

VICTORIAN RAILWAYS.

CHIEF MECHANICAL ENGINEER'S BRANCH.

BOOK OF INSTRUCTIONS.

9TH FEBRUARY, 1895.

VICTORIAN RAILWAYS.

BOOK OF INSTRUCTIONS

(Supplementary to Regulation No. 19, dated 21st September, 1891)

FOR THE

GUIDANCE OF THE EMPLOYÉS

OF THE

CHIEF MECHANICAL ENGINEER'S BRANCH

OF THE

VICTORIAN RAILWAYS.



By Authority:

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NOTES.

- (1) Where a Regulation is quoted it means one of the Regulations contained in the Regulation Book (commonly called the Rule Book), which forms Regulation No. XIX. of the Victorian Railways Commissioners, dated 21st September, 1891.
- (2) An "Instruction" means an order contained in this Book, which, for convenience sake, will be called the "Instruction" Book. Thus—Instruction No. 33, page 14, deals with pay for Sunday work, and so on.

VICTORIAN RAILWAYS.

CHIEF MECHANICAL ENGINEER'S BRANCH.

PART I.

**GENERAL INSTRUCTIONS TO ALL
EMPLOYÉS.**

1. In addition to the articles enumerated in Rule 3 of the Book of Regulations, Regulation No. XIX., 21st September, 1891, every officer and employé of the Locomotive Branch must be supplied with a copy of this Book of Instructions.

Employés to possess and be conversant with these instructions.

Every employé concerned in the running of trains must have his copy with him when on duty, and must produce it when required.

Officers in Charge of Locomotive workshops, depôts, and sheds will be held responsible for the carrying out of this instruction, and that the book is properly signed for as directed in Instruction No. 69.

Though the instructions hereafter given are placed under different heads for the convenience and information of the employés concerned in doing the work mentioned in such instruction, yet every employé must make himself acquainted with all the instructions here contained, and will be held responsible for a knowledge of and a compliance with the whole of

them. Every employé must also be prepared to be examined, after due notice, as to his knowledge of these instructions. (See also Regulation No. 5, Rule Book, 21st September, 1891.)

Correspondence
to be signed by
Officer in Charge.

2. All correspondence, returns, &c., must be signed by the Officer in Charge of workshops, district, or depôt, except in cases of emergency, which must be at once reported to the Chief Mechanical Engineer.

Books to be kept.

3. All outward letters must be numbered and press copied and letter books indexed.

All other books must be carefully labelled, showing date of opening and when completed, the date of closing.

Correspondence—
How to be sent.

Correspondence from employés must always be sent through their immediate superior officer.

Misconduct of
employés.

4. Cases of misconduct of employés which may lead to reprimand or fine must be reported to the Chief Mechanical Engineer to be dealt with by him. Subordinate officers are not empowered to inflict fines or penalties except when authorized to do so.

Officers must supply complete information in their first report, to avoid unnecessary delay and inconvenience.

Official corre-
spondence to be
treated as confi-
dential.

5. Official correspondence, sent for action or report to officers or employés must in every case be regarded as strictly confidential.

Official papers are the property of the Department and must not, as a rule, be allowed to leave the railway premises, but in any case of irregularity which may involve punishment papers referred to an employé for explanation may be taken home, receipt to be taken and care taken to see that they are returned promptly.

Correspondence
issued to employés.

After papers have been dealt with, however, and punishment awarded, they cannot be allowed out of the possession of the officers of the Department. Should the employé concerned desire to see them he can only be permitted to do so in the office, where he may also make copies if he so desire.

Rules to be
observed when
replying to corre-
spondence.

In replying to communications, either by telegraph or otherwise, officers should observe the following rules:—

To read each communication over carefully, in order to ascertain clearly the nature of the information required.

To reply thereto exactly, framing the reply so that it will run as closely as possible in the same paragraph order as the communication to which it refers.

To supplement such reply by any other particulars within their knowledge or command which may be considered of value or interest.

When information is required from employés which it is impossible to obtain except in writing, a brief memorandum should be drafted, clearly setting forth the nature of the particulars to be supplied.

Officers and employés in the Chief Mechanical Engineer's Branch must not write to the Head or to any subordinate officer of another Branch of the Railway Department.

All communications must be sent through the Chief Mechanical Engineer's Office.

When correspondence is received from persons or bodies outside the railway service referring to the Chief Mechanical Engineer's Branch, officers should simply acknowledge it and inform the writers that their communications have been referred to headquarters.

When forwarding communications of this nature officers will please attach a full and detailed report on every point, so that replies may not be delayed by having to wait for information.

Care of documents. 6. All papers, especially Secretary's registered documents, must be kept scrupulously clean, and returned in that condition with the least possible delay. When the Chief Mechanical Engineer minutes a Secretary's paper to one of his subordinate officers, that officer's reply must, if practicable, be written on the same sheet. When a separate slip is minuted, a report on a separate sheet of paper should be attached by the officer concerned.

Reports. 7. All reports must be made in writing, and care should be taken to guard against dealing with two or more subjects in one communication, especially in cases where action and reply are likely to follow.

Telegraph inquiries. 8. All inquiries made by telegraph should be answered in a similar manner, unless instructions to the contrary are received. Numbers forming part of telegrams must be written in full in words as well as in figures.

Telegrams—Brief. 9. Care should be exercised in telegraphing. The wire is not to be used for matters which can be as well sent by post, and when it is used the message should be made as brief as possible; all unnecessary words and phrases being carefully eliminated before it is despatched.

Telephone messages. When sending a message by telephone speak slowly and distinctly, making a sufficient pause after every three or four words, to allow the receiver to write them down. In all cases the messages must be repeated by the receiver from his written copy, and the sender will be held responsible that the message is properly received.

