end of the jumpers must be secured in the receptacle provided for the purpose at the end of each Trailer Car. These receptacles are not provided on Motor Cars, and, when uncoupling, the jumpers must always be detached from the Motor Car.

3. (a) Employees responsible for cleaning or using screw couplings must take special care to adjust the screw, so that it will be properly equalised on each side of the nut, otherwise, the screw end is likely to foul the drawhook, and may cause the coupling to lift off.

(b) At a Station from which a vehicle starts on a journey, the employees concerned will be responsible for seeing that the screw couplings are clean and in good order.

Before taking their engines from the Shed, Drivers must see that the screw couplings attached to the engines have been cleaned, that the screws have been adjusted, and that the couplings are in a safe condition.

4. Couplings Lifting.—(a) In order to provide against a coupling lifting off the drawhook, and so causing the train to become divided, every Guard and Shunter must see that the shackles work freely when attaching any vehicle for despatch.

(b) More or less serious injuries are sustained by employes from time to time during shunting operations owing to couplings being stiff, and in order to minimise the risk of injury from this cause, employes concerned must immediately draw the attention of the Station-master, Train-examiner, or other responsible official to the particular couplings, so that the Rolling Stock Branch may be promptly advised to have such couplings adjusted.

If any coupling be found stiff, at a Station where there is no Train-examiner, it will be the duty of the Guard or Shunter to well oil the shackle, and to see that it works freely, so that it will not be likely to lift off the drawhook on the journey. Care must also be taken to see that the link of the centre chain is properly hung on the drawhook.

(c) When coupling vehicles, of which the buffers are unequal in height, the coupling attached to the lower vehicle must be utilised, as it is considered that the possibility of the coupling lifting from the drawhook will thus be minimised. See clause 5.

(d) When couplings lift off the drawhooks during the journey, the Driver, in addition to making a personal examination, must report the matter to the Train-examiner at the nearest Depot, so that an examination can be made.

5. Screw Couplings on Trucks.—(a) Live Stock trucks (loaded or empty); also trucks for which authority is given to attach to Passenger trains, and all trucks on which large Boilers, Engines, Heavy Girders, etc., are loaded, and also sets of two or more trucks carrying one lot of Piles, or long timber, etc., must be screw coupled.

(b) Yard Foremen, Guards and Shunters must see that, except where otherwise ordered, the screw couplings are adjusted so as to have equal travel on each side of the shackle nut, and that they are properly screwed up between the vehicles prior to the despatch of the train.

(c) When screw couplings are used on Live Stock and Goods trucks, the centre chain couplings must be coupled to the hook provided for the purpose, and not to the centre hook.

(d) When any truck is equipped with a Fixed screw coupling, it must always be used instead of the chain coupling, and the screw coupling must be properly adjusted.

(e) The ordinary portable screw coupling is not suitable for, and must not be used on, trucks fitted with Gab or Gedge hooks; if at any time these trucks are fitted with seats and placed in passenger traffic, they must be screw coupled, with couplings of a special type.

6. Side Chains.—Side Chains are being gradually abolished, but when two trucks which have them come together, they must be coupled in the usual way: where they are connected to one truck only, one Side Chain is to be slung on the other.

7. Engine Coupling Chains.—The couplings on the ends of American engine tenders, with bogie underframes, must be allowed to hang in the normal or vertical position when not in use, and must not be slung over the bogie frame.

8. Couplings Not to be Allowed to Hang Down.—

As Point connections and interlocking gear are frequently damaged owing to long centre couplings being allowed to hang down, Shunters, Porters, Firemen and others must, when coupling up, see that spare couplings, both **screw** and **three-link**, if any, are properly slung. If no hook is provided for the purpose, the side chain, if there be one, should be used to sling the screw coupling clear of the Line. Three-link couplings should be slung on the hook provided for the purpose, or as per diagram in margin.

Fig. 1.

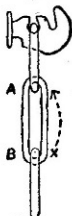
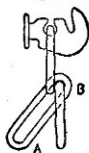


Fig. 2.



Explanatory Note re Diagram.—Take hold of the middle link at "X," Fig. 1, and raise it until it is in position shown in Fig. 2.

9. Draw-bar Hooks.—To prevent draw-bar hooks being unduly strained or broken, only one link of a centre chain or screw coupling must be allowed on them at one time. If a screw coupling is hanging on the hook it must be removed before the link of a centre chain is placed on it, and vice versa.

10. Screw Couplings and Chain Couplings.—(a) All spare couplings (both chain and screw) must be waybilled to the nearest of the undermentioned Stations:—

Melbourne Yard
Spencer Street
Castlemaine
Bendigo
Maryborough
Ballarat
Ararat
Horsham

Geelong
Benalla
Warragul
Nyora
Korumburra
Flinders Street
Prince's Bridge.

(b) The Station-masters at the respective Depots must arrange for the surplus couplings to be sent to Spencer-street.

(c) Spare coupling chains must not be left lying about Station yards.

11. Attention is directed to the instructions under the heading of "Buffers on Trucks," and Buffers of unequal Height, etc., pages 468-469.

AUTOMATIC COUPLERS AND RATCHET HAND BRAKE.

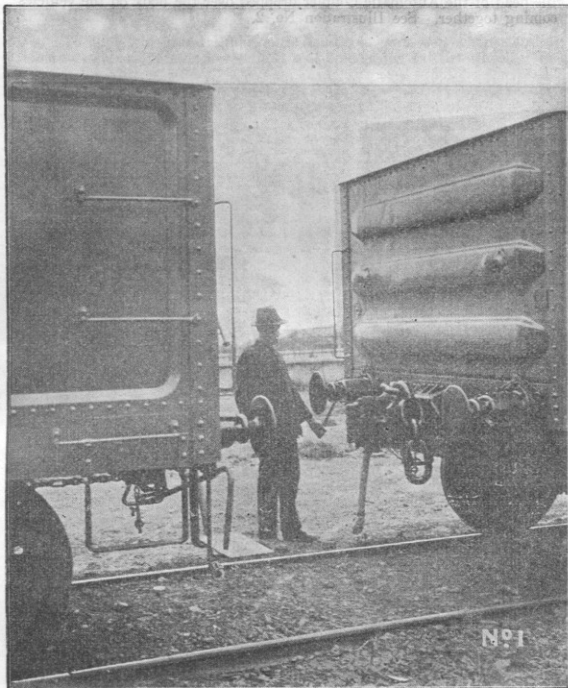
1. (a) A description of the Automatic Coupler and the Ratchet Brake is set out hereunder:—

(b) **AUTOMATIC COUPLERS.**—The Automatic Coupler has an 18-inch projection. Attached to and above the Automatic Coupler is a Five-link Coupling.

2. COUPLING AND UNCOUPLING VEHICLES FITTED WITH AUTOMATIC COUPLERS.—To couple or uncouple vehicles fitted with Automatic Couplers, give the operating handle fitted on the side of vehicles an upward pull; this operation will throw the knuckle open, allowing the two

WORKING OF TRAINS.

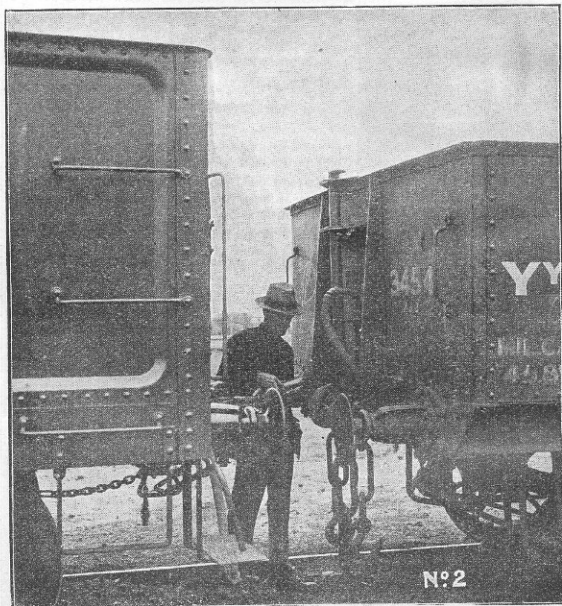
vehicles to couple, automatically, when brought together. See Illustration No. 1.



Note.—On account of the use of short buffers, the clearance between Head Stocks of adjoining vehicles fitted with Automatic Couplers is eight inches less than the clearance between ordinary stock. Employees must, therefore, exercise due care in getting between two vehicles, when either, or both, are fitted with an Automatic Coupler, and must never stand in line with the Automatic Coupler.

WORKING OF TRAINS.

3. (a) TO COUPLE A VEHICLE FITTED WITH AUTOMATIC COUPLER TO A VEHICLE WITH DRAW-BAR HOOK.—The knuckle on the Automatic Coupler should be opened, and the chain coupling which is attached to the head of the Automatic Coupler dropped over the hook on the vehicles coming together. See Illustration No. 2.

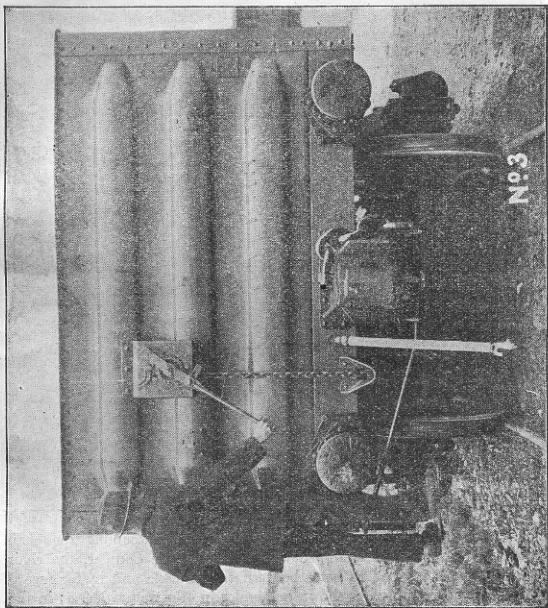


Note.—Some trucks are fitted with top operated "Majex" Couplers, having a "Bail" hook and two link transition chain; before coupling a vehicle fitted with the ordinary draw gear to one with an automatic coupler by means of the transition chain, care must be taken to see that the coupler knuckle is at all times in the full open position.

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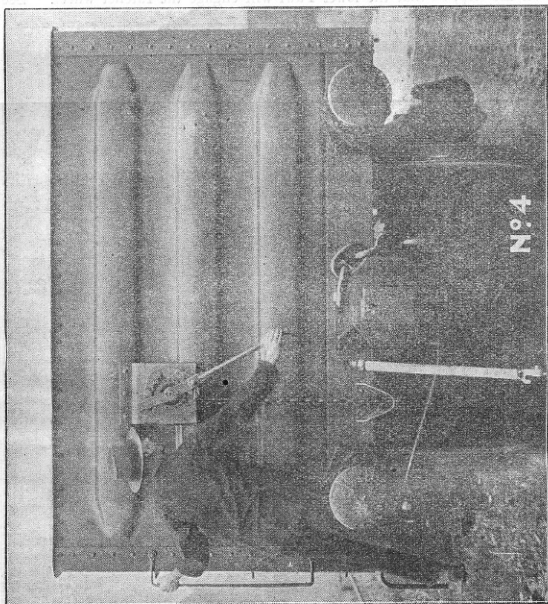
5. (a) RATCHET HAND BRAKE.—The handle of the Brake is fixed at one end of truck, with a Shunter's Step outside the buffer nearest the Brake Handle.

To apply the Hand Brake, pull handle towards you when standing on the step, so that the lower Pawl will engage the ratchet wheel. See Illustration No. 3.



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(b) To RELEASE THE HAND BRAKE.—Push the handle away from you when standing on the step so that the upper and lower Pawls will be thrown out of contact with the ratchet wheel, allowing Brake to run off. See Illustration No. 4.



(c) It is most important to note that, when uncoupling the chain coupling from vehicles equipped with an Automatic Coupler, the chain should not be dropped to hang between the knuckle and buffer face of the Automatic Coupler, as shown hereunder in Illustration No. 5; in that position the chain would foul the Coupling Knuckles and prevent the action of the Couplers when wagons equipped with Automatic Couplers are brought together.

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(d) The proper position in which to place the three (3) link chain, when not in use, is on the side of the Automatic Coupler, as indicated in Illustration No. 6.

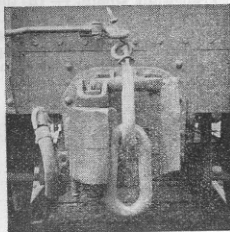


FIG. NO. 5.—THE WRONG WAY.

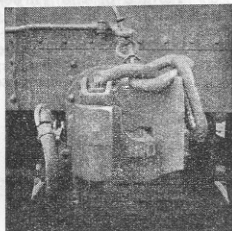


FIG. NO. 6.—THE RIGHT WAY.

4. (a) Failure of the Knuckle or Knuckle Pin. — When two vehicles are coupled together by automatic couplers and the knuckle or knuckle pin fails, the Drag Chain must be used to couple the vehicles together. The Drag Chain must be doubled and the loop or bight end passed under the striking plate and over the coupler shank, and the loop pulled to within a foot of the next vehicle, and the hook and link ends of the chain must be passed under the striking plate and over the coupler shank of the same vehicle, and through the loop of the chain; the chain must then be pulled taut, and the single ends passed over the coupler shank from right to left, and from left to right, and secured by knotting together or hooking the hook and eye.

(b) Failure of the Draft Gear or Shank. — When two vehicles are coupled together by Automatic Couplers and, owing to a failure of the draft gear, the Automatic Coupler is pulled out, they must be secured to each other by the use of the Drag Chain. The Yoke Key must first be replaced in the slots of the front stops or a spare key inserted. The Drag Chain must be doubled, and the loop or bight end passed under the striking plate and over the Yoke Key, and then brought and secured to the next vehicle, as outlined in clause (a).

(c) Failure of the Bollard on Automatic Coupler. — When the three link transition chain being used between a vehicle fitted with Automatic Coupler and one fitted with ordinary draw gear and the Bollard breaks, the Drag Chain must be used to couple the vehicles together. The Drag Chain must be doubled, and the loop or bight end passed under the striking plate and over the Coupler Shank, and the loop pulled to within a foot of the next vehicle. The hook and link ends of the chain must then be passed under the headstock and over the draw bar of the same vehicle and through the loop of the chain; the chain

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must then be pulled taut, and the single ends passed over the draw-bar from right to left, and from left to right, and secured by knotting together or hooking the hook and eye.

(d) **Failure of the Three-Link Transition Chain.**—In the event of failure of the three-link transition chain, the damaged chain shall be replaced by a spare three-link chain. The damaged chain can be freed from the Bollard by knocking the lightly welded check strip off with a hammer blow. If no spare three-link chain be available, the Drag Chain must be used as directed in clause (c).

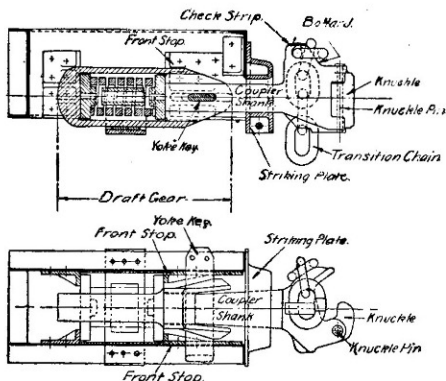
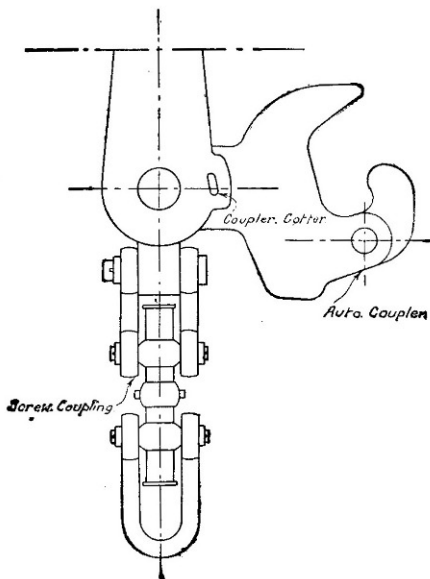


DIAGRAM OF AUTOMATIC COUPLER AND DRAFT GEAR.

WORKING OF TRAINS.

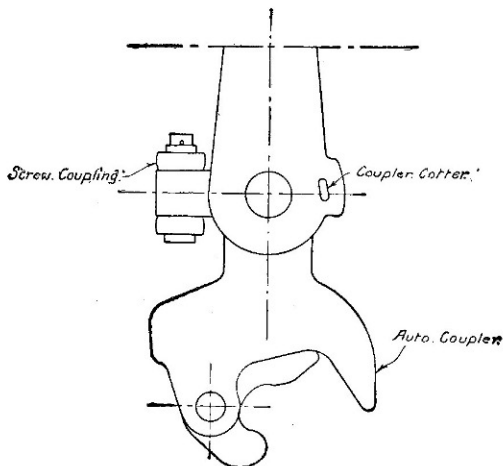
1. Use of Draw Gear on Locomotives Fitted with Automatic Couplers.—(a) This gear consists of two types, viz.:—(i.) Automatic Coupler, and (ii.) Screw Coupling.

(b) TO COUPLE a Locomotive to a vehicle equipped with ORDINARY DRAW GEAR, remove coupler cotter, place the Automatic coupler parallel with the headstock of Locomotive, then swing the screw coupling into position and couple to draw hook.



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(c) TO COUPLE a Locomotive to a vehicle equipped with AUTO-MATIC DRAW GEAR, swing the screw coupling to the left side, bring Auto-matic coupler in line with centre of Locomotive, place coupler cotter into position, couple up by bringing the Locomotive and vehicle together.



WORKING OF TRAINS.

A number of 21-ton steel trucks now in traffic and fitted with Automatic Couplers are equipped with a special type of Hand Brake.

The Brake handle, which is fixed on each side at the end of the truck, has two positions, i.e., "On" and "Off."

To apply the Brake, the operating handle must be turned towards the "On" indication until the Brake Blocks are fully applied. The Brake will then be held in the "On" position by a Pawl and Ratchet until released.

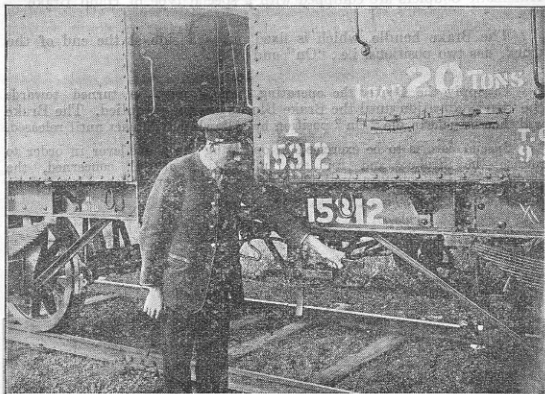
Special care is to be exercised in operating the Pawl lever in order to release the Brake; and for the information of all concerned, the CORRECT and INCORRECT methods are illustrated hereunder:—

CORRECT METHOD OF RELEASING.



WORKING OF TRAINS.

INCORRECT METHOD OF RELEASING.



LOOSE SHUNTING.

(Regulation 132.)

1. Definition of Loose Shunting.—This means the moving of any vehicle not coupled to an engine or Motor Car; and includes Fly or Slip Shunting; see sub-clause (b).

(a) **DOUBLE SHUNTING.**—This means the pushing of two lots of trucks—uncoupled from the engine which is pushing them, but coupled together in two separate lots—from one Line on to different Lines—that is, one lot going through one set of Points on to one Line, and the other going through another set of Points on to another Line.

(b) **FLY OR SLIP SHUNTING.**—This means that while an engine is drawing trucks attached to it towards Facing Points, the trucks are uncoupled from the engine, and the engine is run on to one Line and the trucks diverted, at the Points, towards another Line.

2. Braking of Vehicles During Shunting Operations.— (a) Clause (c) of Regulation 206 provides that when putting away loose carriages in any Depot or Siding, they are not to be uncoupled from the engine or motor car until they are at rest in the position in which they are required, and this Regulation must be complied with whenever it is possible to do so; when, in a case of special emergency, the loose shunting of any vehicle is unavoidable, sub-clause (b), hereof must be strictly complied with in addition to all other Instructions applicable to the shunting movement in operation.

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(b) Before commencing the movement, the employee responsible for the operation must test the Air or Hand Brake (whichever is required to stop the vehicles to be shunted) by personally operating the cock which discharges Train-pipe pressure, or by applying the Hand Brake, and see that the Brake Blocks are, thereby, pressed firmly on the wheels. See clause 16, page 613.

3. Shunting Vehicles Against Trains Conveying Passengers.

—Loose shunting of vehicles against loaded Passenger or Mixed trains or against any vehicle containing passengers is strictly prohibited. When there is a vehicle or a number of vehicles in one lot to be attached to a Passenger train, or to a Mixed train, or to a Goods train with car attached, the engine must not be uncoupled, but must be moved back carefully with them to the standing train. When more than one shunt is necessary, and time is important, the engine must go back with the first vehicle or vehicles, which must be placed short of the train, at a safe distance, and securely hand-braked. Other vehicles may then be loose-shunted on to the vehicle or vehicles so braked, provided a competent person is available to attend to the Hand Brakes. After the marshalling has been completed, and the vehicles placed short of the train are properly coupled, they must be shunted back to the train, attached to the engine; see also clause (b), under the heading of "Shunting Empty Trains," pages 442-444.

4. Loose Shunting Vehicles into Goods Sheds, Substations, Loading Docks, and on to Stages, etc.—(a) In order to avoid risk of accident to employees conducting shunting operations, all concerned are hereby instructed that wherever it can be avoided, vehicles should not be loose shunted into Goods Sheds, Loading Docks, on to Stages, or past Platforms, etc., unless the Hand Brakes can be applied without the risk of the men operating them coming into contact with the structures. See also Regulation 131.

(b) At Substations no vehicles must be loose shunted into a Siding that leads into the building, unless there are other vehicles in the Siding with their Brakes secured "On" to prevent the trucks fouling the door of the Substation.

(c) On Substation Sidings having a branch or "Spur" Road leading from a Siding into the Substation, the Points leading towards the building must lie, normally, for the ordinary road—not towards the door of the Substation; hand bars and padlocks are provided for these Points, and, to protect the doors, the Substation attendant will be responsible for the Points being ordinarily locked in the normal position and for custody of the key.

SHUNTING AT INCLINE STATIONS.

At Stations situate on or close to a grade on which any detached vehicles are liable to run away, the shunting in the direction of the falling gradient must be subject to the following restrictions:—

1. While being shunted on or to the Main Line, vehicles must not be detached from the engine unless a sufficient number of other vehicles, properly secured by means of Hand Brakes are standing as a

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barrier between the moving vehicles and the falling grade. If there be no barrier, a competent employe must ride on the leading vehicle of those attached to the engine (when the vehicles are being pushed) and on the trailing vehicle of those attached to the engine (when the vehicles are being drawn), so that in the event of any vehicle becoming detached, he may be in a position to prevent a runaway by using the Brakes. The leading or trailing vehicle, as the case may be, must be fitted with a Hand Brake, which must be in good order, and, in addition, whenever it is reasonably practicable, the Air Brake must be in operation on all vehicles that are being shunted.

2. Vehicles must not be loose shunted into a Siding unless—

- (a) the Siding is a dead end Siding, or
- (b) has Catch Points or Derail Blocks at far end which are set for derailing, or
- (c) there are other vehicles in the Siding with their Hand Brakes applied, and the Scotch Block is across the rail at the far end.

3. When a train or vehicle has to be left unattached to an engine in Sidings where there is a falling gradient in one direction or the other, all screw Brakes must be put hard on, and in the case of trucks a sufficient number of Hand Brakes must be applied to prevent the vehicles from moving; Hand Scotchies or Sprags must also be used where necessary. If the Siding have a dead-end, the train or vehicles must be left close up to the buffer stops, if reasonably practicable to do so. Van doors must be locked after the Brakes in them are applied.

4. Station-masters are hereby instructed to personally warn all the men under their charge to be **exceptionally careful** in performing shunting operations on the Running Line at places situate near the summit of, or on a grade, and they are required to see that the proper precautions are taken, and that, where necessary, a sufficient supply of Hand Scotchies is kept available.

SHUNTING EMPTY TRAINS.

Definition.—For the purposes of this instruction the word "Train" means an engine or a Motor Car with one or more vehicles attached.

1. Unless instructions are issued to the contrary, when a train is being shunted from one Running road to another or to a Siding out of running, or from a Siding to be put into running, the Air Brake must be connected through and in operation on the train. A Guard, Shunter, or other competent employe of the Transportation Branch, must test the Air Brake, and except where otherwise ordered, must accompany the train, riding on the vehicle farthest from the engine, being prepared to stop the train by means of the Brake (if practicable) or to signal to the Driver as may be necessary. Before moving the train the Driver must see that such employe is in attendance; see Special Instruction relating to Flinders-street Station, pages 723-724.

2. (a) If the train is to be pushed, the Guard, Shunter, or other employe must, in the first instance, give the Driver all necessary information regarding the movement, and before giving the Driver a Hand Signal to

WORKING OF TRAINS.

move his train, he must, as far as is reasonably practicable, see that the Line is clear, and that the Fixed Signal (where one is provided) applying to the movement is at Proceed. He must also be prepared to apply the Air Brake from the leading vehicle should circumstances so require. At night a White Light must be exhibited on the leading vehicle.

Before commencing to push the train the Driver must himself see that his engine or Motor Car is properly coupled on. (See also clause 5, page 397.)

(b) Except where special instructions are issued to the contrary, the Driver must always be in the Motorman's compartment at or nearest to the leading end of the train when shunting the cars of Electric Trains.

(c) When one or more vehicles are to be attached to any train containing passengers, the following instructions must be observed:—

- (i.) The Driver and Guard must see that the Air Brake is fully applied on the train, to ensure that it shall not be moved when the two portions are brought together. See clause (a), Regulation 210.
- (ii.) The Air Brake on the vehicles to be attached must be tested and then worked carefully towards, and stopped at least six feet from, the standing train; except in the case of an Electric train, the vehicles may then be moved cautiously towards the main portion of the train.
- (iii.) In the case of an Electric train, when vehicles are to be attached, the vehicles must not be moved on to the standing train until the Shunter has received a signal to do so from the Guard. The Guard must go to the place where the coupling is to be done, and personally see that everything is right before giving the Shunter the Signal to bring the vehicles carefully on to the main portion of the train.

Certain Trailer cars used on Electric trains are fitted with a special Brake Valve which is fixed in a position suitable for the Shunter to operate it whilst riding on the footboard at the leading end; before taking the car or cars from the yard he must locate and test this Brake Valve. The Shunter must withdraw the hose pipe from the "Dummy Coupling" before moving towards the train or portion of the train to which the cars are being added.

DETACHING VEHICLES.—When vehicles are being detached, the Guard must be in attendance at the point where the uncoupling is being done, to see that the Shunter carries out the operation in proper order, and that the train is not allowed to move until the Shunter is clear of the train. The Driver must satisfy himself that the proper All Right signal to proceed is displayed by the Shunter before starting.

- (iv.) When a car (or cars) is being attached to the rear of any Brake-van on a train, the light on or in the Van must not be extinguished until the cars have been coupled to the train; the Guard must see that the cars are properly coupled, that the Shunter is clear, that the Tail Signals,

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and (at night) Side Lights, are properly arranged, and before starting the train he must release the Hand Brakes and test the Air Brake Apparatus from the rear vehicle.

(d) Except in case of emergency the Shunter must not leave the leading vehicle while the train is in motion upon a Running Line. If, however, the train is being pushed from a Running Line to a Siding, he may, if it be necessary to move any Hand Points after the train has arrived at or is in the Siding, leave the leading vehicle to move such Points; but he must, if reasonably practicable, rejoin the train and again ride on the leading vehicle until the train comes to rest at its destination in the Siding.

(e) If the Guard, Shunter, or other employe is unable to satisfy himself that the Siding into which the train is being shunted is clear, he must, in all cases, after leaving the train to move the Points, rejoin it after the train has passed over the Points, and ride on the leading vehicle.

(f) The Driver must, when the Guard, Shunter, or other employe leaves the leading vehicle to move the Points, reduce the speed of the train to a rate not exceeding three miles per hour, and he must bring the train to a stand immediately it has passed over the Points, unless he receive verbal instructions from the Guard, Shunter, or other employe, to continue to move the train, in which case the rate of speed must not be increased between the Points and the place where the train is to be brought to rest.

3. The Guard, Shunter or other employe, must see (1) that a train shunted into a Siding is left properly secured, and (2) before shunting a train out of a Siding that any vehicle or vehicles immediately in the rear are properly secured. For this purpose the ordinary Hand Brakes must be used.

SHUNTING OF CARRIAGES AND OTHER HIGH VEHICLES, ETC.

1. Carriages, vans, "T" and "U" trucks, and other high vehicles, must not be shunted into or through Engine Sheds where there are smoke troughs, nor must carriages be shunted into or through Goods Sheds, as sufficient clearance is not provided. Vestibule vehicles are wider than the ordinary Rolling Stock, and must not be shunted through Sidings unless the clearance is known to be sufficient.

2. Vestibule vehicles should not be shunted with loose couplings, as there is a danger of employes falling between the buffers when passing through the vestibules, and the connecting curtains are likely to be torn.

3. The curtains should always be disconnected before vestibule carriages are uncoupled from each other, and as the shutters on the ends of the cars are liable to injury by the Air Brake gear of adjoining vehicles if pushed hard against such gear, Shunters should exercise care to avoid this. Vestibule carriages must always be placed with the engine, and not be loose shunted.

4. Whenever a vestibule vehicle has to be coupled to another vestibule vehicle or to a vehicle of the ordinary stock, the shunter or other employe concerned, in order to avoid risk of accident, must not attempt to get between the two vehicles until they have been brought together and are at rest.

WORKING OF TRAINS.

WORKING OF COAL GEARS AND ELEVATED ROADS.

1. All classes of engines, except A2, "C" and "F" classes, may be used for shunting on Coal Gears and elevated Roads; the engine must **always run funnel first** up the grade.

2. Before going on to or coming off any Coal Gears or Elevated Road the Driver must see that the boiler of the engine shows a full glass of water, so that sufficient water will be over the tubes at the smoke-box end while on the grade.

3. The vehicles must always be pushed up the grade, and for Coal Gears the load must not exceed that laid down in the "Load Table."

4. The Air Brake must be connected throughout, and, before the train is so moved, the Guard or Shunter in charge must, in order to see that it is so connected, test the Air Brake by opening the cock in the Brake pipe of the last vehicle; he must also test the Hand Brake on each vehicle on the train, and see that it is in proper working order, and if the Hand Brake on any vehicle be not in proper working order then such vehicle must not be shunted on to any Coal Gears or Elevated Road.

5. The rate of speed must not be excessive, and great care must be exercised by all concerned so as to be able to stop the vehicles where required on the level; the Hand Brakes must be used for this purpose when necessary.

6. Loose or Double Shunting is strictly prohibited; the engine must remain attached to the vehicles until they are brought to rest and properly secured.

7. (a) Before placing a rake of loaded vehicles on any Coal Gears Road or any elevated Road, all empty vehicles in the Road must first be removed.

(b) When, owing to the grade, the engine is unable in one trip to place the full complement of vehicles, a second rake may be placed against the first, but in such case the foremost vehicle of the first rake must be stopped at least 40 feet from the buffer stops, and each truck must be properly secured by the Hand Brake before the engine is detached.

(c) When a second rake is to be placed against a first rake the Driver must carefully push the second rake up to the first, and the two rakes must then be coupled together and placed as required.

(d) If, after computing the tonnage of a set of trucks about to be placed on any Coal Gears Road or elevated Road, it is found that the load laid down for the engine is in excess to the extent of a portion of one of the trucks, the extra tonnage may be permitted to be pushed.

As an instance of the above, in regard to the Seymour Coal Stage, the load for an 80 per cent. engine is shown as 51 tons, but the total tonnage of three loaded trucks may be 57 tons. In such case the three trucks may be placed, if it is reasonably practicable to do so.

NOTE.—Sub-clauses (a) and (c) of clause 7 do not apply to the North Melbourne Coal Gears Roads, as trucks to the full complements of the Stage may be placed on any of the Roads, providing that the vehicles (if any) already occupying such Road are properly secured.

WORKING OF TRAINS.

8. Vehicles must be properly marshalled before being shunted on to Coal Gears or Elevated Roads.

9. The use of a tail rope for the purpose of dropping a vehicle wholly or partly down the incline of Coal Gears or other elevated Roads is strictly prohibited.

USE OF TAIL ROPE FOR SHUNTING.

1. In affixing a tail rope to any vehicle that requires to be towed, care must be taken to hook the rope on to the proper place, and not on to the Brake Gear or the hornplate below the axle box, and when ready to move, the engine must always start gently.

2. When using a wire Tail Rope (the diameter of which is 11/16ths of an inch) to move any vehicle or vehicles, the Guard, Shunter, or other employe must be careful to prevent excessive strain being placed upon the rope. Where the Line is level, up to 12 empty or loaded vehicles of a gross weight of 78 tons may be moved, but on rising grades the gross weight to be moved at one shunt must not exceed that shown below:—

Grade.	Gross Weight of Trucks to be moved. Tons.
1 in 1000 rising	73
1 in 500 „	68
1 in 250 „	60
1 in 150 „	52
1 in 100 „	45

3. Unless specially authorised by the General Superintendent of Transportation, vehicles must not be towed up grades steeper than 1 in 100.

4. When an engine is pushing vehicles, it must not, at the same time, be used for towing, as the vehicles in front of the engine or tender obscure the Driver's view.

5. Guards, Shunters, or other employes are hereby forbidden to pass in front of moving vehicles for the purpose of hooking or unhooking Tail Ropes, except in those cases where it is absolutely necessary for them to do so.

6. Tail Ropes must be kept in a convenient position, well known to the Station or Yard Staff, and preferably near to where most of the shunting operations take place, but at least 4 feet 9 inches away from any Running Line. A like clearance should also be observed when the rope is not actually in use during the progress of shunting operations.

7. Every Tail Rope must be carefully examined before being used, and also specially examined on every Monday morning by the Station-master or Officer in charge, or an employe appointed by him; the weekly examination by the person appointed will not relieve the employe who is about to use a Tail Rope of his responsibility of satisfying himself that it is in proper order each time it is to be used.

WORKING OF TRAINS.

TRAIN-EXAMINERS' DISTRICTS.

The location of Train-examiners in each District R.S. Superintendent's District and the area in which each attends to Rolling Stock requiring repairs is as shown hereunder:—

District.	Location of Train-examiners.	Area.
Western.	Ballarat ..	Buninyong, Waubra, Tourello, Beaufort, Meredith, Rowsley, Newtown, Skipton, Woodburn
	Stawell ..	Great Western, Lubeck, and Marnoo
	Dimboola* ..	Horsham, Balmoral, Geroke, Yaapect, Yanac, and Miram
	Murtoa ..	Ashens, Doon, and Patchewollock
	Serviceton ..	Kaniva
Northern.	Bendigo ..	Harcourt, Mincha, Glenalbyn, Willowmavin, Elmore, and Cohuna Branch line
	Castlemaine ..	Shelbourne and Campbell
	Kyneton ..	Kyneton Yard only
	Woodend ..	Clarkefield, and Branch Line to Lancefield, Chewton, Redesdale Junct. to Redesdale, Carlsruhe to Daylesford
	Echuca ..	Rochester and Tatura (including oiling, padding and blocking of cars on the Toolamba Line), Deniliquin, Balranald.
	Kerang ..	Macorna to Yungera, Murrabit and Koon-drook
South-Western.	Korong Vale ..	Wedderburn Junct. and Wedderburn Branch Line, Robinvale, and Kulwin
	Geelong ..	Queenscliff, Wensleydale, Birregurra, Forrest, Wingeel, Lethbridge, and Little River
	Colac ..	Crowes, Camperdown-Timboon, and Warn-coort and Alvie
	Warrnambool* ..	Port Fairy, Penshurst, Terang-Mortlake, and Boorcan
	Cressy ..	Ondit, Vite Vite, Berringa, and Poorneet
	Ararat ..	Glen Thompson, Armstrong, Navarre, Amphitheatre, Middle Creek, and Pura Pura
	Hamilton* ..	Woolsthorpe, Portland, Mount Gambier, Casterton, Coleraine, Dunkeld, and Englefield

*The Train-examiner stationed at Warrnambool travels to Penshurst on Fridays. The Train-examiner stationed at Hamilton travels to Warrong on Mondays, Tuesdays, and Wednesdays; ordinarily the Train-examiner, Dimboola, travels to Balmoral, but in busy seasons the Train-examiner, Hamilton, proceeds to Kanagulk.

WORKING OF TRAINS.

TRAIN-EXAMINERS' DISTRICTS—continued.

District.	Location of Train-examiners.	Area.
East and South-East.	Dandenong ..	Dandenong to Drouin, Caldermede and Strezlecki Line
	Nyora ..	Lang Lang to Woodleigh
	Korumburra ..	Loch to Woodside and Branch Lines
	State Mine ..	Garden Blocks and Kernot
	Warragul ..	Noojee Line, Warragul to Trafalgar
	Traralgon ..	Briarolong, Sale, and North Mirboo line
	Moe ..	Yallourn, Walhalla, and Thorpdale
	Bairnsdale ..	Stratford to Orbost
Midland.	Maryborough ..	Clunes, Avoca, Guildford, Bullabul, Goldsborough
	Donald ..	Bealiba and Massey
	Woomelang ..	Watchem and Turriff
	Ouyen ..	Speed, Yatpool, and Panitya
North-Eastern.	Mildura ..	Yelta and Redcliffs, Merringur
	Seymour ..	Broadford, Mansfield, Alexandra, Colbinabbin, Girgaree, and Creighton
	Shepparton ..	Murchison East, Picola, Tocumwal, Cobram, and Katamatite
	Benalla ..	Benalla to Springhurst, inclusive; also Yarrowonga, Tatong, Whitfield, Wahgunyah, Yackandandah, and Bright
Metropolitan.	Wodonga ..	Chiltern to Cudgewa, inclusive
	Car and Wagon Shops, North Melbourne ..	Sunbury, Kilmore East, Kilmore, Fawkner, Whittlesea (via Royal Park), Bacchus Marsh, Manor, Fitzroy Goods Line,
	Jolimont Shops ..	Flinders-street to Hurstbridge, Warburton, Healesville, Gembrook, Red Hill, Mornington, Sandringham, St. Kilda, and Port Melbourne.