After hearing the repetition, the sender will write upon the message "Repeated back O.K." with his initials and the time. Telephone messages are to be written out both by sender and receiver, and must not on any account be destroyed, but must be kept for reference.

Issue of circulars. 10. Circulars are not to be issued upon general matters of business, except by authority of the Chief Mechanical Engineer. Particulars of any subject, or instructions which it may be considered necessary to publish for the information of the employes, should be reported so that a circular may be issued from the Head Office.

Circulars to be acknowledged. 11. All circulars and letters received must be promptly acknowledged, thus—

"Your circular /9 duly received,"

or

"Your letter, No. , duly received."

Not reporting irregularities.

12. In the event of any irregularity which may come under notice not being reported, the person neglecting to report will be dealt with as if he were a party to the irregularity committed. Any officer or servant seeing another officer or servant intoxicated must, in addition to reporting the circumstance to his immediate superior, draw the attention of some other person to it, so that corroborative evidence may be given. (See Regulation 36.)

Information not to be given to press.

13. The communication of official information to members of the press, or other persons, relating to departmental business, or to the official position of any employé, is forbidden.

Clearing of the line in case of accident.

14. The Senior Locomotive officer present will, in the event of any accident, act in conjunction with the senior officers present of the Existing Lines and Traffic Branches and take immediate steps to clear the line and replace rolling-stock; every effort must be made to avoid damage to rolling-stock.

Reporting casualties.

15. Particular care should be taken by all employés to note any facts which may appear to explain the cause of an accident, such as the state of the permanent way, condition and position of the stock, time of accident, speed of trains, &c., and the attention of the responsible officer on the spot should be called to any facts which may be observed.

All accidents or casualties involving injury to employés or passengers, damage to rolling-stock, or

serious delay to trains must be promptly reported by telegram to the Chief Mechanical Engineer; full information being given as to time, place, cause, and nature of accident.

Departmental telephones to be used freely in suburban districts, and if necessary a special messenger should be sent to the Chief Mechanical Engineer's Office from Locomotive depôts near Melbourne.

Full written reports to be sent in afterwards in the usual way confirming all telegrams sent.

Vehicles off the line.

16. No vehicle is to be allowed to run after being off the rails until it has been thoroughly examined and passed by a responsible Locomotive employé.

Issue of time-tables.

17. All Working Time-tables and Appendices will be issued direct to Locomotive depôts from the Traffic Manager's Office, Spencer-street.

The Officer in Charge receiving them will forward receipt to the Traffic Office for the total number supplied to his depôt, and he will be held responsible for the distribution of same to all men under his charge who are entitled to receive them. (See Regulation IV. and Instruction No. 69.)

Ordering of stores.

18. When ordering stores, the quantity on hand as well as the quantity required must be shown opposite each item ordered. If necessary a column on Green Order is to be ruled off for that purpose.

Axle oil for carriages and waggons must be ordered on a separate order, and marked "Carriage and Waggon Oil," so as to distinguish it from oils used for engine lubrication.

Store orders should be sent in not later than Wednesday in each week to avoid delay in supplying.

When ordering stationery from the Government Printer it will not be necessary to attach samples of the forms or books required, but the number shown on the left-hand top corner of the form or book must be quoted.

Lithographed forms which are marked Litho. No.....are to be ordered from the Chief Mechanical Engineer not from the Government Printer.

Disposal of waste-paper. 19. All waste-paper, and all books and forms that are not required, and all empty ink bottles, are to be forwarded to the Railway Store-keeper to be disposed of. Care must of course be taken not to destroy any books or records that may be important.

Goods to be properly consigned. 20. Consignment notes must be given and receipts obtained for all goods sent through the Traffic Branch for transmission between Branches.

Serving on juries. 21. All officers and servants and men regularly employed in this Branch are exempt from serving on juries. If summoned, they should inform the summoning officer of the fact of their being so employed.

Employés not to interfere in politics. 22. Employés are to abstain from signing political petitions, and their interference in political matters, otherwise than by recording their votes, will result in their dismissal. They may, however, form or join mutual benefit societies as long as they are not of a political character.

Not to witness signatures to tenders. 23. Employés must not witness contractors' signatures to competitive tenders for advertised works. If asked, they must inform contractors that they must get some one outside of the Department to witness their signatures.

Militia Force. 24. No objection will be taken to employés becoming militiamen, but it is to be clearly understood that their being summoned to attend drill will not be taken as an excuse for absence from work.

Fire—How to act in case of. 25. To prevent wholesale destruction, in the event of any workshop or building taking fire, officers should impress upon all employés the necessity for immediately taking steps to remove any rolling-stock or appliances from the building the moment the fire is discovered, and if any boilers contain steam the whistles should be sounded continuously as signals for the fire brigades or other assistance.

Money found on railway premises. 26. When any sum of money or other valuable article is found on any part of the railway premises by an employé, he must immediately hand it over to the Station-master or Officer in Charge, who will at once report particulars.

If it remains unclaimed, ten per cent. (10 per cent.) of the amount will after a time be handed to the finder as a reward.

Life insurance of employes.
Victorian Railways Commissioners Regulation XXVI.

27. Clause 5 of Victorian Railways Commissioners Regulation IV., respecting the insurance of employes has been repealed and the following substituted,

viz. :—

The amount of insurance shall at all times be equal to at least one year's salary or wages of the assured, and shall be according to the following scale :—

Salary or Wages.		Amount of Insurance.
Under £110 per annum	...	£100
£110 to £199	„ ...	£200
£200 to £299	„ ...	£300
£300 to £399	„ ...	£400
£400 to £499	„ ...	£500

and so on; the insurance being in every case increased from time to time by successive steps of £100 whenever and as often as the salary of the assured shall be increased beyond the amounts set forth in the scale; no employe, however, who through the operation of percentage deductions is not actually in receipt of salary or wages at the rates per annum set forth above will be compelled to increase his insurance until his pay, less the percentage deductions, is actually at the rates mentioned in the scale.