TRAINS TO BE EXAMINED BY TRAIN EXAMINERS AND DRIVERS.

(Regulation 126.)

1. At Spencer-street and Flinders-street Passenger Stations, Regulation 126 will, except in special cases, apply to Country Passenger trains only. If, at either of these Stations, the Train-examiner should find it necessary to detain a Suburban Passenger train for any purpose connected with his duties, he must promptly advise the Station-master or other person in charge of the platform, so that the train may be dealt with as circumstances require.

WORKING OF TRAINS.

2. (a) Trains must be made up in time to be examined by the Train-examiners; see Air Brake Order 4, pages 602-603. No train must be started until the Train-examiner has satisfied himself that it is all right and safe for it to proceed, and (except as specified in clause 1 hereof) he has informed the person in charge—or, in the case of a Goods train, the Guard of such train—to that effect.

(b) When two trains are timed to start from one Station or Yard at or about the same time, and insufficient time is allowed for both trains to be examined, the Train-examiner should report the matter to his Foreman.

(c) In order that employes of the Rolling Stock Branch may be aware when it is considered that delays to trains have been caused through Brake testing, Train examining, etc., the Station-master must, on or before the departure of the train, or as soon thereafter as is reasonably practicable, advise the Train-examiner or other Rolling Stock Branch employe concerned, of the cause to which the late departure is attributed; the Train-examiner, also, must forward a written explanation to his Foreman.

(d) Should the Train-examiner notify the Station-master or person in charge that any vehicle is unfit to run, the latter must take steps to see that the defective vehicle is at once taken out of traffic.

3. (a) **Clause (c), Rule 21, Appendix III., Book of Rules and Regulations.**—When examining, and testing the Brakes on, vehicles that have been attached to a train, the rear portion of which has not been disturbed since the previous running or terminal test, the added portion and one of two vehicles immediately in the rear thereof, must be examined and tested by the Driver. Before starting the train the Driver, however, must observe the Guard's test in accordance with clause (b), Rule 23, Appendix III.; see amended form of that clause, on page 9 of this Book.

(b) **Up Through Goods Trains to be Examined at North Geelong.**—All Up Ballarat-Melbourne Through Goods trains, run via North Geelong loop, are to be examined by the Driver-in-charge of the train at North Geelong, or at the station where crews are changed; fifteen (15) minutes will be allowed for this purpose.

4. Drivers must approach the platforms of all examining Stations at a rate of speed not exceeding 10 miles an hour, in order to permit of Train-examiner feeling the axle-boxes.

EXAMINATION OF PASSENGER COMMUNICATION APPARATUS.

(See Appendix viii., Book of Rules and Regulations.)

1. The Communication Apparatus fitted to each carriage forming part of a train at a Terminal Station, or to any carriage attached en route, must be tested before the train is started, to see if the Communication is in proper working order. If, when the test is made, the Communication be in good order, and the Train-pipe be charged with air, the Brake will be applied sufficiently to attract attention.

WORKING OF TRAINS.

2. (a) Except where special instructions are issued to the contrary the following directions respecting the Testing and Adjusting of the Communication Apparatus must be carried out conjointly by the Car-builder and Train-examiner at any Station at which such employers are on duty, and otherwise, by a Train-examiner and Guard, or, if no Train-examiner be on duty, by the Guard and the Driver.

(b) The Train-examiner or the Driver, as the case may be, must walk on the pit side advising the Car Builder or the Guard of the effectiveness of the Air Brake.

(c) The Car Builder or the Guard, as the case may be, before commencing to test, must first ascertain from the Train-examiner that he has finished testing the Air Brake.

(d) The Car Builder or the Guard must then instruct the Driver to place the handle of the Driver's Brake Valve in the Running Position, where it must remain until the test has been completed.

3. If the Apparatus on any car is found to be inoperative after testing with the Train-pipe charged with air, or if it be found that there is a leak from the air valve or elsewhere, and that there is not sufficient time to rectify the defect, the Guard must be advised, and he must inform the Driver, in which case a good look-out must, as far as practicable, be kept, in order that any signals that may be made by passengers may be noticed; when there is an assisting engine, each Driver must be informed.

4. If the leakage of air from the valve or elsewhere in the Apparatus be serious, the Guard must consult with the Driver as to the necessity or otherwise of removing the carriage from the train. The defect must be reported to the Station-master, and the proper officer of the Rolling Stock Branch must be advised as early as possible.

5. To remove any obstruction in the Communication Apparatus, the following directions must be observed:—Unfasten the valve box at the thumb screw, then lift the valve frequently so that any obstruction may be blown out. If this should fail, slack back the $\frac{1}{2}$ in. lock and the $\frac{3}{4}$ in. valve nuts one quarter of an inch ($\frac{1}{4}$ in.) to clear the nib or feather in the valve box, then pull the valve chamber to the left hand and turn it upside down; take out the seat nut and remove the obstruction from the valve seat.

Note.—On the latest type of Passenger Communication Apparatus the cap is on the top of the valve chamber, and the valve can be removed by unscrewing the cap, and without disconnecting any of the pipes.

6. Except in the case of Suburban trains, the Guard must ascertain whether any carriages fitted with the Passenger Communication Gear are on his train, and in the event of there being any, he must inform the Engine-driver, and when there is an assisting engine, the Driver of that engine also.

7. **Suburban Trains.**—The use on Suburban trains of any car fitted with the Communication Apparatus should be avoided, but if it become necessary to use such a car in Suburban traffic, it should be for as short a period as possible, and the Communication Chain must be disconnected.

FASTENING CARRIAGE AND TRUCK DOORS.

1. (a) A door open outward on a moving train is a source of danger to passengers and employes, and care must be taken that all swinging doors can be properly closed before a train leaves the Station. A polite request to passengers in the car, such as "Close car door, please," will usually gain their assistance. If, however, a door be opened outward when the train moves out from the platform, and the employe attending the doors considers that he cannot close it without exposing himself to injury, he should signal to the Driver or Guard to stop. Guards must also give this matter their attention, and Drivers should stop the train in any case where the platform staff fail to close all swing doors.

(b) At Terminal Stations, Junctions, and other large Stations, it is the duty of the Station-master or other responsible employe who gives the order for the train to start, to see that all carriage doors that open outward are shut and fastened; at small Roadside Stations, this duty must be attended to by the Guard.

(c) At Stations where swing doors on the platform side of a Down passenger train, will be on the "Pit" side on the Up journey and at Island platforms, the staff must particularly see that all such doors are closed and properly secured before the departure of the train.

(d) When passenger trains are being docked, Drivers, Motormen, Guards and other employes must give special attention to doors on the side of the train which will be on the "pit" side when the train is standing at the platform, and if any door be not properly secured, or if a fastening be defective, arrangements must be made for it to be adjusted, or, if the latter cannot be accomplished, the carriage removed from the train. Train-examiners, too, must see that all swing doors on the "Pit" side are closed and properly secured before trains leave. The fastening of the doors of trucks on Mixed and Goods trains must be given similar attention, especially by Guards and Train-examiners prior to trains starting.

(e) Drivers, Motormen and Guards must also watch their trains whilst in running—and Signalmen, every passing train—for open or improperly secured doors, and take prompt action to have any such irregularities at once attended to. The Track Force can also render valuable assistance in this matter by strictly complying with Regulation 299 of the Book of Rules and Regulations.

(f) It is the duty of the Guard at all Stations to shut, fasten and lock the doors of luggage vans and dog boxes, and to see that all the fastenings of horse-boxes, vans, and carriage trucks are secure whether at Terminal Stations, Junctions, or elsewhere. The Guard of a Goods or Mixed train must, before starting, see that the doors of all trucks attached to his train are securely fastened.

Leading Shunters are provided with a carriage key for the purpose of locking the doors of dog boxes of Vans, and must give attention to this duty.

WORKING OF TRAINS.

2. (a) Particular attention must be paid to the doors of the standard 15-ton or 16-ton "I" trucks. Each door on these trucks is fitted with two hooks, one at the top and another at the bottom, and when the doors are closed, the hooks should be swung over on to the pins fixed in the moveable panels, and properly adjusted, so that they will be securely fastened; if this is not done, there is a liability of the doors swinging open, or, (if the trucks are loaded) of their becoming damaged through pressure of loading against them.

(b) Care must be taken to see that the door fastenings of the ordinary medium trucks (both top and bottom) are properly secured. If this is not done, there is a liability of the doors becoming unduly strained, and, moreover, the top fastener acts as a tie to keep the ends of the trucks from springing.

(c) Serious damage may be caused by open doors. Truck doors must be secured by all pins or fastenings provided for that purpose; if, instead of all pins being used only one is fastened, then some employe is exposed to injury by the door falling open unexpectedly when he removes the one pin in use.

NOTE.—Although the Holder of a Private Siding is required to properly secure the doors of out-bound trucks, that condition does not relieve the Guard, Shunter, or other employe of responsibility for seeing that all such doors are properly fastened before removing the trucks from the Siding; every case in which the Holder of the Siding omits to secure a truck door must be promptly reported.

(d) Train-examiners must examine the fastenings of all trucks that pass through their hands, and note whether the fastenings are in proper order, and every case in which it is found that the doors are not secured by all fastenings, must be reported promptly. The name of the Station at which the truck was loaded must be shown on the Train-examiner's Report.

3. Particulars regarding any door with a defective lock or fastener must be reported without delay.

OPENING GOODS TRUCK DOORS ON OR NEAR RUNNING LINES.

1. When a Mixed or Goods Train is standing at a Station on a Running Line, and it is necessary to open swing side doors to load or unload Station goods, which must be carried across an adjacent Line, Guards or other employes must not open any swing doors for this purpose without first obtaining the sanction of the Signaller, and the Signaller must not give his sanction if he has exhibited a Signal for a train to run on such adjacent Line.

2. Swing side doors of trucks standing in a Siding must not be open on the side next to an adjacent Running Line, when a train is signalled to approach on that Line. Station-masters and persons in charge must comply with clause (e) of Regulation 128 in this respect.

WORKING OF TRAINS.

3. Vehicles must not be shunted about Station Yards with the doors open, either hanging down or unfastened.

PASSENGER TRAIN STOPPED ON RUNNING LINE.

Passengers Alighting from Trains on "Pit" Side at Stations.

—Except in case of emergency, passengers must not be allowed to alight from a train on the "Pit" side, and if it is impossible to avoid such a course, due precautions must be taken, particularly at night, for their safety. The ladders must be used when necessary to detain passengers on to the ballast; the passengers must be warned to stand clear of other Lines, and before any passenger is allowed to alight on the "Pit" side, the permission of the Station-master must be obtained, and he must make the necessary arrangements with the Signalman. The Signalman must keep at Stop the Fixed Signals applicable to trains approaching on any Line or Lines adjacent to that on which the train is standing, until the alighting passengers are clear of the Lines. (See also clause (f), Regulation 247.)

When, owing to overhead power failure, train failure, or other cause, a train conveying passengers is detained, between Stations, on a Running Line, the Guard, after ascertaining the cause, must, when proceeding to protect his train, calmly and politely request the passengers to keep their seats, pointing out to them the risk of accident attending their attempting to alight from the train, and assuring them that if the detention continue proper arrangements shall be made for their safe removal.

RIDGE POLES ON MEDIUM TRUCKS.

1. The standard "I" trucks are fitted with a permanent ridge pole, and when the tarpaulin is taken off, the ridge pole must be immediately turned down to rest on the side of the body of the truck. If this be not done, there is a possible risk of injury to employees engaged about the truck through the pole falling. Whenever possible two men should attend to the lowering of the ridge pole, which should be steadied until it is brought to rest. The pole should not be lowered suddenly.

2. If a pole be damaged it should be removed before truck is run; but if this is not practicable the pole must be properly secured to prevent it overhanging and coming in contact with passing train or structures. Ridge Poles detached from trucks must not be kept at Stations, but must be forwarded to the Chief Foreman, Car and Wagon Shops, North Melbourne.

3. On no account must empty trucks be allowed to go into traffic with the ridge poles raised. When empty trucks are taken on from any Caretaker or No-one-in-Charge Station, or from any Workshop or Siding, the Guard or Shunter must see that the ridge poles are lowered before the trucks are moved.

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4. When the ridge pole is raised to the vertical position for the purpose of covering the truck with a tarpaulin, care must be taken to see that the pawl at each end is placed in position so that it will properly grip the upright standard.

LOADING OF TRUCKS.

1. **Authorised Load not to be Exceeded.**—(a) The authorised load of every truck is painted on the side, and, except as provided in clause 2 hereof, the load of any truck must not exceed that shown, unless special instructions are issued to the contrary; see sub-clause (b) hereof. Care must be taken to see that the load in the truck is so distributed that undue weight will not be placed at either the ends or the sides; the load must be evenly distributed so that as far as practicable the weight over each wheel will be equal. This is especially necessary with bogie trucks, which must have the greater weight distributed over the bogies, and not over the centre of the truck.

(b) "T" and "O" trucks of 15 tons capacity must be rated as 16 tons capacity.

(c) Stations loading Van trucks must be careful to see that the goods for the terminal point are equally divided and loaded into each end of the vehicle, and the goods for other Stations to be discharged en route similarly loaded whenever practicable, having due regard to brands and addresses in order that the Guard, Vanman or others may effect delivery with a minimum of inconvenience and delay. Guards are also enjoined to watch this aspect closely, and, if necessary, adjust the weight of loading by re-stowing the contents in order to, as far as possible, obtain an equal distribution of weight.

2. (a) In order to secure uniformity in the loading of pitchers, spalls, metal screenings, toppings, sand, clay, etc., it is necessary that close supervision be maintained and that senders should be shown the height to which the trucks may be loaded; whilst however important that overloading be prevented, it is also necessary that trucks be loaded to the best advantage, and, in respect to the above-mentioned classes of goods, to at least within one ton of the marked carrying capacity.

(b) If, on being weighed, a truck be found overloaded to the extent of not more than $2\frac{1}{2}$ per cent. of its capacity, i.e., 5 cwt. for a 10 ton and $7\frac{1}{2}$ cwt. for a 15 or 16-ton truck, the load may, except as shown in sub-clause (c) hereof, be allowed to go forward; but if the overloading be in excess of the $2\frac{1}{2}$ per cent. margin, the Supervisor of Weighing must be promptly notified, and he will advise as to what action is to be taken.

(c) Sub-clause (b) will not apply to trucks of 16 tons capacity (including those referred to in sub-clause (b) of clause 2), for which the margin of safety has been fixed at 5 cwt. additional; any of these vehicles loaded above 16 tons 5 cwt. 0 qrs. 0 lbs. must not be allowed to go forward until the load is reduced.

(d) The prescribed height of loading for Mallee Roots is two feet six inches above water level; this height must not be exceeded.

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3. (a) Heavy articles over 10 tons in weight must not be loaded in the centre of a "QR" or other bogie truck. Articles up to 13 tons in weight may be loaded over each bogie or over one bogie only, provided that in the latter case an article or articles weighing not less than 9 tons be loaded over the other bogie. Heavier weights must be carried in specially prepared trucks, for which application must be made to the Superintendent of Goods Train Service.

As far as possible, it is essential that the loading in all vehicles, more particularly "U" and "T" Class wagons, should be equally distributed in order that each wheel will carry its proper proportion of the total weight.

(b) Any truck loaded with a Traction Engine, Engine Bed, or other similar article up to 13 tons, which, when loaded, will have the weight distributed over one bogie and towards the centre of the truck, need not have any article loaded over the other bogie; but when the weight on the leading pair of wheels of a traction or portable engine is over $1\frac{1}{2}$ tons, old sleepers or other suitable packing must be placed under them in order to distribute the weight over a greater area of the floor. Every care should be taken to see that the buffers are not unduly lowered from the ordinary height above rail level. This can be judged when the truck which contains the heavy loading is seen against an empty truck or against a truck that does not contain loading of an exceptional kind. The springs also should not be unduly depressed. Any doubtful case must be brought under the notice of the Superintendent of Goods Train Service. See "Buffers of Trucks," pages 468-469.

(c) **Doors of "QR" Trucks.**—The hinges and top boards on the doors of "QR" trucks are liable to be damaged if the doors are allowed to drop unchecked. Station-masters and others concerned must, therefore, see that proper care is exercised when the doors of these trucks are being opened. If only one man is available to open the door, the following method should be adopted:—

- (i.) Secure the end of a rope to the tension-rod of the under frame.
- (ii.) Throw the rope over the truck to the other side, and take a turn round the tension-rod on that side, and secure it.
- (iii.) Remove the pins from the door to be opened, and lower by slackening out the rope from the opposite side.

(d) Whenever practicable, "Q" trucks are to be utilised in preference to "QR" trucks for the loading of long timber, logs, etc.; flat "S" bogie trucks may be used when available. Stations requisitioning for bogie trucks must state class and length of loading, also destination, so that suitable arrangements may be made, in the event of the trucks required not being available. Attention is particularly directed to the special importance of ensuring that the stanchions of "Q" trucks and other equipment are securely fixed in position, so as to maintain security of the loading in transit.

4. (a) Articles of exceptional weight, such as heavy blocks of stone and heavy castings, must not be loaded on the floor of any "K" truck numbered 213 to 262 inclusive. These trucks were built to carry plant

WORKING OF TRAINS.

and timber on the bolsters, but, when not required for this kind of loading, may be used to convey wheat, wool, and other consignments of a similar nature.

(b) Machinery consigned to Stations at which no crane power is available must be loaded in suitable trucks.

5. Loading of Piles and Logs.—(a) Damage may be caused to trucks through incorrect and careless loading of piles and logs into trucks; when loading this traffic into "I" and "QR" trucks skids must be used to avoid dropping the logs heavily on to floor of trucks, and, in addition, pieces of timber (3in. x 4in.) must be placed between each layer to prevent the logs sinking to the bottom of the trucks and unduly straining the doors. At Stations where a crane is available, piles and logs must be loaded at the crane, and not from the Goods Platform. All concerned must give this matter special attention, and impress upon loaders the necessity for the strict observance of this instruction.

(b) When piles, long timber, rails, or other articles of an unusual length are conveyed on two or more "K" trucks, with the ends of the loading resting on the swing bolsters, **the total weight of the consignment must not exceed 12 tons.** When necessary, Train-examiners must grease the swing bolsters underneath in the centre so as to give them free play.

(c) When timber is placed under rails to facilitate the withdrawal of slings, it must not be more than three feet from the bogie-centres, towards the centre of the truck.

6. Security, Etc., of Loading.—(a) Great care must be exercised by all concerned, especially at loading Stations and in Depot or Junction Station Yards, to see that all loads are properly secured so as to reach their destination safely.

(b) Before loaded trucks are removed from sheds or Sidings particular care must be exercised to see that the loading is properly secured by lashings, and in addition all loads must be carefully examined at the despatching, Junction and recognised examining Stations, to see that they are in safe condition to travel. The Station Staff, together with the Guard of the train, will be held responsible for making a proper examination of the loads, lashings, door fastenings, etc.

(c) **The attention of all concerned is directed to the other Instructions contained in this book, viz.:**—Articles exceeding the gauge dimensions, page 461; Loading and conveyance of Articles of exceptional shape, dimensions or weight, pages 464-466; and to the Goods Transport Book for further instructions relating to the loading of the various classes of consignments. The attention of Guards is specially directed to Regulations 213 and 231.

7. Loading should not project over the end of any truck for a greater length than 1 foot 10 inches unless a suitable truck to act as "safety" can be attached to the end over which the loading projects.

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8. Sawn Timber.—(a) The principal precautions to be observed in loading and securing of sawn timber are set out in the following instructions:—

- (i.) Timber must be properly secured by the use of stays and lashings as explained in the Transportation of Goods Book.
- (ii.) An adequate supply of lashings must be maintained at Stations where sawn timber is loaded. Lashings must be kept under cover so that they may be dry when required for use, as when placed on trucks in a wet condition they are liable to expand and become more or less useless for securing loads.
- (iii.) At officered Stations the Station-master must see that sawn timber is properly secured; at unattended or Caretaker Stations, and also at all stopping places en route, this responsibility is placed on the Guard.

(b) In cases where the employe concerned is satisfied that the loading is not secure, the truck must be detained until the load is adjusted, and consignors must be notified that demurrage charges and the cost of adjustment will be debited to them.

(c) In all cases where a truck has been detained at the loading Station owing to faulty or insecure loading, a report, accompanied by a copy of waybill showing the measurements of the consignment, together with particulars of demurrage and cost of adjustment, must be forwarded by the Station-master, or, in the case of Caretaker, or unattended Stations, by the supervising Station-master to the Superintendent of Goods Train Service, by the first train after the truck has been forwarded.

9. Loading of Chaff, Hay, Straw, and other Inflammable Loading.—(a) The Station-master at the loading Station must see that every truck of Chaff, Hay, or Straw is carefully examined by a responsible employe prior to its removal from the Shed or Siding for despatch, and it must not be sent forward unless it is securely loaded and properly covered and lashed. See also clause 6.

(b) Chaff, Hay, or Straw must not project more than 6 inches over the ends of any truck; "K," "Q," and "N" trucks must not be used for this class of loading.

10. Loading Chaff.—(a) The main feature in regard to chaff loading is to ensure the correct placing of the four bags immediately above water level at the corners of trucks, with a dip towards the centre of trucks; that at least four lashings be used on each truck (two from end to end and two from side to side) in the positions indicated in the loading diagrams; trucks of chaff are not to be accepted for despatch unless loaded strictly in accordance with the diagrams, nor unless the requisite number of lashings used.

(b) The numbers of bags specified in loading diagrams refer to normally filled standard chaff bags, but should the bags vary in size or

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be more than ordinarily well filled, the loading gauge measurements may be reached with a lesser number of bags; in such cases the number of bags may be varied, but the method of loading as indicated in the diagrams, particularly with regard to the corner bags and the use of four lashings, must be adhered to.

(c) The ordinary loop knot is largely used to obtain the purchase required to tighten lashings on high loads of chaff, etc., but although this knot is effective it is found that after becoming wet it is difficult to untie, and in some instances ropes have been cut.

The "Sheepshank knot," while equally effective for tightening purposes, is easily loosened, and it is desired that its use be made general by officers in charge, who must bring its advantages under the notice of the staff, and loaders of traffic, such as hay, chaff, wool, etc., which requires to be secured by lashings. The various movements required to make the knot are illustrated at the end of these instructions.

11. Loading of Hay, Straw, etc., in Trusses or Bales.—(a)

In loading it is desirable to somewhat reduce the width of each successive layer of trusses placed in a truck, thus throwing the centre of gravity into the middle of the load, and reducing the possibility of outside trusses becoming displaced. The trusses, or bales, should also inter-lock each other as far as practicable.

(b) When loading pressed hay in iron medium trucks, care should be taken to arrange the bales so that the wire fastenings will not be severed by the sharp edges of the truck.

(c) Straw has a tendency to settle down in the truck after loading, and when for any reason consignments are delayed at the loading Station, the lashings should be tightened before the loads leave.

12. Use of Tarpaulins.—(a)

As many covers and lashings should be used as may be necessary. When more than one cover is used for hay or straw, or other inflammable loading, the one next the Van must be put on first, and the next one must overlap so as to prevent the wind raising the facing edge of the first cover, and thus allowing of sparks being blown underneath whilst the train is running.

(b) Where trucks conveying such loading are reversed en route, the overlapping cover must lie for the longest portion of the journey, and an extra lashing for securing the facing edge must be put on or taken off, as the case may be, at the sending or reversing Station. Sufficient covers should be used to avoid risk of fire to such consignments in transit.

(c) Guards must not take on trucks loaded with goods liable to be set on fire by sparks or hot cinders, unless such trucks are properly covered.

(d) When more than one tarpaulin is used for Hay, Straw, or other high loading, the tie-ropes attached to the edges of the tarpaulins on top of the loading must in every case be turned under the tarpaulin, and both tarpaulins (with the tie-ropes underneath) must be properly secured

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across the centre of the load by a lashing to provide against the tarpaulins being lifted by wind, and to prevent the tie-ropes from fouling the overhead wires.

Officers of all Branches must at once give this important aspect their special attention, and report every case in which they observe that tarpaulins or ropes are not properly secured. Signalmen observing a loose tarpaulin that is likely to foul any structure should have the train stopped for the purpose of securing the tarpaulin, and must report the circumstances. The number of the truck, the train (if on a train), and the loading Station must be specified in such reports.

13. Lashings on Trucks to be Secured Clear of the Brake Gear.—

(a) Accidents have occurred through the Hand Brakes on trucks being fouled by lashings (used to secure loading), the tie ropes of tarpaulins, and in some instances by the loose ends of these ropes becoming entangled in the moving parts of the Brake Gear, thus rendering the Hand Brakes inoperative.

In another instance, a lashing trailing from a moving truck became fastened to a rail placed beside the track; the lashing pulled the loose rail foul of the track and caused a derailment.

(b) The Staff at loading Stations must be careful to see that lashings and tie ropes are clear of the Brake gear, and that the loose ends of the ropes are secured so as to prevent them hanging down; a loose or dangling lashing is always a source of danger.

(c) Lashings must not be secured to the buffer casing, but to the stud of the side chain, if cleats are not provided.

After trucks which have conveyed Hay, Straw, or other inflammable goods have been unloaded, they must be swept.

Trucks of Hay or Straw for Melbourne must not be forwarded by any Mixed train, scheduled to arrive at the Passenger Platform at Spencer-street Station; with this exception such consignments may be sent by any Mixed or Goods train.

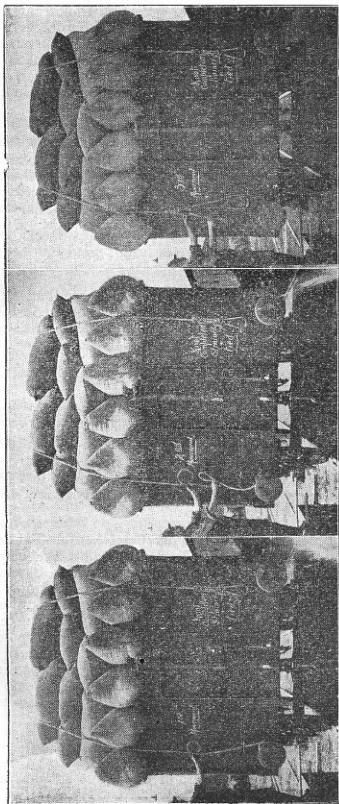
14. Loading and Unloading of Trucks at Caretaker or Unattended Sidings.—(a) Inspectors, Road Foremen, Trackmen, and other employes travelling on or patrolling the Permanent-way, and Guards, Caretakers, and Station-masters supervising intermediate Stations or Sidings must adopt a practice of informing persons engaged in loading and unloading trucks at Caretaker or intermediate Sidings, of the precautions necessary to prevent derailment, and must explain to such persons the purpose and functions of Catch Points or Derail Blocks on the Sidings, and also warn them of the serious damage likely to be caused by loose tarpaulins or dangling ropes, and of the importance of securing the doors on both sides by all fastenings; the attention of customers should be also directed to sub-clause (b), clause 8 hereof.

(b) A Notice—"SAFETY FIRST NOTICE TO TRUCK LOADERS"—must be exhibited at every intermediate Siding, including Sidings at Caretaker Stations; another Notice urging special care of tarpaulins and lashings is

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also erected at these places. Supervising Station-masters and other officials must see that these Notices are exhibited in a position where they will be clearly visible, and, if practicable, protected from weather.

Illustrations referred to in sub-clause (c), clause 10, of the preceding Instruction.

**1st Movement.**

Make small loop in lashing as shown above at most suitable position for knot, according to length of lashing available.

2nd Movement.

Hold 1st loop with Left hand, make second loop with Right hand, and thread same through first loop from behind.

3rd Movement.

Gradually tighten first loop which makes the knot, holding second loop in position. The end of lashing is then threaded through eye bolt or passed around cleat and through bottom loop to enable strain to be obtained on load.

ARTICLES EXCEEDING THE GAUGE DIMENSIONS.

1. Unless the consent of the General Superintendent of Transportation be first obtained, no consignment must, under any circumstances, be accepted for conveyance if, when loaded, the height or width of same over all (including ropes, chains, etc.) would exceed the maximum load dimensions, or if the article is of such exceptional length that there is room for doubt as to whether it will pass safely round curves.

2. In all cases where the Department is asked to convey such articles, the Station-master must specially advise the General Superintendent, and, at the same time, enclose a drawing or sketch, showing the exact shape or dimensions of the consignment. Enquiries will then be made with a view to determine whether the consignment can be accepted for conveyance.

3. (a) Out-of-gauge loads may be worked by ordinary trains provided certificates have been furnished by the Rolling Stock and Way and Works Branches that such out-of-gauge loads may be conveyed.

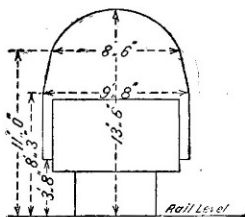
(b) Out-of-gauge loads of exceptional width will be conveyed only by agreed trains, so as to avoid, as far as possible, the passing of other trains en route. It may be necessary for trains conveying such loads to be brought to a state of rest before being passed by any other train, and the passing should be at a place where there is no curve of the Line. If it be necessary to shunt these trains to allow another train to pass or to meet other exigencies of working, they should be shunted into a Goods siding or on to a Branch Line well clear of the Main Line and other Running Lines.

(c) If necessary an Inspector conversant with the working of the traffic will be appointed to travel with the train, and when this is done, he must make himself acquainted with all special arrangements applicable to the safe working of such train, and see that these instructions and any other special instructions issued, are carried out. An Inspector of the Rolling Stock Branch should also travel with the consignment when that Branch considers it desirable.

(d) A circular containing the necessary instructions will be issued prior to the day on which it is intended that the consignment shall travel.

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4. (a) The particulars of the maximum dimensions of loading for Broad Gauge Lines are as shown in the following diagram:—



The height of the floor above rail level for the following classes of vehicles is—QR trucks, 3 feet 11½ inches; 15-ton or 16-ton I. trucks, 3 feet 9 1/8 inches; iron mediums, 3 feet 9¼ inches; wooden mediums, 3 feet 11½ inches; and QB trucks, inside of well, 11 inches, lower floor, 2 feet 6 inches, and upper floor, 3 feet 9 inches.

South Australian Lines.—In South Australia, the maximum measurements for loading on the Broad Gauge Lines are the same as in Victoria.

(b) **Narrow Gauge Lines.**—The maximum load measurements for Victorian Narrow Gauge Lines are as under:—

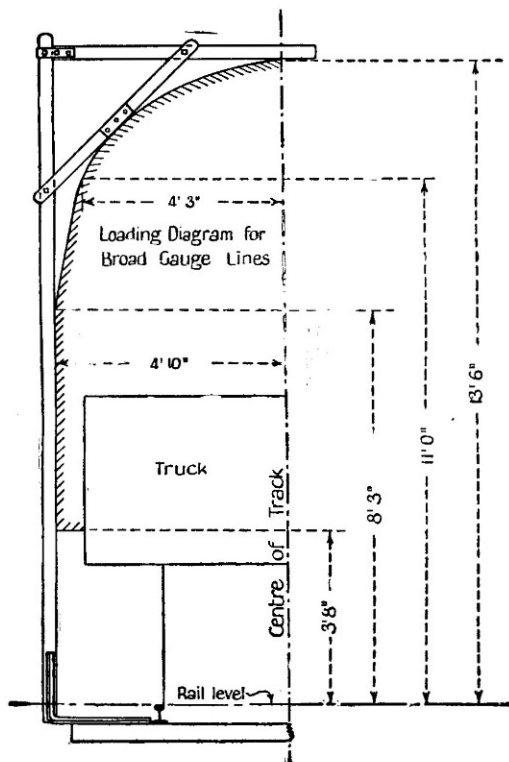
Height from rail centre	9ft. 6in.
Height from rail side	9ft. 0in.
Width	7ft. 0in.

New Type of Loading Gauge.—The new type of truck loading gauge is illustrated at end of this clause. The new gauge is provided with a rectangular metal foot, and when gauging a load the metal foot must be placed on the end of sleeper outside the rail, with the end of the foot pushed hard against the edge of the flange of the rail; when held in this position the gauge defines the authorised width, curvature, and maximum height of loading.

A specially important condition in the use of the new type of gauge is that when being used to gauge a load the gauge must rest on the sleeper—not on the rail, as in the case of the old type. The gauge must be held truly vertical and not used on curved or canted tracks.

Station-masters and other responsible officers must take steps to see that all employees under their supervision, whose duties

may require them to gauge loading, are familiar with the method of using the new type of gauge.



LOADING AND CONVEYANCE OF ARTICLES OF EXCEPTIONAL SHAPE, DIMENSIONS, OR WEIGHT.

1. The attention of all concerned is directed to the absolute necessity for every possible precaution being taken to prevent any load of exceptional shape, dimensions or weight becoming displaced during transit.

2. If, owing to shape, dimensions, or weight, or to any other circumstance, there is, in the opinion of the person responsible, difficulty in properly loading or securing a consignment, he must call the attention of the person in charge to it, and the person in charge must, if necessary, communicate with the General Superintendent of Transportation (by wire, if time is pressing), in order that arrangements may be made for an officer of the Rolling Stock Branch to examine the consignment, and supervise the loading, if necessary.

3. Under no circumstances must any such exceptional consignment be sent forward until the loading has been examined by the Station-master, or other person in charge, who must satisfy himself that it is within the dimensions of the maximum gauge. Should any doubt exist the load must be tested by means of the Loading Gauge supplied for the purpose.

4. Any truck conveying exceptional traffic from connecting Lines must be specially examined at the Junctions where it is handed over, and if the consignment is not properly loaded, the truck must not be sent forward until the load has been adjusted.

5. (a) Every Guard and Shunter must pay particular attention to the careful examination of any load of this description at all places where the train may stop, to see whether it has shifted, or requires adjustment; and, if so, the truck or trucks must not be taken forward until the load has been made secure.

(b) When it is necessary to transfer goods at a Station other than the original forwarding Station from a truck which, owing to the load shifting, or Hot Axle Box, or for any similar cause, cannot proceed on its journey, it will be necessary for the Officer in charge to wire to the Superintendent of Goods Train Service, giving the numbers of the trucks from and into which the goods were transferred, and also the names of sending and destination Stations. (See sub-clause (e), clause 5, page 472.)

6. At every Station where loads of exceptional shape and dimensions are dealt with, and at every Junction where such exceptional traffic from connecting Line passes through, a Loading Gauge must be kept available in a convenient position, so that any load about which there is room for doubt may be readily tested.

7. Special care must be exercised with loads of exceptional character as regards dimensions or weight, especially when sent from Private Sidings, to see that the loading is secure, and within the prescribed dimensions. The General Superintendent of Transportation must be consulted when necessary, in order that the loads may be inspected by an experienced person before being despatched.

8. (a) It is often found by the use of special appliances, or by a slight alteration to a truck, that arrangements can be made for the safe conveyance of consignments, which might not otherwise travel safely, and

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if the General Superintendent of Transportation be advised, arrangements will be made for the Rolling Stock Branch to afford every possible assistance in this direction.

(b) **HEADER HARVESTERS.**—When some of these implements are loaded in "I" trucks, one of the doors cannot be closed and fastened in the regular way. At Spotswood, Sunshine, and at the Melbourne Goods, these implements may, however, be despatched in "I" trucks with the door open, provided the door is securely fastened back against the side of the truck by means of four lashings; the lashings must be made fast to the hub of the wheels of the Harvester, then taken across the open door, thence through the Shunter's handle at corner of the truck, back again across the open door, and fastened to the bracket on the channel iron of the underframe. Stations other than those specified above must not, unless specially authorised by the Superintendent of Goods Train Service, load implements which will not permit of the doors being properly closed. Train-examiners must see that doors are secured according to the above directions.

9. When traction engines, steam rollers, or other heavy articles of similar description have to be forwarded, the weight of the consignment must first be ascertained as accurately as possible, and care taken to see that a vehicle of ample carrying capacity is provided. Before receiving heavy loading of this character, it must be ascertained whether the consignment can be unloaded at the destination. (See "Goods Transport Book," with regard to the acceptance of this class of loading.)

10. Reapers and Binders, Threshing, Winnowing, or other bulky and heavy machines, when consigned to Stations at which there are no cranes, must be loaded on suitable trucks. The employee concerned at the Station to consult the Working Time-table as to what facilities there are for unloading.

11. **Regulation 213.**—(a) Except as shown in sub-clause (b) hereof, a loaded Oil-tank truck or trucks loaded with Engines, Steam Ploughs, exceptionally heavy Machinery, or any other article of exceptional shape, weight or dimensions, must not be conveyed by any Mixed train or Through Goods train, unless authorised by the General Superintendent of Transportation, or the Superintendent of Goods Train Service.

(b) Where a regular Goods train does not run and a special Goods train is not available loading of the kind referred to in sub-clause (a) may be forwarded by a Mixed train if in an "I," "Q" or a "QR" truck, provided such truck be placed next the engine and attached at each end by means of screw couplings; if it be practicable to avoid, a "Q" truck must not be placed next a Passenger car.

(c) Trucks conveying exceptional loading forwarded by Goods train must be placed next in front of the rear Brake Van, and the load carefully watched while running and examined by the Guard as laid down in the Regulation.

When loading Engines and Machines, care must be taken to see that their running wheels are properly secured by ropes as well as by scotches; this precaution is especially necessary in the case of secondhand machines. Driving and flywheels must also be thoroughly secured by ropes.

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(d) When any set of "K" trucks is used for the conveyance of any consignment of lengthy articles which requires two swing and one or more safety "K" trucks, the Air Brake must be capable of being applied on at least one of the trucks in the set; "K" trucks must not, however, be used for this purpose unless special permission has been obtained as laid down in sub-clause (a) hereof. See also clause 5, under Loading of Trucks, page 456.

Note. — A diagram illustrating the various ways in which trucks should be loaded is issued to Stations.

LOADING LONG ARTICLES ON CARRIAGES.

Ladders, Poles, etc., belonging to the Department, must only be sent by Passenger train fastened to the steps of vehicles in **Cases of emergency**, and then only by the sanction of the General Superintendent of Transportation or the District Superintendent, and when such permission is given, the following precautions must be adopted:—

- (a) The person in charge must see that such articles are securely fastened.
- (b) When practicable, the vehicle to be selected must be the rear van, and the Guard of the train must be advised.
- (c) The Guard, on arrival at the destination Station, must not give a Signal for the train to start until he has satisfied himself that the articles have been released from, and are clear of, the train.
- (d) Under no circumstances are these articles to be allowed to be put upon the roof of any vehicle.