Insurance premium in two instalments.

28. In all cases where the amount of insurance premium, payable half-yearly, exceeds Two pounds (£2), it will be deducted in two equal instalments—one from January and the other from February pay; and similarly in July and August.

Where the premium cannot be divided into equal amounts—*e.g.*, a premium of £2 8s. 3d.—£1 4s. 2d. will be deducted as the first and £1 4s. 1d. as the second instalment.

Garnishee orders.

29. Employes against whom garnishee orders are issued will be dealt with as follows :—

First offence—Fine of one day's pay.

Second offence—Fine of two days' pay.

Third offence—Consideration to be given as to whether employe should be further retained in the service.

Penalties will be inflicted whether orders are abandoned or not.

Employes' insolvency.

30. In order that the provisions of Act 1324 may be complied with, any employe sequestrating his estate must immediately inform the Chief Mechanical Engineer of the fact, giving date of sequestration, and subsequently, when obtained, he must forward his certificate of discharge to the Chief Mechanical Engineer, who will send it to the Secretary for Railways to be noted.

An employe renders himself liable to be fined, reduced, or dismissed, if, after three (3) months from date of sequestration, he fails to at once take steps to apply for a certificate of discharge.

Appeals to Commissioners.

31. In all cases of appeal to the Commissioners, which they may consider trivial, the time occupied attending appeal will not be paid for.

Allowance for overtime.

32. Single time only will be allowed for overtime, whether worked on week days or Sundays.

All special or emergency cases must be submitted to the Chief Mechanical Engineer, and, if the

circumstances warrant it, an extra rate may be allowed, irrespective of whether the men have worked 48 hours or less for the week.

Sunday work. **33.** If a man works over four (4) hours on Sunday he is to get a day's pay, if only four (4) hours or under, half-a-day's pay.

All special emergency cases, where Sunday work is necessary, are to be reported to the Chief Mechanical Engineer, who will consider each on its own merits.

Employés occupying departmental premises. **34.** Before any employé takes possession, as a residence, of a portable house, or any other premises, the property of the Department, he must ascertain the rent and sign an agreement to pay it in advance, and all such charges as closet emptying, water, gas, &c.

Buildings not to be erected on railway land without permission. **35.** Before any employé is permitted to erect a building on railway land, or provide additional accommodation where he occupies a building belonging to the Railway Department, or to make any alteration, he must obtain permission from the Engineer for Existing Lines, through the Chief Mechanical Engineer, so that an agreement may be signed, and a nominal rent paid as ground rent. When permission has been obtained, the building must be erected detached from the Government building, and in such a manner as the Inspector of Works approves of, and in the event of the employé's transfer to another district, or retirement from the service, the Department will recognise no claim for compensation for value of additions or improvements, but the employé

will have the right to remove such building or dispose of it to an employé of the Department.

Sale of ashes. **36.** The following arrangements have been made for the sale of ashes:—

(1) The Existing Lines Branch is to be supplied with all ashes required by them. Existing Lines men are to load up ashes at all stations (except at Melbourne, Prince's-bridge, Ballarat, Bendigo, Seymour, &c., where the contract system for loading ashes is in force), to load up all ashes sold to the public, clean out ash-pits, and discharge ashes at all stations.

(2) Ashes will be sold to the public on the ground at North Melbourne and Prince's-bridge for 1s. per dry load or cubic yard.

(3) Ashes will be offered for sale (if required) in sidings at the following suburban stations near Melbourne, viz.:—Footscray West, Middle Footscray, Newport, North Williamstown, Kensington, Newmarket, Essendon, Brunswick, Coburg, North Carlton, North Fitzroy, Toorak, Malvern, Camberwell, Surrey Hills, Kew, Windsor, Elsternwick, and will be delivered to the public on the ground at 1s. 6d. per load. Station-masters have been instructed to arrange for sale and collect cash.

(4) Ashes will be sold at 20s. per 10-ton medium "I" truck within 9 miles of Melbourne; within 15 miles of Melbourne, 24s. per truck load; within 20 miles, 26s. per truck load. These rates in all cases include freight. In quantities of ten trucks or more a reduction of 2s. per truck will be made.

(5) Cash to be paid before delivery as follows:—
At North Melbourne and Prince's-bridge, to the Locomotive Inspector or his representative,

who will pay in the money daily to the Station-master and obtain his receipt. A book to be kept specially for this purpose, and a weekly statement of sales to be sent to this office every Monday. At other suburban stations cash for ashes and freight to be paid to the local Station-master at receiving station before delivery.

If none are sold, a memo. to that effect must be forwarded.

(6) Only 10-ton medium "I" trucks to be used for loading up ashes, so that the load will be the same in each case.

(7) Trucks of ashes from North Melbourne or Prince's-bridge to be way-billed by Locomotive Inspector to receiving station by *pro formá*, freight to pay, whether for private consignees or sent to Station-masters for sale in small quantities. A Consignment Note to be afterwards promptly sent under cover to Goods Superintendent, Melbourne, giving full particulars, name of purchaser, quantity, station, &c.

(8) At country stations similar arrangements will be made, if required. Locomotive Foreman to advise the Chief Mechanical Engineer of any sales made. Locomotive Branch to be credited with 1s. per dray load or 14s. per truck for all ashes sold. Traffic Branch to collect freight. Station-masters at stations where there is no Resident Locomotive Inspector or Foreman, have been instructed to consult the Senior Engine-driver, and, with his concurrence, arrange for the sale of ashes at 1s. per dray load or cubic yard on the ground.

PASS AND PRIVILEGED TICKET REGULATIONS.