VEHICLES LABELLED WITH RED CARD "NOT TO GO" OR GREEN CARD "FOR REPAIRS," ETC.—(Regulation 233.)

1. Vehicles Labelled with Red Card "Not To Go."—(a) Any vehicle requiring extensive repairs, or any vehicle which is not in a safe condition to travel, will be labelled by the Train-examiner with a Red Card, "Not To Go," and any vehicle so labelled must be placed for repairs as soon as possible, and not be again loaded or placed in traffic until the necessary repairs have been effected. The Train-examiner must in every instance, fill in and supply either the Shunter-in-Charge, Yard Foreman or Station-master with the portion of Red Card marked "A," and his Foreman with the portion of Red Card marked "B," and the other two portions marked "C" must be placed on the vehicle, one on each side. Before leaving duty, the Train-examiner must enter the full particulars in regard to every vehicle so carded in the Repair Report Book provided for the purpose (R.S. 268A), and where repairs have been effected, he must mark off every vehicle so repaired.

(b) A Red Card (R.S. 272), with a BLACK CROSS thereon, is provided for marking off loaded trucks that require to be discharged before being placed for repairs. In the case of any loaded truck marked off by a Train-examiner requiring to be discharged before repair, this card must be used, and the Transportation Branch Staff must arrange to have such truck discharged before it is placed for repairs.

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(c) When a Train-examiner finds it necessary to place a Red "Not To Go" card on any vehicle which forms part of a train that is marshalled and ready to start, he must immediately advise the Station-master, Guard or Shunter-in-Charge of the train, and supply him with the duplicate portion of the Red Card marked "A" as provided for in sub-clauses (a) or (b) of clause 1, and the vehicle must not be allowed to travel until the repairs have been effected.

(d) If any other employe, such as a Fitter, Running Gear Repairer or Engineman, finds it necessary to place defect cards on any vehicle for any cause he must act in a similar manner to that set out in the above instructions for the Train-examiner.

2. Vehicles Labelled with Green Card, "For Repairs."—These cards are to be used when the repairs required to a vehicle are of such a nature as not to render it unfit to travel.

3. Vehicles Labelled with Green Card, "For Repairs, Return Loaded or Empty."—(a) When the repairs required to a vehicle are of such a nature as not to render it unfit to travel, and it is desirable to allow such vehicle to go forward to its destination, it should be labelled with a Green Card, "To be returned to *..... Loaded for repairs."

If it is necessary for the vehicle to be returned empty to a Depot, the word "Loaded" is to be struck out and if it may return loaded, the word "Empty" must be struck out.

**Here specify the Depot to which the vehicle is to be returned.*

(b) When any loaded wagon labelled with a Green Card "for Repairs" arrives at its destination, the Station-master or Yard Foreman must see that the wagon is not reloaded for any Station beyond the Depot Workshops Station, specified on the Green Card by the Train-examiner.

4. If the Station at which the vehicle is examined be not an Examining Station, and it is necessary that the vehicle should be forwarded empty for repairs, the employe examining the vehicle must, in addition to labelling the vehicle with a Green Card, as prescribed above, notify (in writing) the Station-master or other person in charge; and the latter must, if the vehicle be loaded, arrange to have it discharged and dealt with according to the directions on the Green Card.

5. When a vehicle labelled with a Green Card arrives at the Depot named on the Card, it must be Red Carded by the Train-examiner and placed for repairs with as little delay as possible. Stations with Green Carded trucks on hand must return them to the Depot named, for repairs as promptly as possible.

6. General.—(a) Train-examiners at all Stations must enter in the "Repair Record Book," R.S. 268A, specially kept for that purpose; every vehicle Red or Green Carded for repairs, before leaving duty, and they must furnish a report on R.S. 15 of all Red Carded vehicles so marked off, and also of all other vehicles on which repairs have been effected either involving or avoiding delays to running trains, and it will be the duty of the Foreman to promptly submit such reports to the Chief Mechanical Engineer, giving all particulars that may be necessary.

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(b) All vehicles which require repairs must be labelled with cards on both sides.

(c) The Repair Report Book R.S. 268A must be examined daily by the Foreman or other responsible employe acting on his behalf, and every vehicle which has been Red Carded and not repaired, must be followed up to see that it has not got into traffic without the repairs having been executed; if any such vehicle has inadvertently been put into traffic, he must take immediate steps to have it returned at once.

(d) The Foreman or other employe responsible for the repairs to whom a duplicate of a Red Card is sent, must see that the vehicle marked off receives proper and prompt attention and if the vehicle in connection with which it was issued is not placed for repairs within a reasonable time, a special report of the circumstances must be made to the Chief Mechanical Engineer, setting out if possible the reasons why such trucks have not been repaired or placed for repairs.

(e) Repairs to vehicles that are carried out in the district of the Foreman to whom the card is sent, must be reported weekly on Form R.S. 288, which must be forwarded to the Chief Foreman, Car and Wagon Shops, North Melbourne, who will be responsible for seeing that a record of all repairs is kept.

(f) Melbourne Yards. — In connection with "Through" and "Outward" loaded trucks, Train-examiners at Melbourne Yards will endorse each section of the Red Card, according to the requirements, as under:—

(i.) "Heavy repairs, contents to be reloaded," or

(ii.) "Light repairs, truck to be placed in Truck Shop."

Trucks requiring heavy repairs are to be promptly placed at the Goods Sheds or Goods Sidings for the contents to be transhipped before going into the Repair Sidings at the North Melbourne Repair Shops.

The Superintendent of Melbourne Yards will, on being notified by the Chief Foreman of the Car and Wagon Shops, North Melbourne, arrange to place all Red Carded vehicles in the Repair Sidings at the North Melbourne Truck Shops.

7. Red (Not To Co) or Green (Repair) Cards must not be removed from any vehicle to which they have been affixed, except by an authorised employe, and only when the necessary repairs have been effected. (See Regulation 233.)

8. (a) Trucks marked with a cross in circle (see margin) must be used only for the local work for which they have been specially allotted.

(b) Trucks with the number and class shown in the spaces of a cross (see margin), must be used only for the local sectional running for which they have been set apart.



BUFFERS OF TRUCKS.

1. Broken or Damaged Buffers.—(a) When a buffer of any vehicle is seen to be broken or seriously damaged, the vehicle must be reported as unfit to run, and dealt with accordingly.

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(b) **Buffer-Locked Vehicles.**—When vehicles become buffer-locked during shunting operations, the buffer or buffers should be released by a member of the Rolling Stock Branch, who must slacken the bolts and, after the trucks have been separated, readjust and secure the buffers to make the vehicle fit for traffic, or, if necessary, for removal to the nearest workshop.

2. **Standard Buffer Heights of Truck Stock.**—(a) In order to reduce as much as possible the re-marshalling of trucks owing to the unequal buffer heights of adjoining vehicles, the minimum and maximum heights, from the rail centre to the buffer tip, have been fixed as shown hereunder:—

Minimum height, loaded 3 feet 2 inches.

Maximum height, unloaded . . . 3 " 6 "

These limits provide for a total variation in height not exceeding 4 inches, and must be strictly observed.

(b) **Unequal Height of Buffers.** — The attention of the Station-masters, Guards, Shunters, Train-examiners and others concerned in the marshalling or examination of trains is directed to the necessity for exercising special vigilance so as not to have vehicles together when the adjoining buffers are of unequal height. Vehicles must not run coupled together when the difference in the height of the buffers exceeds 4 inches, or when the upper edge of the low buffer is less than 2 inches above the centre of the high buffer. In any such case the vehicle with the low buffer should be transferred so as to secure uniform height for buffers, if practicable; if that object cannot be attained by removing the vehicle to another part of the train, it must be taken off and reported as unfit to run.

DAMAGED AND DERAILED VEHICLES, HOT AXLE BOXES, ETC.

1. (a) In addition to the Station-master or person in charge reporting the derailment of or damage to any vehicle to his superior officer in the ordinary course, every derailment must be reported to the Road Foreman, and (if interlocking or safety appliances are concerned) the Signal Adjuster, for the Section in which it occurs. Every derailment of or damage to any vehicle must also be reported to the Chief Foreman of the Car and Wagon Shops, North Melbourne, if in the Metropolitan District, and to the Locomotive Depot Foreman concerned, if it occur in any other District. Derailments of or damage to Passenger Rolling Stock must be reported to the District Rolling Stock Superintendent, as well as to the Depot Foreman for the District; a derailment of any Suburban Passenger Car must also be reported to the Workshops Manager, Jolimont, and to the Electric Running Inspector, Flinders-street.

(b) The number and class of the vehicle, the train from which it was detached, the name of the Driver and Guard, the cause of the damage, if known, and the particulars specified hereunder, must be given in every instance—

HOT BOXES—Number, class and tonnage of vehicle, whether loaded or empty, class letter and number of axle box (details cast on box).

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UNDER-GEAR—Number, class and tonnage of vehicle, whether loaded or empty, whether damaged part is drawbar, cradle, truss bar or spring.

WESTINGHOUSE BRAKE—Whether defect is in train, stand, or branch pipes.

WESTINGHOUSE HOSES—Description and size of hoses in accordance with the following examples:—

1 inch (thread outside) x 24in. or 30in. long.

1 inch (thread inside) x 24in. or 30in. long.

1¼ inch (thread outside) x 24in. long.

2. Derailed vehicles—see Instructions under the heading of Derailments, pages 70-72.

3. (a) Trains Breaking Away.—In the event of a train breaking away, the Guard must enter the particulars in his Train Book, and report the matter, through his superior officer, to the General Superintendent of Transportation, and also to the District Superintendent; Form TR39 must be used.

If the breakaway be due to a broken hook or link, the fractured part must be carefully wrapped up and dealt with as prescribed in sub-clause (b), clause 4, hereof.

(b) Broken Drawbars on Trucks.—To facilitate the supply of the required material, to ensure the correct type of draw gear being supplied, and to obviate delays to trucks which have been detached from trains in consequence of damaged drawbars, the Station-masters concerned must supply the following information when wiring particulars to the Depot:—

(i.) Number, class, and capacity of truck:

(ii.) In the case of 15 or 16 ton "I" truck, state whether "standard" or "high-sided" truck;

(iii.) Specifically state, if possible, whether the drawbar or cradle is required; and in the case of "QR" trucks, whether a drawbar, with "screw" or "eye" end is required.

4. Portions of Damaged Vehicles to be Retained.—(a) All spare couplings, broken or otherwise, also shackles or other detached portions of undergear of any vehicles found on any Running Line, or in Station Yards, must be delivered to the nearest Station-master, and, except as shown in clause 2 hereof, must be forwarded to the Officer-in-Charge of the Rolling Stock Depot for the District.

(b) In every case of damage to Rolling Stock, Points or Interlocking gear caused by accident, derailment, neglect or want of care by any employe, the damaged portions must, except as provided for on page 71, be handed to the nearest Station-master, who must see that the damaged portions are marked in such a way that they can be properly identified, and, except in cases where an Enquiry is to be immediately held at his Station, or he has been otherwise instructed, he must forward the damaged gear to the nearest Depot concerned, together with a report fully explaining the circumstances. The Officer-in-Charge of the Depot receiving such damaged material must see that each portion is properly marked and held in safe custody until advised that an Enquiry

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will not be held, when it should be placed for repairs as required. In no case must the damaged material be destroyed until after the expiry of at least three (3) months from the date of the occurrence.

(c) Whenever it is reasonably practicable, the attention of more than one employe should be drawn to the condition of all damaged material in order that, when necessary, corroborative evidence may be available.

5. Hot Axle Boxes.—(a) Whenever a hot axle box is discovered in any vehicle on a train at a place where there is no Train-examiner it must at once be brought under the notice of the Driver, and, subject to sub-clauses (i.), (ii.) and (iii.) hereof, his decision may be accepted as to whether the vehicle with the hot box should be detached or taken on.

(i.) In the event of any truck having a hot axle box in flame, the contents of truck should be inspected as soon as possible after the flame has been extinguished, and should the truck be covered by a tarpaulin, the latter must be removed so that a thorough inspection can be made.

(ii.) If it be a carriage, or Van, or a truck loaded with live stock or perishables, and the Driver is of opinion that he can make the vehicle fit to travel safely, he may do so. If there be any doubt, however, it is preferable to cause a little delay by detaching a vehicle that may be considered unsafe rather than to accept any risk by taking it on. In the event of a vehicle being detached, the hot box or boxes must be marked by the Station Staff for the information of the Train-examiner.

(iii.) Should any vehicle by which explosives or any other dangerous or inflammable goods are conveyed be found to have a hot box, it must be detached from the train without delay.

(b) Should one or more of the axle boxes of any vehicle with perishable loading which is attached to a Passenger or Mixed train run hot, the loading must, if necessary, be transferred to another suitable truck with the least possible delay, and be forwarded by the same train. If there be a following Goods train on the same day, by which the consignment could reach its destination in time for the market, it must be forwarded by the Goods train and the Passenger or Mixed Train must not be delayed. In every case the Superintendent of Goods Train Service and the Melbourne Goods Superintendent and the District Superintendent must be advised by wire when any delay takes place, and if the truck is detached from a Passenger or Mixed train, the train by which it is sent forward must be stated in the wire.

(c) When a vehicle is detached from a train at an out-Station, it must be placed clear of Running lines, and platforms, and, if practicable, isolated from other vehicles, for the convenience of Repair-men.

(d) **Light Repairs at Out-Stations.**—When a Train-examiner goes to an Out-Station to effect repairs (such as broken draw-bars, buffers, etc.), to a truck which has been put off at such Station, he may require a little assistance; to obviate the necessity of a second employe accompanying him, it is desired that such necessary assistance be rendered by

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a Transportation employe, if this can be done without interfering with requirements of the Transportation Branch, or involving excessive hours. This instruction will only apply to Stations where there are two or more Porters; at Stations with a smaller staff (only three employes) assistance must be given by an employe of the Way and Works Branch. Station-masters and Officers-in-Charge, when sending "Sodi" wires, must state in the message whether a Transportation employe shall be available, and the length of time for which such employe may be utilised; example:—Sodi (general particulars of work), Porter (or other employe), 1 hour (or time available).

(e) Any case of a vehicle being put off with a hot or broken axle box or other defect must be reported to the Workshops Manager, Jolimont, and to the Chief Foreman of the Car and Wagon Shops, North Melbourne, if it be in the Metropolitan District, and to the Locomotive Depot Foreman, in the case of any other District. The number and description of the truck, and the class of axle box, must be given. The Superintendent of Goods Train Service and the Station-master at the destination Station must also be promptly advised by wire, as per code message hereunder. Particulars must also be shown on the waybill, and if the consignment is to be reloaded into two trucks, the waybill must be endorsed with the words "Part Consignment," and sent with the first truck; the code message must be filed with the waybill for reference at the destination Station. (See also clause 5 (b), page 464.)

CODE MESSAGE REFERRED TO IN CLAUSE (e).—*NIKO*—Truck (No. and class) loaded with (loading) weight..... ex (Sending Station) for (Consignee) at (Destination Station) detained here for repairs. *ODOL*—Consignment transferred from truck (No. and class) to truck or trucks (No. and class) per.....train.

(f) **Mildura Line.**—To avoid delays to Mixed trains on the Mildura Line, the pads of every vehicle loaded with soft fruit must be examined and supplied with clean oil at Mildura; this course must also be followed in the case of any vehicle conveying dried fruit, whenever it is reasonably practicable to do so.

Drivers running trains on this Line must carry with them one gallon of car and wagon oil, which is to be used on the journals if required, and they must arrange to have three or four pads of different sizes in soak in the oil, so that when a journal requires attention, no time will be lost in attending to it. Train-examiners must also keep a supply of car and wagon oil on hand, and they must, when necessary, and it is reasonably practicable to do so, accompany any train on which there is a vehicle with a hot axle box to the next examining Station for the purpose of attending to the box; if the Train-examiner consider it unnecessary to accompany the train, or it is not practicable for him to do so, he must inform the Driver and Guard of the condition of the axle box, and state whether the hot bearing has been drenched with oil.

TRAINS ON RUNNING LINES WITHOUT A BRAKE-VAN IN THE REAR.—(Regulation 232.)

1. (a) No train must be run outside Station limits on any Running Line without a Brake-van in the rear, except in any emergency in

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which case action must be taken in accordance with the Rules and Regulations; and that, subject to compliance with the remaining clauses of this instruction, the general rule may be departed from:—

- (i.) Under instructions issued by the General Superintendent of Transportation. (See clause 5 in regard to a disabled vehicle being hauled behind the rear Brake-van.)
- (ii.) A car may be hauled behind the Brake-van when being sent for repairs, in accordance with the provisions of clause 6 of this instruction; and
- (iii.) **Gembrook Line.**—“N.Q.R.” canopied and seated trucks Numbers 114 and 140 are fitted with Screw Hand Brakes in addition to the Air Brake apparatus; these vehicles may, when necessary during Holiday traffic only, be used in place of a Van on Up trains.

(b) Subject to the conditions laid down in clauses 2, 3 and 4, the following trains or classes of trains may be run without a Brake-van in the rear on the Sections of Line specified, viz.:—

Train or Class of Train.	Section.	
	From.	To.
Sydney Express, see clause 2 (a)	{ Spencer-street	Albury
Empty Passenger Train ..	{ Albury	Spencer-street
	{ Wodonga	Albury
	{ Albury	Wodonga
*Goods Train	Donald	Freezing Works
“ “ “ “ “ “	Freezing Works	Donald
“ “ “ “ “ “	Bendigo	Golden Square
“ “ “ “ “ “	Golden Square	Bendigo
“ “ “ “ “ “	Bendigo Gas Co.’s Siding	
“ “ “ “ “ “	Bendigo Brick & Tile Co.’s Sdg.	
“ “ “ “ “ “	Bendigo Cattle Yards	N. Bendigo Junction
“ “ “ “ “ “	Bendigo Freezing Works	
“ “ “ “ “ “	Swan Hill Cattle Siding	Swan Hill
“ “ “ “ “ “	Rockbank	Cockbill’s Siding
“ “ “ “ “ “	Cockbill’s Siding	Rockbank
“ “ “ “ “ “	Rowsley	Bacchus Marsh
“ “ “ “ “ “	{ Ballarat	Doveton-street
“ “ “ “ “ “	{ Doveton-street	Ballarat
“ “ “ “ “ “	Selkirk	Ballarat

* See sub-clause (c), of clause 4, on pages 476-477.

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Train or Class of Train.	Section.	
	From.	To.
*Goods Train	Eureka	Ballarat
" "	{ Langi Logan	Roads Board's Sdg.
" "	{ Road Board's Sdg.	Langi Logan
" "	Coleraine	Gritjurk
" "	Weighbridge Sdg.,	Portland
" "	Portland North	
" "	North Geelong	North Shore
" "	North Shore	North Geelong
" "	{ North Geelong	Geelong
" "	{ Geelong	North Geelong
" "	North Geelong	Fyansford
" "	Fyansford	North Geelong
" "	Gravels Siding	Gherang
" "	Camperdown	Camperdown
" "	Cattle Siding	
" "	Warrnambool	Warrnambool Cattle Siding
" "	{ Port Fairy	Rosebrook
" "	{ Rosebrook	Port Fairy
" "	Penshurst	Ballast Pit
" "	Ballast Pit	Penshurst
" "	Shepparton	G.V.I. Co.'s Siding
" "	G.V.I. Co.'s Siding	Shepparton
" "	Shepparton	Canning Factory
" "	Canning Factory	Shepparton
" "	Wodonga	Coal Sidings
" "	{ Coal Sidings	Wodonga
" "	{ Lilydale	Cave Hill Siding
" "	{ Cave Hill Siding	Lilydale
" "	Herne's Oak	Yallourn
" "	Yallourn	Herne's Oak
" "	Erica	Platina
" "	Korumburra	Cattle Siding
" "	Korumburra	Coal Creek and Austral Lines
" "	Coal Creek and Austral Lines	Korumburra
" "	Agnes	Toora
" "	Alberton	Port Albert
" "	Port Albert	Alberton

* See sub-clause (c), of clause 4, on pages 476-477.

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Train or Class of Train.	Section.	
	From.	To.
*Goods Train	Koo-wee-rup	Water Washed Sand Siding
" "	Water Washed Sand Siding	Koo-wee-rup
" "	Mitcham	Tunstall (see pages 858-859)
" "	Lilydale	Black's Siding
" "	Black's Siding	Lilydale
" "	Melb. Goods Yard	Newport Workshops
" "	Newport Work-shops	Melb. Goods Yard
" "	{ Yarraville	Newport
" "	{ Newport	Yarraville
" "	{ Williamstown	Newport
" "	{ Newport	Williamstown
" " (Loop Line)	{ Newport	South Newport
" " (Loop Line)	{ South Newport	Newport
" "	{ Newport	Sunshine
" "	{ Sunshine	Newport
" "	{ South Kensington	Yarraville
" "	{ South Kensington	West Footscray
Ballast Train only ..	{ West Footscray	South Kensington
" "	{ West Footscray	Sunshine
" "	{ Sunshine	West Footscray
*Goods Train	Bell	Thornbury
" "	Brunswick*	South Brunswick
" "	Port Melbourne	Montague Goods Yard
" "	Montague Goods Yard	Port Melbourne
" "	Graham	New Pier
" "	New Pier	Graham
" "	Riversdale	East Kew
" "	{ East Kew	Riversdale
" "	{ Tooronga	Darling
" "	{ Darling	Tooronga
" "	{ Hawthorn (see clause 2 (c))	Kew
" " (Local movement) ..	Upper Fern Tree Gully	Herman's Siding
" "		

* See sub-clause (c), of clause 4, on pages 476-477.

†After passenger traffic on Down journey has ceased.

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Train or Class of Train.	Section.	
	From.	To.
*Goods Train	Spencer-street	Arden-street
" "	Arden-street	Spencer-street
" "	Spencer-street	South Kensington
" "	South Kensington	Spencer-street
" " Up direction only ..	Maribyrnong River Line	Maribyrnong River
" "	Maribyrnong River Junction	Spencer-street Yard
" "	Spencer-street	Kensington
" "	Kensington	Spencer-street
" "	Spencer-street	Newmarket
" "	Newmarket	Spencer-street
" "	Spencer-street	Flinders-street
" "	Flinders-street	Spencer-street
" "	Jolimont Yard	Montague Goods Yard
Engines with only Water Truck attached; Steam Cranes	See clause 7 on page 478.	

* See sub-clause (c), of clause 4, on pages 476-477.

2. (a) In the case of the Sydney Express train the Parlor Car must be the last vehicle on the train.

(b) The practice of running Goods trains without a Brake-van in the rear from and to Spencer-street or Flinders-street Goods Yards over the Sections enumerated in clause 1 as applicable to Goods Trains, must be limited as much as possible, and even under conditions in which such a practice is authorised by this Instruction a Brake-van must, if such a course be reasonably practicable, be attached in the rear.

(c) When necessary at Hawthorn to divide the load of a Down Kew Goods train in the Station Yard, the front portion of the train may be taken on to Kew without a Brake-van in the rear; paragraph (1), sub-clause (c) of clause 4 is excepted in this case.

3. During foggy weather every train except an engine with a water truck attached over certain Sections, as provided in clause 7, or a Passenger or Mixed train specified in clause 1, must have a Brake-van in the rear.

4. When a train is authorised to run outside Station limits without a Brake-van in the rear the following directions must be observed:—

(a) In the case of a Loaded Passenger Train, i.e., a train conveying passengers, the trailing vehicle must be fitted with a screw Hand-brake.

(b) In the case of a Mixed Train, the order of marshalling must be as follows:—Trucks next to engine, van next to trucks, and Passenger car, which must be fitted with a screw Hand-brake, trailing.

(c) In the case of a Goods Train—

(i.) Except where otherwise provided, the practice must be limited to the hours between sunrise and sunset.

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- (ii.) Whenever it is reasonably practicable, a suitable low-sided vehicle on which the Guard or other employe in charge of the train can ride must be attached in the rear. The vehicle must be of a kind from which the Air Brake can be applied in a case of emergency to stop the train, and the Hand Brake on such vehicle must be in good order.
- (iii.) The employe in charge of the train must be qualified to act as Guard, and must be provided with the necessary Hand Signals, Detonators and Guards "Wrong Line Forms" (see clause (g), Regulation 243). He must ride on the rear vehicle except in the case of a disabled vehicle being attached behind the rear Brake-van (see clause 5) in which event he must ride in the Brake-van in accordance with Regulation 199.
- (iv.) The rate of speed must not exceed 15 miles per hour.
- (v.) Except as shown hereunder, the maximum number of vehicles must not exceed ten (10). Exceptions: — Between the undermentioned places the number of vehicles allowed is specified in each case:—

	On Up or Down journey.
Wodonga—Coal Sidings	20
Ballarat and Doveton-street	20
North Portland—Portland	12
Geelong—North Geelong	30
North Geelong—Fyansford	30
Herne's Oak and Yallourn	12
Yallourn—Herne's Oak	12
Williamstown—Newport	20
Williamstown—Yarraville	30
Newport—Yarraville	20
South Kensington—West Footscray	20
West Footscray—Sunshine	20
South Kensington—Yarraville	20
Spencer-street—Arden-street	30
Spencer-street—South Kensington	30
Maribyrnong River Line	30
Maribyrnong River Junction—Spencer-street	30
Spencer-street—Kensington	30
Spencer-street—Newmarket	30
Spencer-street—Newport Workshops	3
Brunswick—South Brunswick	20
Montague Goods Yard—Port Melbourne	35
Graham—Princes Pier	35
Princes Pier—Graham	35
Bell—Thornbury	12
Agnes—Toora	30
Lilydale—Black's Siding	30

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(d) In the case of All Trains:—

- (i.) The Air Brake must be continuous throughout the train, and the Guard or other employe in charge of the train must test the Brake (see Nos. 22 to 29, inclusive, of the Air Brake Rules, Appendix (iii.), Book of Rules and Regulations) by opening the Cock in the Brake Pipe of the last vehicle. The Hand-brake on the rear vehicle must also be tested by the Guard or other employe in charge of the train, who must satisfy himself that it is in good order before commencing the journey, and prior to testing the Air Brake. In the case of the Sydney Express train these duties will devolve upon the Parlor Car Conductor, as provided in the instructions, pages 366-368.
- (ii.) The prescribed Tail Signal must be carried on the rear of the last vehicle.

5. (a) When authority is given for a **disabled** vehicle to be hauled behind the rear Brake-van of any train the following directions must be observed:—

- (i.) A competent employe of the Rolling Stock Branch must ride in such vehicle. He must be provided with the necessary Hand Signals and Detonators to enable him to protect the vehicle in case of a break-away. On Lines where Sprags or Scotchies are carried in the Brake-van, see list on page 357, the employe riding in the disabled vehicle must have a Sprag or Scotch, which he must use according to requirements.
- (ii.) When practicable, the Air Brake must be continuous throughout the train, and in operation on the disabled vehicle, but, if the vehicle be fitted with a pipe not operating Brake Blocks, it must have a Hand Brake which must be in good working order.

(b) When a vehicle which requires repairs is left at a Station where there is no Loco. Depot, the Station-master, in notifying the District Rolling Stock Superintendent, or the nearest Train Examiner, must specify its number and class, in order that arrangements may be made in accordance with sections (i.) and (ii.) of this clause.

6. Unless otherwise ordered, the following directions must be observed when it is necessary to haul a Car to a Depot for repairs.

- (a) It must not be forwarded by a Passenger train, but by a Mixed or Goods train on which only one engine is employed.
- (b) It must be attached to the end of the rear Brake-van.
- (c) The Air Brake must be continuous throughout the train and in operation on the Car.
- (d) A competent employe of the Rolling Stock Branch must ride in the car. He must be provided with the necessary Hand Signals and Detonators to enable him to protect the car in case of a break-away.

7. (a) A Water truck may be drawn between North Melbourne Engine Shed, Flinders-street Station, and Port Melbourne, and between Geelong and North Geelong, without a Brake-van in the rear, and without being in charge of a Guard or Shunter.

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(b) The 5-ton steam cranes and the 10-ton wrecking and coaling crane with only the usual match truck (safety truck) trailing, are to be treated as Light Engines, and may be run without a Brake-van in the rear.

(c) In each case the Driver must see (1) that the truck is attached to the engine by means of a screw coupling, which must be screwed up so that it cannot lift off the draw hook; (2) that the Air Brake is connected through and in good order; and (3) that a proper Tail Signal is carried on the rear of the water truck.

8. During shunting operations **inside** Station limits a Guard or other employe must, unless instructions be issued to the contrary, ride on the last vehicle to ensure that none become detached or are left behind.

SIDE CHAINS.

The short, light side chains affixed to new medium trucks are for a Shunter's hand-hold while getting under the buffers. They must not be used to secure covers or lashings to, but must always be left free.

LABELLING OF LOADED AND EMPTY TRUCKS.

1. Except where instructions are issued to the contrary, or except in the case of Mineral traffic in train loads, for journeys not involving marshalling during, or on completion of, the journey, every loaded truck must be labelled or directed on both sides to its destination.

2. When it is necessary for any empty truck to be labelled or directed to its destination, such truck must be labelled or directed on both sides.

WORKMEN'S SLEEPING CARS.

1. (a) Workmen's Sleeping Cars, that are not fitted with Hand Brakes, are provided with a strong chain and padlock, which is to be used to secure one of the wheels to the rail whilst the car is standing in the Siding or in the Carriage Dock; Station-masters are required to see that these cars are so secured.

(b) Workmen's Sleeping Cars must always be placed with the engine, and are not to be loose shunted.

2. (a) Workmen's Sleeping Cars, when occupied by workmen in Station yards, must be placed in the Car Dock, or, if Car Dock is not available, then in a Siding where Passenger Cars are stored, or Live Stock Siding, or against the Buffer Stops of some such Siding where the car is least likely to be disturbed, but, except specially authorised, the Dead-end extension of a Running Line must not be used for this purpose. For further protection of the workmen occupying these cars, each car will be furnished with a portable Deraill-block, which, at night, must be secured, if practicable 100 feet clear of the car, on one rail of the Siding, in order to prevent any vehicles being shunted against the car.

(b) The Foreman or other employe in charge of the car will be responsible for securing the Deraill each night as specified above, and must confer with the Station-master, Yard Foreman, or other person in charge

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as to the most suitable position for the car and the point at which the Derail is to be secured, care being taken to fix the Derail so as to provide proper protection for the car; if the car is in a Siding adjacent to a Running Line, the Derail must be placed on the rail farthest from the Running Line, so that in the event of derailment the vehicle will be diverted clear of the Running Line.

(c) Except when the car is secured in a Siding closed against shunting operations, the Station-master or other person in charge must warn Guards and Shunters of the position of the car and Derail, and the need for special care in shunting operations.

3. Clause 2 will not apply to Workmen's Sleeping Cars Nos. 8, 30, 61, 72 or 92 used by the Weighbridge Staff.

CARS USED FOR CONVEYANCE OF GOLD, MAILS, LUGGAGE, ETC., BY TRAIN.

The total weight of Gold which may be conveyed in one of the following carriages is shown below:—

AE	(a) 30 cwt. in the 3rd or 4th compartment, or
	(b) 20 cwt. in the 3rd, and 20 cwt. in the 6th compartment.
ABE	20 cwt. in the 3rd compartment from the first class end.
AW & AV	(a) 30 cwt. in the 3rd or 4th compartment, or
	(b) 20 cwt. in the 2nd or 5th compartment.
ABW	20 cwt. in the 2nd compartment from the first class end.

The total weight of Mails or Luggage which may be conveyed, in cases of emergency only, in any carriage must not exceed 15 cwt.

The total weight of Van Goods which may be conveyed, in cases of emergency, in the mail compartment of a BDSE Car must not exceed 5 tons, evenly distributed.

The authorised load as shown inside the Guard's compartment of XYZ and YZ cars must not be exceeded.

DISCHARGING PARCELS OF NEWSPAPERS AT INTERMEDIATE STATIONS FROM PASSING TRAINS—(Regulation 224).

1. When authority is given for Newspaper Parcels to be discharged from trains whilst passing through stations, the following conditions, in addition to those specified in Regulation 224, must be observed by all concerned:—

- (a) The maximum number of parcels must not exceed six.
- (b) The maximum weight of any parcel must not exceed 21 lbs.
- (c) The speed of the train whilst passing through the Station must not exceed 25 miles per hour; the Guard must instruct the Driver which Stations to slow up at.

2. The parcels must be discharged on the Station platform from the rear-most door of the rear van, the van door being opened for the purpose, and the parcel or parcels thrown low, and well clear of the train. The provisions of Regulation 224 must be strictly observed by all concerned.

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3. In the event of the number of parcels for any Station exceeding six, or the weight of any parcel exceeding 21 lbs., the Guard must arrange with the Driver to stop, but any number of parcels tied together may be dealt with as one parcel, provided the weight of such parcel does not exceed 21 lbs.

4. Subject to the conditions specified above, permission is given for parcels of newspapers to be discharged at Roadside Stations from the undermentioned trains:—

Line.	Train.	Line.	Train.
Melb. to Ballarat (via Geelong)	2.0 a.m. Dn.	Melb. to Warragul	2.42 a.m. Dn.
Melb. to Bendigo...	2.10 a.m. Dn.	Melb. to Nyora ...	3.15 a.m. Dn.
Melb. to Seymour	2.25 a.m. Dn.	Melb. to Lilydale	3.40 a.m. Dn.

MOTORMEN'S EMERGENCY CONTROLLER KEYS.

1. (a) At certain Stations, an Emergency Controller Key is provided for use in cases of emergency or in the event of the Motorman's Key becoming defective or lost. The Emergency Key is normally in a locked box, having a glass front, and specially provided for this purpose in the Station-master's office; an Emergency Key Book is also secured in the box with the Emergency Key. The key of the box is in the custody of the Electric Running Inspector, Flinders-street.

(b) The Station-master or other person in charge will be responsible for preventing undue interference with the box containing the Emergency Key, which must not be removed from the box, except as laid down hereunder:—

- (i.) In the event of the Motorman's Key being defective or lost.
- (ii.) When, owing to defect in the electrical equipment, the Emergency Key is required to enable the Motorman and Guard to drive the train from separate compartments.

2. When, in accordance with clause (b), it is required to obtain the use of the Emergency Key, the Motorman must personally apply to the Station-master and explain the circumstances that render its use necessary, and the Station-master, when satisfied that the Key is required for an authorised purpose, must break the glass front of the box referred to above, and hand the Emergency Key to the Motorman.

3. If the Motorman's Key be defective, it must be handed to the Station-master when the Motorman receives the Emergency Key. If the Motorman's Key is lost, and after search it cannot be found, and a further search would cause serious delay to the train, the Station-master must hand the Emergency Key to the Motorman to allow the train to proceed; he must then arrange for a thorough search being made for the missing Key. The Key, if defective (or if recovered after being lost),

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must be locked away by the Station-master until it is handed to the official who returns the Emergency Key, and on receipt of the Emergency Key, it must be locked away until the glass front is to be replaced in the box.

4. On receipt of the Emergency Key from the Station-master, the Motorman must make an entry in the Emergency Key Book explaining the reasons which rendered the use of the Emergency Key necessary, and the time at which the Key was received. The Station-master must counter-sign the Motorman's entry in the Book and report the circumstances by the most expeditious means to the Metropolitan Superintendent and the Electric Running Inspector. On receipt of the report, the Electric Running Inspector must promptly arrange to furnish the Motorman with a duplicate Key; the Emergency Key must, as soon as possible, be restored to its position of security in the Station-master's office.

5. Emergency Controller Keys are available at all Racecourse platforms, and at the Stations mentioned hereunder:—

Flinders-street	Reservoir	Bayswater
Spencer-street	Alphington	Upper Fern Tree Gully
South End Box	Heidelberg	Croydon
Footscray	McLeod	Mooroolbark
Newport	Greensborough	Lilydale
Altona	Eltham	Caulfield
North Williamstown	Hurstbridge	Oakleigh
Williamstown	Burnley	Spring Vale
Williamstown Pier	Tooronga	Dandenong
Sunshine	Darling	Glenhuntly
St. Albans	Hawthorn	Moorabbin
Essendon	Kew	Mentone
Broadmeadows	Camberwell	Mordialloc
Royal Park	Ashburton	Aspendale
Coburg	East Camberwell	Carrum
Merlyston	Canterbury	Frankston
Fawkner	Surrey Hills	Elsternwick
North Carlton	Box Hill	Brighton Beach
North Fitzroy	Blackburn	Sandringham
Princes Bridge	Tunstall	St. Kilda
Clifton Hill	Mitcham	Port Melbourne Stn.
Bell	Ringwood	Port Melb., New Pier

PASSENGER TRAIN ASSISTING IN THE REAR OF A STALLED OR DISABLED TRAIN.

These Instructions shall not apply where an Electric Train is required to assist another Electric Train; for instructions respecting disabled Electric Trains, see pages 487-492.

1. When, in order to avoid serious delay to Passenger traffic, it is necessary for a Passenger Train to render assistance to a train, the

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engine of which is stalled or disabled in a Section in advance, this may be done, but in addition to the conditions laid down in Regulation 239 the following directions must be observed by the employes concerned:—

2. On a Double Line where the Block Telegraph System is in operation, the Relief train must be dealt with as prescribed in Rule 16, Appendix IV., of Book of Rules and Regulations.

3. (a) The assisting train must be brought cautiously on to the disabled train, and, except as shown in sub-clause (b) hereof, the two trains must be coupled together and the Air Brake must be in operation throughout the combined trains.

(b) An Electric train must not be coupled to any Mixed or Goods train. In foggy weather or during falling snow or when from any similar cause a clear view cannot be obtained, an Electric train must not be used to push any Mixed or Goods train.

(c) If the Air Brake be not in operation on the Mixed or Goods train, arrangements must be made for the Mixed or Goods train to be controlled on every falling gradient or when approaching any Station or Junction, as prescribed by clause 10 of the Air Brake Orders shown on pages 606-608.

(d) The Drivers and Guards must confer and have a complete understanding in respect of the point to which the train shall require to be assisted, the condition of the stalled or disabled steam locomotive and the load that it is capable of lifting—see sub-clause (e), and the mode of procedure; the Signal to start must be given by the Guard of the front train after he has exchanged Signals with the Guard of the rear train.