(Being By-laws 109, 110, and 113 of the Victorian Railways Commissioners.)

37. Passes may be issued to permanent officers and employés only as follows, viz. :—

Passes for annual leave. (a) Any officer or employé when on annual leave may have a pass for himself, wife, and three children (who must be under the age of twelve years), available for all lines, and to cover the whole of leave granted.

Officers' passes. (b) Officers' passes (with title of each officer engraved thereon) are to be issued only to Heads of Branches, and to such other high officers as the Commissioners may direct whose duty requires them to travel on railway business.

Passes for employés transferred. (c) Any officer or employé who may be transferred can obtain a pass for himself, wife, family, and furniture to his new place of duty, but this concession is not to cover the free transit of either dogs, horses, cattle, vehicles, or firewood.

Pass-holders to have no claim for lost baggage. (d) Officers or employés travelling on free passes will have no claim for luggage or other property lost in transit, and they will be expected to sacrifice their personal comfort for the convenience of paying passengers.

Passes not available for certain trains. (e) Gold, Annual, and Visitors' passes may be used for "Express" or "Special" trains, but no other pass may be so used unless made specially available by an authorized officer.

Employés not to travel without pass or ticket. (f) Any officer or employé found travelling without a free pass or ticket is to be at once suspended by the Head of his Branch, and the occurrence reported to the Commissioners to be dealt with.

Duty passes to be stamped. (g) All passes issued to officers and employés on duty shall have the words "On Service Only" printed plainly across them.

Officers authorized to sign passes. (h) The following officers only are authorized to sign and issue passes, and indorse such concessions for special or express trains or guard's vans, viz. :—Heads of Branches and such other officers as are specially approved by the Commissioners. The Deputy Postmaster-General may indorse passes for mail vans. Only the authorized Gold, Book, and Paper passes are to be recognised, except in cases of emergency, when a telegram pass from any authorized officer or the Station-master at Spencer-street is to be accepted.

Particulars of passes to be clearly shown. (i) At stations where tickets are checked or collected passes must also be checked or collected. The dates for which passes may be available and the names of the issuers are to be clearly written on each pass. Failing the observance of these particulars the holders of passes are to be treated as ordinary passengers, unless fraud is attempted.

Privileged tickets to whom issued. (j) Privileged tickets (available for the same periods as ordinary tickets) may be issued to officers and employés entitled to passes at one-fourth of the advertised fares. Minimum :—First class, 2s. ; second class, 1s. Children of employés under twelve years of age half these rates.

Privileged tickets not to be issued to employés' sons. (k) Privileged tickets are not to be issued for the use of employés' sons who are in receipt of salary or wages, or who are over eighteen years of age. Unmarried daughters may be granted privileged tickets, provided they are not in receipt of remuneration from any

source whatever. Privileged tickets may also be issued to an employé's mother, mother-in-law, or niece, provided they form part of applicant's household and are entirely supported by him.

They may also be issued to a mother, sister, or sister-in-law when keeping house for an employé, and totally dependent on him, or to an employé's mother when living with a married son.

Privileged tickets for supernumeraries. (l) Supernumerary employés who have been in the service over two years may, at the discretion of Heads of Branches, be granted privileged tickets for themselves only.

Applications for passes and privileged tickets. (m) Pass and privileged ticket requisitions, as per form attached hereto, must be sent to the issuing officers so as to insure the concessions being made in sufficient time. Such officers will be held responsible that the concessions granted under these By-laws are not exceeded.

FORM OF APPLICATION.

Victorian Railways,
(1) Office,
(Date) 18

Memo.

I have the honour to request that a (2) class may be issued to (3) for a journey from (4) to (5) and back from (6) to (7)

Since the 1st January last (inclusive) I have had (8) passes and (9) privileged tickets.

(10)

(11)

The (12)

- (1) Branch.
(2) First or second class.
(3) For whom required.
(4 and 5) Names of stations.
(6 and 7) Dates available for.

- (8 and 9) Number.
(10) Signature of applicant.
(11) Grade.
(12) Head of Branch.

NOTE.—This application must be forwarded so as to reach the issuing office, at least, the day previous to the concession being required.

Issue of privileged tickets. **38.** Applications for the above are to be sent to the Chief Mechanical Engineer's Office, when a voucher authorizing the issue of an ordinary ticket at a fourth of the published rates will be supplied. There is no limit as to number. The form to be used when making application for tickets or passes is to be obtained on requisition in the usual way. The number of the ticket issued is to be indorsed on voucher by issuer. Should a voucher be presented for a station to which the issuing station does not book, a ticket may be issued to the furthest station *en route*, and an excess fare ticket (return) made out for the remainder of the journey, charging mileage as per Appendix to Passenger Fare Book. When holiday excursion, seaside, and other excursion tickets are on general issue to the public, employés holding "privileged ticket" vouchers are only to be charged one-fourth of these rates when they take such tickets. Privileged-ticket rates do not apply to monthly or other periodicals. Tickets obtained on privileged certificate are only available for an employé, employé's wife, employé's unmarried daughter, or employé's son under eighteen years of age and who is not in receipt of remuneration from any source whatever. First or second class tickets to be issued as employés may desire, application to state class required. Any tickets transferred will render employé liable to dismissal or prosecution. When applying for leave or privileged tickets for children the age of each child to be given.

Passes to Pensioners. By-law 113.

39. Pensioners may have not more than two passes in each year, for a period of not longer than seven days each. The concession

to extend to their wives, and to be available for one specified return journey only.

Second Class Passes available as First Class on payment of excess. **40.** Holders of Second Class "Station to Station" Leave Passes may have them made available as First Class on payment of one-fourth of the difference between second and first class fares for each journey travelled. This also applies to passes issued for a single or return journey. Pass number to be quoted on excess fare ticket, which must be delivered up with the pass on its expiry.