(e) The loads which may be lifted by an Electric train are set out hereunder:—

Grade.	LOAD IN TONS.	
	Trains Composed of Two Units.	Trains Composed of Three Units.
1 in 40	250	300
1 in 50	350	400
1 in 75	500	600
1 in 100	650	800
Less than 1 in 100 ..	800	1000

4. When the Driver of the front train has received the Guard's Signal to start and he has satisfied himself either by observation or by obtaining the exhibition of the necessary Signals, that the line ahead is clear, he must call the attention of the Driver in the rear by giving two distinct whistles which the Driver in the rear must acknowledge, and until these whistles have been given and acknowledged, neither of the Drivers must attempt to move forward.

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5. (a) If the assisting train be an Electric train, it must have the motors of two cars, at least, in operation.

(b) If whilst assisting the train and before reaching the point to which it is agreed the train shall assist, the Motorman shall be required to pass any Fixed Signal at which a Train-stop apparatus is provided, he must raise the handle of the Trip-valve and close the Isolating cock of the Air-operated Safety Apparatus on his car, in which case he must arrange for the Guard to ride with him to hold over the Control Governor Switch.

(c) The Motormen, when pushing, must first put the Controller Handle to the First Series position, and then, intermittently, from First Series to Full Series, until the speed is suitable to operate in Full Series. The Controller Handle must not, however, be placed beyond Full Series whilst assisting.

(d) When an Electric train is assisting a Mixed or Goods train in the rear, the speed of the Mixed or Goods train must not exceed a rate of 25 miles per hour.

(e) If the Driver of the assisting train become aware that the first train has drawn away from the assisting train, he must at once bring his train to a stand, and if the Goods train proceeds, the Driver of the assisting train must act as laid down in sub-clause (b), clause 8.

6. (a) If, from any cause, it become necessary that the front train should be stopped, the Driver of that train must, in addition to taking the other necessary measures to stop, give a series of short, sharp whistles to the Driver of the assisting train, and the latter must at once shut power "Off" so that the train shall be stopped as required: in the case of an Electric train assisting a Mixed or Goods train, the Motorman of the assisting train must at once bring his train to a stand.

(b) The Driver of the front train must be prepared to exhibit a Red Signal to the Trainmen in the rear if circumstances require it; the Driver of the assisting train and the Guard of each train must keep a sharp look-out whilst the trains are in motion, and adopt all necessary measures for safety.

7. Where a Fixed Signal is controlled by Track Circuit and such Signal is at the Warning or the Proceed position, the Signal will be reversed to the Stop position when the leading pair of wheels of the front train enters the Section to which the Signal applies; in such circumstances the Driver of the assisting train may continue to push unless he receive a Hand Signal to stop, in which case the train must be brought to a stand.

8. (a) On arrival at the point to which the train is to be assisted, the combined trains must be stopped; in the case of an Electric train assisting a Mixed or Goods train, however, the Mixed or Goods train may, provided the Line be clear, proceed without stopping.

(b) After the first train has proceeded, the Driver of the assisting train may proceed cautiously, as laid down in Regulation 170, towards the next Fixed Signal, and if an Electric train, the Motorman, before proceeding to follow, must see that his Trip-valve is properly set.

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MOTORMAN'S TRAIN DEFECT MESSAGE.

1. When, owing to a defect, it becomes necessary for the Yard Foreman, Flinders-street, to shunt an Electric Train out of service, the next, scheduled trip for such train may have to be cancelled unless another train be available or there is a sufficient margin of time to prepare one for service; the attention of Trainmen and Station-masters is, therefore, directed to the importance of sending prompt advice of train defects in order that the Staff at Flinders-street may notify the Equipment Examiner and other officers concerned.

2. (a) When a defect that is likely to disturb the schedule running occurs on an Electric Train the Motorman must deliver a written message to the Station-master at the nearest Station; the Station-master must at once telephone the particulars to the Equipment Examiner or to the Indicator Porter, Flinders-street, and the latter must promptly repeat the message to the Equipment Examiner and Station-master at Flinders-street. The Motorman's message should clearly indicate the character of the indications of the defect, in order that the Equipment Examiner may be prepared to promptly deal with the trouble, and thus avoid unnecessary delay at Flinders-street; care must also be taken to state clearly whether the defect is of such a character as to permit of the train being worked up to Melbourne, and whether it is likely to arrive on time.

(b) If a defect of a serious nature occur on an Electric Train which is to be stabled at an Out-station, the Driver must promptly hand a Train Defect Message to the Station-master, who will transmit the message per telephone to Melbourne. If the nature of the defect be not serious, the Driver must leave the Train Defect message in the clip of the Motor Car at the Melbourne end of the Train, and the Driver who takes the Train to Melbourne must hand the message to the Indicator Porter, who, after transmitting the message to the Equipment Examiner, must deposit the message in the box provided for that purpose; the Driver making out the Train Defect message must, in such cases, fill in on the butt of the book the Date and Station at which the message is deposited in the Clip of the Motor Car.

(c) When a defect occurs on an Electric Train in service which is not of a serious nature, the Driver must fill in the Train Defect message stating the Car No. and nature of defect, and hand the written message to the Indicator Porter on arrival at Melbourne, who, after transmitting the message to the Equipment Examiner, must deposit the written message in the box provided for that purpose; the Driver must state on the Butt in the Train Defect Message Book the date and Station Platform No. at which the message is handed in. The Indicator Porter transmitting the message should inform the Equipment Examiner whether the train on which the defect occurs is being shunted or remaining in running.

(d) A Driver reporting a defect on an Electric Train which he has shunted to the Yard must state when filling in the Train Defect message in addition to the Car No., the Train No., the nature of defect and the Road on which the train is stabled. The procedure of reporting the defect to the Equipment Examiner will be as follows:—

(i) When the Driver who is reporting the defect is booked to relieve at the Platform before coming to the Driver's Depot the Train Defect Message must be deposited in the box

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provided at the Indicator Porter's Cabin at Flinders-street or Princes Bridge, as the case may be. In all cases where it is possible for a Driver to hand in the Train Defect Message to the Equipment Examiner's Cabin, Flinders-street or Princes Bridge, it must be done, and in all cases the date and place of handing in the message must be shown on the butt.

- (ii.) If the Driver be returning to the Depot after being relieved on a train in service on which a defect has occurred, the Train Defect Message must be handed to the Officer-in-Charge at the Depot, who, after transmitting the message to the Equipment Examiners, will deposit the message in the box provided.
- (iii.) If the Driver be returning to the Depot after stabling a train in the Yard on which a defect has occurred, the Train Defect Message must be deposited on the box provided for that purpose at the Depot.
- (iv.) The Workshops Manager, Jolimont, is responsible for the clearing of the Train Defect Message boxes at the various places at which they are situated.

Overhead Disarrangement.—The transmitting of a Motorman's Train Defect Message shall not relieve Station-masters, Signalmen, or other employees of their personal responsibility for reporting any disarrangement of overhead equipment, direct to the Overhead Superintendent and other Officers referred to in the special instructions bearing on the subject.

3. If the defect be of such a character as to warrant withdrawing the train from service, the Equipment Examiner must, immediately on receipt of the message, inform the Yard Foreman and Station-master, Flinders-street. If the message refer to a damaged or defective Pantograph, it will be the duty of the Equipment Examiner, as well as the Indicator Porter, to notify the Overhead Superintendent.

4. In the event of a report being received of undergear on a Car being disarranged, the Equipment Examiner concerned must—

- (a) If sufficient time be available to prepare and dock a train without causing delay, arrange with Transportation Branch to withdraw from service the train with reported defect.
- (b) Should time not be sufficient to withdraw train, the Equipment Examiner must—
 - (i.) Make careful examination of the whole train from Pit side—
 - (ii.) In the event of no defect being discovered on the above examination, instruct Motorman and Guard to proceed to a point one full train length outside the platform, then bring the train to rest, so that it can be thoroughly examined on platform side.

5. The messages sent and received must be entered in the Telephone Message Books, and must include the name of sender, the Station, and

the time sent or received. The written message received from the Motorman must, after being copied into the Telephone Message Book, be forwarded to the Metropolitan Superintendent, from whom the message will be collected by the Workshops Manager, Jolimont.

AIR-OPERATED SAFETY APPARATUS ON ELECTRIC TRAINS.

Clause (f), Regulation 68.

1. In every case in which the leading Trip-valve becomes defective, the Motorman must close the Isolating Cock of the Air-operated Safety Apparatus, and as this apparatus will then be inoperative and power cut off from the Driving Apparatus, the Motorman must obtain the services of the Guard, unless another competent employe can be obtained, to hold over the Control Governor Switch, which is fixed in the front Guard's compartment. The Guard must break the glass cover of the Control Governor Switch-box, and hold the switch handle according to requirements. If the Guard release his hold, the switch handle will return to the "Off" position, and switch the power off the Driving Apparatus.

The employe whose duty it is to hold the Control Governor Switch must work under the instructions of the Motorman, who must see that such employe is properly instructed as to his duties, and understands what he is required to do.

2. The Motorman must also request the Guard (or other competent employe) to ride in the front compartment in the event of—

- (i.) The Pilot-valve being defective, or its failing to operate the Emergency Relay when the Plunger is released with the Controller handle at the normal (the "Off") position;
- (ii.) Failure of the Emergency Relay; or
- (iii.) Failure of the Controller handle, from any cause, to return to the normal (the "Off") position after being released.

3. The Guard, or other competent employe, accompanying the Motorman in accordance with the foregoing instructions, must keep a good look-out from the front Guard's position, and take any action that may be necessary.

DISABLED ELECTRIC TRAINS.

(Regulation 247, clause (g).)

1. In the case of an Electric train, as there will usually be a Motor car at each end of the train, if the disablement affects the rear part, such front cars as can do so, may be run with passengers to the Station in advance, leaving the rear part protected as prescribed in the Regulations. On the other hand, if the rear part be free to run, it may, after the requirements of Regulation 244 have been complied with, return with the passengers to the Station in the rear.

2. Circumstances may arise in which it is not practicable to drive and brake the train from the same compartment. In every such case the Trainmen must exercise the utmost care in working the train forward. They must travel cautiously at reduced speed, keeping the train under the needful control to ensure safety.

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3. If owing to a defect in the train, the Motorman be unable to proceed, and the defect be found to exist in the Control Governor Apparatus, due to Open Circuit, he must obtain the services of the Guard or other competent employe, who must ride with the Motorman to hold over the Control Governor Switch.

The Trip Valve of the leading cab must be cut in, and the Isolating Cock left in the normal position.

4. (a) If the train cannot be electrically driven from the leading cab, but can be braked therefrom, the following instructions must be observed:—

- (i.) In every case where the train has only two driving cabs, viz., one at each end, the Guard or other qualified employe will drive the train, electrically, from the rear cab, and the Motorman must operate the brake from the leading cab, signalling by Hand Signals to the Guard or other qualified employe driving the train, when to operate the Controller. The Trip Valve of the leading cab must be cut in, and the Guard must apply to the nearest Station-master for the services of a competent employe, who must ride with the Guard to hold over the Control Governor Switch, and, at Stations, act as Guard of the train; the Trip Valve on the rear cab must be cut out.

If, however, a competent employe be not available for this duty, the Trip Valve of the rear cab, as well as that of the leading cab, must be cut in; if, while the train is being worked under the latter condition, it is necessary for it to pass a Train Stop Apparatus on the same side of the Line as the rear Trip Valve, the speed of the train, when passing such apparatus, must be reduced to the rate of 5 miles per hour to obviate the train being tripped by the Train Stop operating the Trip Valve handle in the reverse direction.

- (ii.) In every case when the train has one or more driving cabs between the leading cab and rear cab, the Guard or other qualified employe will operate the train, electrically, from the next cab in the rear of the defective cab, and the Motorman must operate the Air Brake from the leading cab, signalling by Hand Signal to the Guard or other qualified employe driving the train, when to operate the Controller.

The Trip Valve of the leading cab must be cut in, and the Trip Valve of the cab from which the train is being electrically driven must be cut out. The Guard must apply to the nearest Station-master for the services of a competent employe, who must ride with the Guard to hold over the Control Governor Switch, and, at Stations, act as Guard of the train. If, however, a competent employe be not available for this duty, the Trip Valve of the cab in the rear on the opposite side to that on the leading cab must be cut in to enable the train to be electrically driven, as well as that on the leading cab; if, while the train is being worked under the latter conditions, it is necessary to pass a Train Stop Apparatus on the same side of the Line as the rear

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Trip Valve, the speed of the train, when passing such apparatus, must be reduced to the rate of 5 miles per hour, to obviate the train being tripped by the Train Stop operating the Trip Valve Handle in the reverse direction.

- (iii.) Wherever possible, the train must be electrically driven from a cab on the same side of the train as the leading Motorman's cab.
- (iv.) The Guard, or other qualified employee driving the train, must keep a good look-out, and, as far as practicable, observe Fixed Signals; he must be prepared to act on any signal which he may receive from the man in the front cab.
- (v.) It must be distinctly understood that in the cases referred to in sub-clause ii. and iii. hereof, the services of a competent employee must be obtained as soon as practicable to ride with the Guard and hold over the Control Governor Switch.

(b) If the train cannot be braked from the leading cab, the Motorman must both electrically drive and brake the train from the rear cab, unless a competent employee can be obtained to attend to the Control Governor Switch, in which case the Motorman must drive from the cab next in the rear of the defective cab. The Guard must ride in the front cab, keeping a good look-out for Fixed Signals, and must signal by Hand Signal to the Motorman, when to operate the Controller or Brake; the Motorman must keep a good look-out for the Hand Signals, and as far as practicable observe Fixed Signals. This will also apply should it become necessary to run a train without a cab at the leading end.

- (i.) If the Motorman be operating the train from the rear cab, the Trip Valve of the leading cab must be cut out, and, if the services of a competent employee be not available, the Trip Valve of the rear cab must be cut in. If the competent employee be available, the train must be operated as specified above, but from the cab next in the rear of the defective cab, and all Trip Valves must be cut out.
- (ii.) If the train is being operated from the rear cab, the speed must not exceed the rate of 10 miles per hour; where it is necessary to pass a Train Stop Apparatus fixed on the same side of the Line as the rear Trip Valve, the speed must be reduced to the rate of five (5) miles per hour, in order to avoid the train being tripped by the Train Stop Apparatus operating the Trip Valve handle in the reverse direction. The train must, if practicable, be driven from a cab on the same side of the train as the leading cab.
- (iii.) The passengers must be detrained at the first Station, and the train shunted at the first available Siding.
- (iv.) It must be distinctly understood that in the cases referred to in sub-clause ii. thereof, the services of a competent employee must be obtained as soon as practicable to ride with the Motorman and hold over the Control Governor Switch.

(c) In any case of train failure likely to cause serious delay, assistance must be obtained as soon as practicable, as laid down in the Rules

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and Regulations; where assistance can readily be obtained, time must not be lost by efforts of the crew to rectify the failure, and thus risk a serious interruption to the train service.

(d) Whenever an Electric train has to be assisted by another Electric train, the two trains must be coupled together, and, if practicable, the Jumpers and Brake pipes of the two trains must be connected; if the Pantograph ends of the train are to be coupled together, the rear Pantograph of the leading train must be lowered. If the combined trains can be braked from the leading cab, the passengers must be transferred, at the first station, to the front train, and this portion of the combined trains must be stopped at the Station Platforms en route.

Not more than five (5) Motor Cars must be working on the combined trains; the motors on any Motor Cars beyond this number must be cut out by the Control Cut-out Switch being placed to the "Off" position; if there are six Motor Cars, the third car from the leading end must be cut out.

- (i.) If the combined trains can be electrically driven and braked from the leading cab, the Motorman of the front train will drive the combined trains from the leading cab.

The Trip Valve of the leading cab must be cut in, and all other Trip Valves on the combined trains cut out, and the Isolating Cocks closed.

- (ii) If the combined trains can be braked from the leading cab, but cannot be electrically driven therefrom, the Motorman of the defective train must brake the train from the leading cab, and the Motorman of the assisting train must drive the combined trains from his own cab. The Motorman in the leading cab will signal by Hand Signal to rear Motorman when to operate the Controller.

The Trip Valve of the leading cab must be cut in, and all other Trip Valves on the train cut out; the Guard of the defective train must ride with the rear Motorman to hold over the Control Governor Switch.

- (iii) If the combined trains cannot be braked from the leading cab, the Motorman of the assisting train must both electrically drive and brake the train from his own cab, and the Motorman of the defective train must ride in the front cab, keeping a good lookout for Signals and signalling, by Hand Signal to the Motorman operating the train when to operate the Controller or Brake.

The Motorman operating the train must keep a good look-out for these Hand Signals and the Fixed Signals.

The Trip Valve of the leading cab must be cut out, and the Isolating Cock closed. The Trip Valve of the cab from which the train is being operated must be cut out, and the Isolating Cock closed, and the Guard of the defective train must ride with the Motorman operating the train to hold over the Control Governor Switch. All other Trip Valves on the Train must be cut out.

If the disabled train be in a Station, the passengers are to be detrained before the assisting train is brought on to it, and when the assisting train is brought to the platform, its

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passengers must be detrained. If the disabled train be between Stations, the assisting train must, if at a Station, be cleared of passengers before it proceeds to the disabled train, but if the assisting train be already between a Station and the disabled train, passengers from both trains must be detrained at the first Station, and the defective portion of the combined trains must be placed in the first available Siding.

5. (a) When an Electric Train cannot be driven from the leading cab the instructions applicable to Pushing Trains on a Running Line, pages 396-399 of this book, must be observed, except when the movements of the train are being controlled by the Motorman in the leading cab, by means of the Air Brake.

(b) When a Motorman is controlling the movements of a Train from the leading cab by means of the Air Brake, and another employe is electrically driving the train from a cab in the rear, the Motorman on the leading cab will be held responsible for working and controlling the movements of the train, according to requirements, and in conformity with Rules and Regulations.

If, in case of emergency, the Motorman should require the power to be promptly cut off, he must (in addition to applying the Air Brake, and exhibiting the Danger Signal), give a succession of short, sharp whistles, as prescribed for a Driver requiring the special assistance of the rear Guard; see clause (d), Regulation 199. On hearing these whistles, or on becoming aware that the Motorman is applying the Air Brake, the Guard or other qualified employe, who is electrically driving the Train from other than the leading cab, must at once close the Controller, until he has satisfied himself that it is safe to proceed, and, he has received an All Right Signal from the Motorman.

(c) When a train, which cannot be driven from the leading cab, is stopped at a Station or between Stations, the employe acting as Guard must signal, by a Green Flag or Light, to the man on the leading end of the train when all is right to proceed, or when necessary to move in any shunting movement; and the employe who is electrically driving the train must not move the train until the "All Right" Signal has been repeated to him by the man on the leading end of the train.

6. The Motorman of the defective train must fill in a Train Defect Message (Form "RS21SB"), which must be promptly dealt with as prescribed in the instructions shown on pages 485-487; the Motorman must also furnish a full report of the circumstances on Form "RS12A."

7. Hand Signals.—In every case in which a train is being electrically driven from other than the leading cab, the Hand Signals to be exhibited by the man in the leading cab must be given with Flags by day, and Hand Lamps by night or in foggy weather.

8. If, owing to defect, any wheels of a Motor Car become locked or jammed and it be necessary that the wheels should be skidded, great care must be exercised in the working of such train, especially when approaching or passing Facing Points, Check Rails, Crossover Roads, etc. The following precautions must be observed:—

(i.) If the locked wheels be the trailing wheels on the train, it must be worked forward; but if the locked wheels be the

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leading wheels on the train must (after provisions of Regulation 244 have been carried out) be shunted back towards the Station in the rear. If, however, an engine or another vehicle be available and it can be attached to the end of the train at which the locked wheels are situated, the train may be worked in either direction.

- (ii.) In the event of any wheels, other than those specified in sub-clause (i.), becoming locked, the train may also be worked in either direction.
- (iii.) The defective train must be shunted clear of the Running Line as quickly as possible, and in every case in which the train is worked in the wrong direction, the provisions of Regulation 244 must be carried out.
- (iv.) The Ganger must be notified when skidding is necessary, and, after arranging for one or more Flagmen to be sent back to act as prescribed in Regulation 271, he must examine the portion of the Line on which the vehicles have been skidded, and arrange for following trains to be stopped or for the speed of such trains to be reduced as may be necessary, until he is satisfied the Line is safe for ordinary traffic.

If the Ganger be not available, the Guard or the Senior Officer present must arrange for a competent man to perform the duties of Flagman until the Ganger has arrived; every train to pass over the Line must be stopped by the Flagman, and the Driver must be verbally informed of the circumstances, instructed to proceed cautiously and reminded that the speed of his train over the portion of the Line on which the Car was skidded must not exceed the rate of 10 miles per hour. The Ganger, on his arrival, must examine the Line as above, and arrange for ordinary traffic to be resumed as quickly as possible.

9. When, owing to any defect, a train has been placed into a Siding, the Motorman of the defective train must see that it is left secured in a safe position, and must hand the Station-master a Train Defect Message, which must be promptly dealt with as laid down on page 485; unless the Motorman receive instructions to the contrary he must return with his kit to the Electric Train Running Depot, and furnish a full report on Form "RS12A." The Station-master must take the necessary steps to prevent the defective train or car from being moved until an authorised employe has, by signing an endorsement on the Train Defect Message Form, intimated that the train is—(a) fit for service; or (b) fit to be taken to the Flinders-street Yard. The Station-master must then request that a Motorman be sent to take charge of the train.

When the train is ready, the Motorman must advise the Station-master, and the latter must then arrange for its despatch. The endorsed Train Defect Message Forms must be shown to and countersigned by the Motorman taking charge of the train; the Form must be retained by the Station-master and duly forwarded by him, with a report, to the Metropolitan Superintendent.

Permanent Way and Works.

PREVENTION OF FIRES AND WASHAWAYS.

1. During the burning-off season and periods of heavy rainfall, Gangers must leave with Station-masters daily particulars as to the locality in which they will be working during the day, in order that the track force may be promptly communicated with in case of necessity.

2. Station-masters should co-operate with the track force with a view to the best arrangements being made for the obtaining of this information.

ROAD FOREMAN ON DUTY IN THE METROPOLITAN AREA ON SATURDAY AFTERNOONS AND SUNDAYS.

One of the Metropolitan Foremen will be on duty in the Metropolitan area every Saturday afternoon and Sunday, and he must be communicated with in case of any emergency arising that requires his services in any part of such area; he must keep the Station-masters, Spencer-street and Flinders-street, informed of his movements.

CARETAKER AND NO-ONE-IN-CHARGE STATIONS.

See pages 204-208 for instructions in regard to the Points and Signals and duties which devolve upon Way and Works Branch employees at Caretaker and No-one-in-charge Stations.

RUNNING OF SPECIAL TRAINS.

The attention of Gangers, Repairers, Gatekeepers and other Permanent Way employees, is directed to the instructions respecting Special trains. See pages 172-178.

INSTRUCTIONS FOR THE USE OF TROLLIES, TRICYCLES, QUADRICYCLES AND MOTOR INSPECTION VEHICLES.

Definitions:—(a) In these Instructions, the term "employee in charge" shall mean the employee in charge of a Trolley, Tricycle, Quadricycle, or other machine, run on any part of the Line.

(b) "Machine" shall include Trolley, Tricycle, Quadricycle, or other similar vehicle (whether propelled by hand or otherwise), and except when signalled in accordance with the Rules for the Train Signalling, shall include Rail Motor Inspection Car and Mail Motor.

1. (a) Except in the case of a Rail Motor Inspection Car, no machine must be used by an employee other than a Foreman, Ganger, Repairer, Electrical Fitter, Signal Adjuster, Lineman, or other authorised employee, and no such vehicle must be used except for Departmental purposes;

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nor must any such vehicle be used for the conveyance of any person other than an employe on duty, except with the permission of the Head of the Branch concerned, or of one of the following officers, viz.:-

Transportation Branch.	Rolling Stock Branch.	Way and Works and Signal and Telegraph Branches.
General Superintendent Asst. General Supt. Outdoor Superintendent Supt. of Goods Train Service Metro. District Supt.	Asst. Chief Mechanical Engineer Workshops Manager Chief Clerk Supt. Loco Running Supt. Loco. Supplies	Asst. Chief Engineer of Ways and Works Engineer of Maintenance District Engineer Chief Engineer or the Asst. Chief Engineer of Signals and Telegraphs

(b) The Station-master or other authorised official must be allowed the use of a Tricycle or other machine by any employe in charge to whom he makes application, provided that it be required in connection with any accident, or emergency, or for the purpose of transferring the Train Staff or Tablet through the Section; see also clause 26.

(c) Tricycles must be carefully lifted off the rails, and must not be dragged across the Line.

2. Unless special instructions are issued to the contrary, the maximum rate of speed for any Motor vehicle, other than a Rail Motor Inspection Car is 20 miles per hour; for a trolley or quadricycle 15 miles per hour, and for a tricycle 12 miles per hour. These rates must, however, be reduced when running over Level Crossings or bridges, or around curves; the speed of any machine, when passing over Points and Crossings, must not exceed a rate of three (3) miles per hour.

3. Where two or more members of a gang reside at the same place the senior employe will be responsible for the proper use and safe custody of every machine belonging to his Branch at that place, and he must keep in his possession the keys, securing all such machines, and except when actually in use, the keys of any shelter shed provided for such machines.

4. When an individual employe is in charge of a machine, his immediate superior officer must, as far as possible, see that no improper use of the machine is made, and that the employe in charge of it is conversant with the Regulations and Instructions on the subject.

5. Every Works Foreman, Road Foreman, or other Supervising Officer, must endeavour to prevent improper use of any machine, and must immediately investigate and report upon any case of unauthorised use of any such machine which comes under his notice.

6. Every Station-master or Signaller must immediately report in writing any breach of the Instructions for use of a machine, and, if practicable, must send a preliminary report by telegram when any such machine is taken into a Section without the authority of the Signaller.

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7. The Station-master and Signalman must also challenge any apparently improper use of any such machine, and take the name and address of each person on the machine, and inform him or them that the matter will be brought under notice by means of a written report. Such report must immediately be sent to the Metropolitan Superintendent or the District Superintendent, as the case may be, who must forward it to the General Superintendent of Transportation.

8. The improper use of any machine will be considered a serious offence, and dealt with accordingly.

9. When travelling on a Double Line, every machine must be run in the same direction as the ordinary traffic. See clause 7, page 144, respecting Points equipped with Plunger Locking, on Single Lines.

10. No machine must be used at night, or in foggy weather, except in a case of extreme urgency, and in such event a Hand Signal Lamp must be fixed in such a position on the machine to show a Red Light to the rear. On a Single Line, any such machine running at night must exhibit a Red Light both to the front and the rear.

11. On every Tricycle a mirror must be fixed in such a position as will enable the rider to observe a train approaching from the rear.

12. No motor vehicle must be run unless in charge of an employe holding a certificate of competency therefor.

13. The employe in charge must be thoroughly acquainted with the running of ordinary trains, and trains that are likely to be put on at short notice; he must have with him a copy of the current Time table, and a note of any Special trains of which he has obtained advice.

14. The employe in charge must understand that Light Engines and Special trains may be run without previous notice of any kind, and he must be acquainted with the provisions of Regulation 283 and with the Instructions on pages 172-178 in regard to Special trains. He must remove his machine from the Line at least ten minutes before a train is due, provided that if a train is known to be running late, the period of ten minutes shall be calculated on the late running time.

15. The employe in charge must have with him a reliable watch, and if there be no departmental clock available, he must compare the time whenever possible with the Guard of a train, or, if a telephone be available, with the clock at a Staff or Tablet Station.

16. (a) Before placing any machine upon a Line where Fixed Signals are controlled by Track circuits, the employe in charge must obtain the permission of the Signalman, and notify him of its destination, and ascertain that the Signal or Signals controlling the entrance to the Section on to which he is about to proceed are all at the Stop position.

(b) Clause (b) of Regulation 270 must be observed when it is necessary for a machine to go through the Tunnel between Geelong and South Geelong. Machines passing through all other Tunnels must be protected solely by the employe in charge of the machine. See also sub-clause (c) hereof.

PERMANENT WAY AND WORKS.

(c) Where Automatic Signalling is in force, no machine must be worked into or through a Tunnel, except during the time that the Way and Works Branch or the Electrical Engineering Branch or the Signals and Telegraph Branch has "Occupation" of the Line. See page 499.

17. Before leaving any Block Post, Staff or Tablet Station, or other place at which there are Fixed Signals, or where there is Telephonic Communication with the Signaller at the Stations on one or both sides, the employe in charge must—

- (i.) Check the time shown by his watch;
- (ii.) Obtain from the Signaller or other person in charge all information in regard to the running of ordinary and Special trains over the Section, and make a note of any train of which he was not previously aware.
- (iii.) Advise the Signaller of his destination, the work he is going to do (and, in the case of a machine loaded with material, the time which will be occupied in the journey); and
- (iv.) Obtain the permission of the Signaller to proceed.

18. In the case of a trolley, or other machine loaded with material, the employe in charge must—

- (a) Allow a proper margin of time for the journey, and endeavour to complete it within the time fixed; and
- (b) Protect the trolley in accordance with Regulations 269 and 271; if there be not sufficient men in his gang for the purpose he must obtain the necessary assistance from the nearest gang.

19. In the case of a machine not loaded with material, the Signaller must (observing the time prescribed in clause 14 of these Instructions as a minimum) give the necessary permission to proceed after giving all the available information required by the employe in charge as per clause 16, and such employe must understand that no further action will be taken by the Signaller to ensure his safety.

20. In the case of a Trolley or other machine loaded with material, the Signaller must give all the available information required by the employe in charge, as per clause 16, and must then observe the following instructions:—

- (a) He must not give permission for the trolley to enter the Section unless there is a reasonable margin of time for safety. (The time provided in clause 14 of these Instructions must always be observed as the minimum);
- (b) On giving permission to enter the Section, he must stop all following trains which approach within the time fixed for the journey, inform each Driver of the time the trolley left, and its destination, and warn him to keep a sharp look-out for it, and to sound the whistle on approaching and passing over places where a good and distant view cannot be obtained of the Line ahead;
- (c) On a Single Line he must, on giving permission for the trolley to enter the Section (provided that any train has to run over the Section in the opposite direction during the time

fixed for the journey of the trolley), advise the Signalman at the Station or Box in advance of all particulars concerning it, and it will then be the duty of the Signalman in advance to warn the Driver in the same manner as is laid down in sub-clause (b) hereof, until the time fixed for completing the trolley journey has expired.

21. In any instance in which the Signalman refuses permission for a loaded trolley to enter a Section, he must inform the employe in charge of his reasons for such refusal, and the employe in charge must, if he consider such reasons insufficient, promptly report the circumstances in writing to his superior officer.

22. (a) The employe in charge must always exercise great caution to avoid danger to himself, to other employes, or to his machine. He must make frequent stops to listen for trains, and before entering a Tunnel or passing on to a curve, or any other portion of the Line where the view is bad, he must take such action as may be necessary to make sure of the absence of danger from either direction before proceeding, and must not exceed a speed of five miles per hour, except at places where a good and distant view can be obtained.

(b) Before starting the machine the employe in charge must see that all persons accompanying him are seated, or in a safe position.

(c) The employe in charge, when mounting, must place one foot on the pedal of the quadricycle, or on the ground in the case of the tricycle, and to swing the other over the seat in the same way as a horseman mounting.

The same procedure is to be followed when dismounting, the vehicle first to be brought to a standstill.

The correct method must be adopted and any failure to do so will be regarded seriously, and may debar an employe from accident pay in the event of injury.

23. When a gang is working with two or more trollies, such trollies must be run either coupled together, or separated by a distance of not less than 100 yards.

24. (a) Trollies, tricycles, and other machines, must, when not in use, be removed clear of the track and road approaches, and locked with a chain and padlock.

(b) Whenever a tricycle is not in use, the outrigger must be disconnected, and the clips removed to prevent the use of the Tricycles by unauthorised persons.

25. No machine must be placed in a refuge on a bridge except in a case of special emergency, and in such event great care must be taken to see that the machine is clear of any train that may approach; the machine must be securely held during the passage of any train so as to ensure that it will not move or come in contact with such train.

26. Use of Motor Tricycles by Train Examiners in Cases of Emergency.— Where, otherwise, it is not practicable for the Train Examiner to promptly reach the scene of a derailment, etc., and his presence is required to expedite the despatch of vehicles, he may be permitted

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to use the motor tricycle of either the Road Foreman or Works Foreman when another motor is not available. The Train Examiner must, however, hold a certificate for driving a motor tricycle, and must comply with the foregoing instructions; the Train Examiner should, however, endeavour to proceed to the scene of derailment, etc., in company with the Road Foreman, Traffic Inspector, Signal Adjuster, or some other Official who is proceeding to the locality by motor.

27. When any Motor Tricycle in use by the Transportation Branch is damaged, a full report, on Form WW303, must be promptly forwarded to the General Superintendent of Transportation, in order that it may be submitted to the Chief Engineer of Way and Works for investigation.

MATERIALS FOUND UPON THE LINE.—(Regulation 294.)

Couplings, Chains, Hooks, Pins, Iron and other similar materials, which may be found upon the Line by Gangers or Repairers, must, when they have been brought to the nearest Station-master, be consigned to the Officer-in-charge of the Rolling Stock Depot for the District; see clause 4, pages 470-471, re Portion of damaged vehicles.

TRACK CIRCUITS.

Where Track Circuits are in use in connection with the operation of Level Crossing Bells, or for any other purpose, the following instructions must be observed by Gangers, Repairers, and others concerned:—

1. The ballast must be kept clear of the rails, and the rail top must be kept clear and free from scale.

2. Whilst packing sleepers, every care must be taken to prevent the accidentally breaking of the bonds.

3. Any metallic connection, such as a wire, rod, bolt, tool, or other metallic substance, which might connect the two opposite rails of the same Line, must be removed, or, if necessary, the Electrical Fitter sent for. The Electrical Fitter must also be communicated with at once in any instance, in which any bond has been displaced, or in which any other connection is defective.

4. A special wooden gauge must be used in place of the usual iron gauge. In any emergency in which a wooden gauge is not available, a piece of dry paper must be placed between the metallic gauge and the rail in order to avoid interrupting the track circuit.

5. Where treadles are attached to the rails for any purpose, the track and ballast in the vicinity must not, except in a case of emergency, be disturbed, unless the Electrical Fitter is present. In a case of emergency, the nearest Signaller must be informed before the treadle or the track is disturbed.

6. (a) Before a rail is taken out or relaying operations are commenced on a portion of a Line where Track Circuit protection is in use, the Road Foreman, Ganger, or other employe in charge of the work must make all necessary arrangements with the Signal Supervisor for all

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Fixed Signals controlling the entrance of trains into the section of Line affected by the work, to be secured in the Stop position prior to the road being broken, and so kept until the Line is made good; the work must not be commenced by the Road Foreman or Ganger until the Flagman has been sent out to act as laid down in the Regulations, nor, except in the case of a broken rail or other unsafe material, until the Signal Supervisor has stated in writing that the Signals have been so secured. See Regulation 273.

(b) In the case of Home and Starting Signals the Signaller must be informed and the particulars must be entered in the Train Register Book, as prescribed in Regulation 93.

7. During preparations for relaying, the new rails must not be left in such positions as to cause any metallic connection with the running rail. The new rails must be drilled and bonded before being placed in position, and, when they are ready for slewing, the Electrical Fitter or other authorised employe must be on the ground to disconnect the bonds from the old rail, and re-connect them to the new rail.

8. Clause 6 or 7 will not necessarily apply to any broken rail or other unsafe materials, which must be removed from the track with the least possible delay, and replaced with sound materials, after arrangements have been made to stop or to regulate the running of trains according to requirements.

9. All operations affecting the security of the Line must be protected in the usual way in accordance with the Regulations.

OCCUPATION OF RUNNING LINE BY WAY AND WORKS BRANCH, ELECTRICAL ENGINEERING BRANCH, OR SIGNAL AND TELEGRAPH BRANCH.

1. Whenever "Absolute Occupation" or "Between Trains Occupation" of the Running Line is required by the Way and Works Branch, Electrical Engineering Branch, or Signal and Telegraph Branch, Special Instructions regarding such arrangement will be issued by the General Superintendent of Transportation; due notice that the "Occupation" is required must, therefore, be given by the respective Branches in order that copies of the Special Instruction may reach all concerned in ample time.

2. The Road Foreman, Ganger, or other person in charge of the work for which Occupation is required, must not occupy the Line until written permission to do so is given by the Signaller or such other person as may be named in the Special Instruction, and before trains are allowed to resume running over such Line, the person in charge who received permission for Occupation must give a written certificate that the Line (or Lines) is clear and safe for the passage of trains. This certificate must be enclosed in the Train Register Book and forwarded to the Block and Signal Inspector.

3. (a) Whenever "Absolute" Occupation of a Section of Double Line is required, the operations must be protected in accordance with the Regulations. On a Section of Single Line worked under the Electric

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Staff or Tablet System, or the Train Staff and Ticket System, the same person in charge of the work must, unless he is in possession of the Staff or Tablet for the Section, arrange for the obstruction to be protected at the proper distance on both sides by Flagmen. When the Ganger or other person in charge of the work is in possession of the Staff or Tablet for the Section, protection by Flagmen will not be necessary.

(b) The person to whom the Staff or Tablet is delivered must sign for it in the Train Register Book, and when it is returned a record of the fact must also be entered in the same book; the time at which it is handed to and received from such person must also be recorded.

4. Unless otherwise specified in the Special Instructions referred to in clause 1 hereof, the Way and Works Branch, Electrical Engineering Branch, or Signal and Telegraph Branch, as the case may be, will provide the necessary Flagmen for all Occupations.

5. When Single Line Working is necessary, the Metropolitan or District Superintendent, as the case may be, must arrange for a competent employe to be appointed to act as Pilotman.

BLASTING.

1. Blasting must not be allowed on or near the Railways without the authority of the Chief Engineer of Way and Works or other authorised Officer.

2. When blasting operations are being carried on inside the Railway fences or anywhere near Railway premises, every precaution must be taken to avoid accident or damage. Explosives, when not in use, must be kept under lock and key in a proper magazine.

3. Lads are not permitted to assist in any work connected with the handling of the explosives. All such work must be carried out by reliable adult employes.

CONVEYANCE OF MOTOR VEHICLES, ETC.

See pages 544-545 for Instructions regarding the conveyance of Departmental Motor-vehicles, and petrol or naphtha for use in Departmental Motor-vehicles.