Half-fare tickets. **41.** Tickets at half-rates can be issued to employés presenting the required voucher between any stations on the suburban lines, irrespective of their being between employés' residence and place of business. The Workshop Manager at Newport, the Locomotive Inspector, North Melbourne and Prince's-bridge, and the Locomotive Foreman, Port Melbourne, are authorized to sign these vouchers.

Concessions to employés' children. **42.** The following concessions to employés' children attending school are in force, viz. :—

- (a) At country stations where there is no school of any description, employés' children are to be granted free monthly tickets to the nearest State school.
- (b) Employés desirous of sending their children to a school of a better description than the one in their immediate neighbourhood, or employés living in the suburbs sending their children to school in Melbourne, are to be granted tickets at half the ordinary scholars' rate.

REGULATIONS FOR LEAVE OF ABSENCE.

(Regulation XXI. of V.R. Commissioners.)

Leave of Absence. Regulation XXI. 43. The Victorian Railways Commissioners, in pursuance of the powers conferred by the Railways Acts, have repealed Regulations IX., XIII., XV., and XVIII., and made the following Regulations:—

Holidays of certain employes not to be reduced. (a) The holidays of officers and employes appointed before Act No. 767 came into operation shall not be reduced, notwithstanding anything that may appear to the contrary under these Regulations, but any increase in their holidays shall only be made at the rate of one day per annum for every additional year of service from the 1st day of March, 1887, until the maximum of the classes as fixed hereunder shall be reached. In no case shall the maximum annual leave, including gazetted or other holidays when taken together, exceed twenty-eight days.

Common holidays. (b) The following holidays shall be held as common to the whole of the Department, viz.:—Christmas Day, Good Friday, Easter Monday, and Her Majesty's Birthday.

Subdivision of officers and employes. (c) For the purposes of these Regulations all officers and employes, other than those referred to in Clause 1, shall be divided into three classes, as shown by the schedules attached hereto—

CLASS 1.—OFFICERS AND OTHERS ON YEARLY SALARY.

After one year of service six days' leave of absence to be granted, and one day additional for every further year of service up to 21 days, exclusive of the four common holidays and gazetted holidays. In cases where a holiday may be gazetted, or a

common holiday intervenes, during the period of absence of any officer or employé on annual leave, such gazetted or common holiday shall not be allowed in addition to the annual leave granted.

CLASS 2.—ARTISANS AND OTHERS.

After one year's service five days' leave of absence to be granted, and one day additional for every year of service up to ten days (except where the maximum is set forth opposite certain grades in the schedule), exclusive of the four common holidays, but inclusive of gazetted holidays.

CLASS 3.—LABOURERS AND OTHERS.

After one year's service three days, and one day additional for every year of service up to six days (except in cases where the maximum is set forth opposite certain grades in the schedule), exclusive of the four common holidays, but inclusive of gazetted holidays.

Employés to remain on duty on gazetted days, if required. (d) Any officer or employé may, if necessary, be retained on duty on any proclaimed holiday, whether gazetted or not.

Workshops and Stores employés to take holidays while shops are closed. (e) Officers and employés engaged in the Workshops or Stores Branch of the Department will be required to take the holidays to which they may be entitled during such times as the workshops may be closed.

Employés to forfeit leave if not taken when due. (f) Leave will be granted as may be convenient, and all applications therefor must be indorsed by the Officer in Charge, and must reach the Head Office in sufficient time to be dealt with before the leave is actually required. Heads of Branches may direct employés to take their leave, whether it is required or not at

the time, and if declined by the employé the privilege will be forfeited. All leave must be applied for not later than 30th April in each year.

(g) If, through any cause whatever, employés do not obtain their annual leave during the currency of the year for which it is due it must lapse and not be subsequently granted under any circumstances. No back leave will therefore be allowed in future.

(h) Applicants must apply for the full period of leave to which they may be entitled.

(i) When compatible with railway requirements, permanent employés will, if necessary, be allowed one day's leave, with pay, to vote at parliamentary elections.

(k) All militiamen obtaining leave of absence to attend drill, shooting matches, &c., shall have the period they may be so absent deducted from their annual leave, or shall have such leave granted, business permitting, without pay.

SCHEDULE I.—CLASS 1.—OFFICERS AND OTHERS ON YEARLY SALARY.

Clerks	Inspectors
Draughtsmen	Overseers (line), maximum 17 days
Engineers	Printers
Engineers (assistant)	Station-masters
Foremen (locomotive)	Storemen
Foremen (running), maximum 17 days	Timekeepers.

SCHEDULE II.—CLASS 2.—ARTISANS AND OTHERS.

Engineer's Branch.

Artisans	Labourers (lithographic and plan)
Foremen Artisans	Messengers on salary
Inspectors (temporary)	Printers on daily pay

Traffic Branch.

Coopers (who satisfactorily prove they served apprenticeship to their trade)	Daily - paid Station-masters receiving 7s. 6d. per diem, maximum 12 days
Foremen (goods)	Sailmakers (who satisfactorily prove they served apprenticeship to their trade)
Guards, maximum 12 days	Signalmen
Messengers (senior)	Yardsmen.
Porters (head)	
Repairers (lamp)	
Repairers (weighing machine)	

Telegraph Branch.

Carpenters	Instrument-makers
Engineers	Lampmen (electric)
Fitters	Timekeepers.
Foremen	

Locomotive Branch.

Blacksmiths	Inspectors (train)
Boilermakers	Leather hands
Boilermakers' Assistants	Lifters (truck)
Carpenters	Machinists
Carriage-builders	Moulders
Carriage-trimmers	Painters
Clerks (shop)	Pattern-makers
Coppersmiths	Pumpers (engine)
Drillers	Repairers (truck)
Drivers of stationary engines	Sailmakers (who satisfactorily prove they have served apprenticeship to their trade)
Engine (locomotive) Drivers, maximum 12 days	Seamstresses
Fitters	Strikers
Foremen (sub.)	Timekeepers
French polishers	Timekeepers (assistant)
Furnacemen	Turners
Inspectors (rolling-stock, construction, and repairs)	Waggon-builders.
Inspectors (lamp)	

Accountant's Branch.

Foremen (Stores).

SCHEDULE III.—CLASS 3.—LABOURERS AND OTHERS.

Engineer's Branch.

Gangers	Messengers on daily pay
Gatekeepers	
Labourers	

Traffic Branch.

Attendants (waiting-room)	Porters (ordinary)
Block-signal youths	
Checkmen (gate)	
Cleaners (carriage)	
Coopers	
Gatekeepers	
Labourers	
Lampmen	
Number takers	
	Porters (weighing), maximum 10 days
	Sailmakers
	Shunters, maximum 10 days
	Watchmen, maximum 10 days.

Locomotive Branch.

Blockers	Labourers with artisans, maximum 10 days	
Boys, maximum 10 days		
Cleaners (engine)		
Examiners (train)		
Firemen, maximum 10 days		
Foremen of cleaners		
Fuelmen		
Greasers		
Labourers (ordinary)		
		Lighters-up
		Messengers with artisans, maximum 10 days
	Padders	
	Storemen, maximum 10 days	
	Washers-out	
	Watchmen (shop hands), maximum 10 days.	

Telegraph Branch.

Batterymen, maximum 10 days | Linemen, maximum 10 days.

Accountant's Branch.

Storemen, maximum 10 days.

44. At stations where there are a large number of employés, and where arrangements are made locally to relieve them for annual
Leave without pay.

leave, the Officer in Charge will require to make application for any passes he may require a day or two before granting the leave. When a few days' leave of absence *without pay* is required by any employé, such leave can only be granted with the understanding that the person relieved will pay usual relieving expenses if incurred.

INJURIES, ACCIDENTS, AND ILLNESS.

45. (a) When any officer or servant of the Department is seriously hurt or injured whilst engaged in the actual discharge of his duty, the nearest medical practitioner is to be sent for to attend to the immediate necessities of the case.

(b) The sufferer is to be conveyed to the nearest hospital as soon as he can be removed with safety.

(c) If he declines such removal he will be required to pay his own medical expenses.

(d) When removal to an hospital is not possible, the case is to be at once reported in the usual course, in order that the Railway Medical Inspector may be instructed to visit the patient and report.

(e) No surgical or medical expenses will in any case be allowed unless certified by the Railway Medical Inspector to have been necessary, and to be reasonable.

(f) Any employé meeting, in the execution of his duty, with injury or accident, not arising from his own neglect, may be allowed, during the time he is incapacitated from work, such pay as the Chief

Mechanical Engineer, with the approval of the Commissioners, may grant (such approval to be obtained month by month), subject to the following rules:—

- (1) He must report at once, and, if possible, before leaving the railway premises, to his superior officer that he is so injured, and give the names of all that witnessed the occurrence; the Officer in Charge to at once obtain the written evidence of all the witnesses.
- (2) He must in any case forward to the same officer, if the absence continue more than one day, a medical certificate—in accordance with Regulation 11—setting forth the nature and extent of his injuries, such certificate to be forwarded within 48 hours, otherwise he will be treated as absent without leave. The Officer in Charge to forward these certificates to the Chief Mechanical Engineer as soon as received.

(g) All medical certificates shall state the nature and extent of the injuries received in cases of accident, and in cases of illness its character; also how long the employé is likely to be incapacitated for duty. A notice of resumption of duty to be forwarded to the Chief Mechanical Engineer directly employé returns to work.

(h) Employés absent from duty for a lengthened period through illness or accident will be required to furnish a medical certificate once a month, and may, at the discretion of the Head of the Branch, be required to furnish certificates more frequently.

(i) Allowances to officers absent through injury or illness must not be made except on approval of the Commissioners; and, if the absence from duty exceed six (6) months, a special examination must be made by a medical officer employed by the Commissioners, when the case will be specially considered and determined upon.

Sick leave. 46. Officers who have hitherto been entitled to sick pay, and to whom leave of absence may be granted on account of illness, may be allowed half-pay during such absence.

V.R. Commissioners' Reg. XXX.—Extended Leave.

Furlough leave. 47. The Commissioners may, with the sanction of the Minister, grant any officer or employé leave of absence on account of slackness of work or other pressing necessity for a period not exceeding twelve (12) months, but for such period of absence such officer or employé shall not be entitled to receive any salary or wages. Provided also that upon the termination of such leave he will not be permitted to resume duty if, in pursuance of any policy of retrenchment during his said absence, his services would in the ordinary course have been dispensed with had he remained at work.

Absence without leave. 48. Officers in Charge of Locomotive shops, depôts, and sheds will please report to the Chief Mechanical Engineer's Office every month, giving full particulars as to employés absent from duty without leave, whether their absence is caused by sickness or otherwise.

TRAVELLING ALLOWANCES.

(V.R. Commissioners' Regulation XXVII.)

Travelling allowances. 49. In future travelling allowances to officers and employes will only be made according to the following scale, and all other Regulations on the subject are cancelled:—

	Under one week.	One week and upwards at same place.
	Per diem. £ s. d.	Per week. £ s. d.
1. Officers in receipt of £400 per annum and upwards ...	0 10 0	2 2 0
Officers in receipt of £175 to £399 per annum ...	0 7 6	1 10 0
Officers in receipt of less than £175 ...	0 6 0	1 5 0
	Three days and under.	Over three days at same place.
	Per diem. £ s. d.	Per week. £ s. d.
Daily-paid Station-masters ...	0 4 0	0 15 0
Porters, Labourers, and others	0 3 0	0 15 0
Guards and Engine-men when relieving away from their home stations ...	0 4 0	0 15 0

2. Officers permanently engaged on relieving duty are to be paid the weekly allowance provided by the salary scale, irrespective of the time they may be at each place.

3. The allowance to Travelling Audit Clerks, Superintendents, and Inspectors shall be made as follows:—If absent from headquarters on duty at 8 a.m., 1 p.m., 6 p.m., and a night, the full

daily scale will be allowed; but if absent on one, two, or three of the specified periods, allowance shall only be made in fourths accordingly.

In calculating fourths, half-pence are to count as pence.

4. Guards and Engine-men absent from their home stations running trains, and on duty for ten consecutive hours, will be allowed 1s. for a meal. If they be sixteen hours on duty, 2s. for meals, and when necessary 1s. 6d. for a bed. If on duty beyond sixteen hours, allowance may be made, when deemed necessary, as per day scale, but in no case shall such scale or any allowance hitherto made be exceeded.

5. Cab and coach fares, horse and conveyance hire may be charged for extra, but in every case, where practicable, receipted vouchers for the expenditure must accompany the claims made for travelling expenses.

6. No officer shall leave his office or proceed travelling on any duty without first informing the Head of his office of his intention to do so, and such Head, before granting him permission, shall satisfy himself that the travelling is necessary.

7. Whenever the exigencies of the case preclude the possibility of an officer first obtaining permission in the manner indicated above, he shall, as soon as possible, acquaint the Head of his office with the reasons which called him away, either in writing or orally, on his return, within 24 hours of his leaving.

8. The scale rates will only be allowed when the duties upon which officers may be engaged necessitate their travelling a greater distance than 10 miles from the places where their ordinary duties are performed.

9. When the distance does not exceed 10 miles, only the necessary expenses actually incurred are to be charged, and similarly in all cases where the travelling is performed within ordinary office hours.

10. Heads of Branches shall carefully examine all accounts for travelling expenses, and shall, before certifying thereto, assure themselves that the travelling was necessary, that the time occupied was only such as was required to properly perform the duties upon which the officer was engaged, that the scale of rates is not exceeded, and that the claims made are fair and reasonable.

Allowances for relieving. 50. When an employe is transferred no expenses will be allowed unless when a night is occupied on the journey, and then the actual and necessary cost incurred will be refunded to the employe transferred.

Board and lodging
accounts to be
checked and copy
of time kept.

51. All accounts for board and lodging must be carefully checked and initialed by the Foreman, who must keep a correct copy of each man's time.

Certificate of
character not to
be given.

52. No officer in this branch except the Chief Mechanical Engineer may issue a certificate of character to any past or present employé, or give a report on the value of any work done by employés, contractors, or others.

Employés not to
enter refreshment-
rooms.

53. The attention of all employés is called to Rule 16, relative to servants of the Department entering refreshment-rooms while on duty, and all officers in charge are directed to see that it is carried out in its integrity, and to report to this office any infringement of its provisions.

PART II.

INSTRUCTIONS TO WORKSHOP MANAGERS, LOCOMOTIVE INSPECTORS, FOREMEN, AND DRIVERS IN CHARGE.

Duties.

54. Locomotive Inspectors will exercise a strict supervision over that portion of the running branch under their charge.

They will see that Locomotive Foremen, Drivers in Charge, Drivers, and all persons employed in or about the running sheds are competent, and perform their respective duties efficiently; immediately suspending employés who may be guilty of any serious dereliction of duty.

They will see that all instructions are properly carried out, and that the Rules and Regulations are faithfully adhered to, especially the Regulations contained in Rule Book, 21st September, 1891, and the instructions here contained and others that may be issued from time to time.

They will report to the Chief Mechanical Engineer on all matters affecting the interests of the Department.

They must furnish a daily report to the Chief Mechanical Engineer, showing the engines and depôts examined and locomotives ridden on by them. These returns will be filed for future reference.

They will pay special attention to the carrying out of the instructions issued by the Chief Mechanical Engineer in Circular 22/94 as to the periodical examination of engines.

They will inquire into any charges against employés, and report to the Chief Mechanical Engineer.

Conduct of inquiries.

55. When any serious charge is made against an employé, an inquiry should be held by at least two officers of different departments—Locomotive, Traffic, or Existing Lines.

Evidence should be taken in writing, and signed by witnesses.

The person accused should hear or see all the evidence, should be at liberty to question the witnesses if he desire, and may then make any statement he wishes.

Such statement to be taken in writing, and attached to the report and evidence, and forwarded to be dealt with.

To remain at home station.

56. Locomotive officers should not leave their recognised station except in cases of casualty or accident, or for the purposes of the periodical inspection, when they should forward by wire or letter to the Chief Mechanical Engineer a brief report of their proposed movements.

To examine Engine-drivers as to signals and eye-sight.

57. Locomotive Inspectors should make a point of ascertaining by frequent examinations at irregular intervals, that Engine-drivers and Firemen are thoroughly acquainted with all the Regulations concerning semaphores and other signals. They should also see that Engine-drivers and especially the older men are periodically examined as to their eye-sight, to see that it is in perfect order.

Duties of Locomotive Foremen.

58. Locomotive Foremen are responsible for the proper and efficient management of the running sheds, engine stock, tools, and other appliances under their charge. They must see that they are kept clean and in efficient working order. They must see that all rules, circulars, orders,

and instructions appertaining to their department and employés are rigidly and consistently obeyed, and that locomotive power is supplied for trains. At stations where there is no Locomotive Foreman, the Driver in Charge will arrange for suitable engine power.

They are also responsible that all employés under them are supplied with time-tables, appendices, and special train notices as required, as per Regulation No. 4, and for seeing that the boiler regulations, hereinafter set down, are properly carried out so far as their sheds are concerned. They will also arrange the duties of all Locomotive employés under them, paying special attention to the necessity of a fair and even distribution of work, so that the payment of overtime may be entirely avoided, or, if unavoidable, reduced to a minimum.

Locomotive Foreman to supervise Train Examiners.

59. Locomotive Foremen are to exercise a proper supervision over Carriage and Truck Examiners in their districts. They will be held responsible for these men strictly and efficiently performing their duties, except at Spencer and Flinders streets, where the Rolling-stock Inspector will assume that responsibility.

Reliable Engine-men to be put on important trains.

60. They must see that specially-reliable Engine-men are told off for important trains, keeping in view the seniority of the men, combined with efficiency of working, and must not permit an engine to run unless in charge of a certificated Engine-driver.

To see Engine-men before departure and after arrival.

61. Where practicable they must personally see all Engine-men before the departure and after the arrival of their trains, so as to know the men are in a fit and proper condition for duty.

Drivers not
turning up.

62. They must in all cases report Drivers who fail to turn up to their engines at least 45 minutes before starting time.

Addresses to be
kept.

63. A register is to be kept by each Locomotive Foreman of the names and addresses of men employed under his supervision.

At out stations this register will be kept by the Driver in Charge or Senior Engine-driver.

Running sheds to
be kept private.

64. Locomotive Foremen will instruct employés that all running sheds must be kept private, and that they must refuse admission to all unauthorized persons, and report promptly to Officer in Charge any case where this order is disregarded.

Persons trespassing on the railway premises should be warned off, and if they persist in trespassing the fact must be reported. (See Regulation 28 of Rule Book, 21st September, 1891, and other Regulations on the subject of trespassing.)

Accident or
casualty to be
reported.

65. In the event of any accident or casualty on the line the Foreman will telegraph to the Chief Mechanical Engineer the nature of the casualty, and repair to the scene with the casualty van and men as soon as possible.

Reports to be
forwarded without
delay.

66. Foremen are to forward as soon as possible all reports from Drivers relating to accidents, late arrivals, or detentions to trains, with a full explanation of their inquiries into the case.

They must report any Driver who leaves the railway premises without having first made out and handed in any report necessary about the running of trains.

Drivers of special
trains to have
copy of time-table.

67. Notices of special trains should be carefully read over by Locomotive Foremen, and no Driver allowed to proceed with any such train unless he is furnished with a proper time-table of its running.

Duplicate Circular
Book to be kept.

68. A book is to be provided at all running sheds, in which duplicates of all circulars in connexion with running business are to be posted.

This book is to be available at all times for inspection by enginemen and others concerned.

Receipts for Rule
Books, Service
and Special Time-
tables.

69. Suitable books must be kept at every running shed in which Rule Books, this Instruction Book, and all issues of Time-tables, Special-train Notices, Departmental Circulars, and other documents of importance must be signed for in ink by all Drivers, Firemen, and others concerned in the working of the running shed. The signatures must be witnessed, and the date of issue recorded by the person issuing the documents. Rule Books and Time-tables when issued must be fully and correctly described. Special-train Notices and Circulars must be securely gummed on to one leaf of the book, and the employé's signature obtained on the opposite leaf, the number of the circular, &c., being quoted.

Locomotive Inspectors and Foremen will obtain and supply to as many men as may be necessary copies of any Time-tables or Special-train Notices which they may require to have.

Time charged for piloting to be certified to.

70. All time charged by Drivers for shunting and piloting must be certified to by Station-masters or other Traffic officers in charge of station yards.

Locomotive Inspectors to supply the Station-masters concerned with books for this purpose. Station-masters to keep the book, and forward the counterfoil to the Locomotive Inspector or Foreman of the district.

The books provide for—(1) engines ordered out before departure of trains; (2) engines which are kept shunting after arrival; and (3) for ordinary shunting or piloting engines; and no time is to be entered in the Time Book unless duly certified to by the Station-master.

All engines to be shown on Lighting-up Sheets.

71. All engines stationed at depôts must be shown on the Lighting-up Sheets whether under shed repair or not. This is important, so that in the event of there being spare engines, it can be shown if one depôt can assist another. Engines under shed repair must be put into running as quickly as possible.

Accidents to employés.

72. Personal accidents are to be reported immediately they occur, full particulars to be given, and whether caused by negligence on the part of the employé, defects in departmental appliances, or by circumstances beyond control.

Work not to be done without authority.

73. No work is to be undertaken for the outside public or other Branches without authority from the Chief Mechanical Engineer.

Material supplied to outside firms.

74. No material is to be sold or supplied to persons outside the Department unless by authority of the Chief Mechanical Engineer.

Unauthorized transfers forbidden.

75. Employés are not to be permanently transferred from the station or duty to which they were appointed until the consent of the Chief Mechanical Engineer has been obtained.

Holidays to be worked off.

76. During the slack season, and whenever an opportunity offers, holidays are to be worked off by allowing as many men away at once as can be spared without in any way interfering with the working of the traffic.

Leave.

77. When employés apply for leave and passes their applications should not be signed by Foremen unless the latter are prepared to let them off from the date they apply, as any alteration necessitates the issue of a fresh pass.

Cleaners not to move an engine in steam.

78. Cleaners or other unauthorized persons must not on any account be permitted to move an engine while under steam. (See Regulation 335, Rule Book, 21st September, 1891.)

Tools, &c., to be branded.

79. All tools and appliances the property of the Department must be properly branded with a broad arrow (↑) and the number of the engine, and all new ones are to be similarly marked before being issued to workmen.

Tool boxes to be examined periodically.

80. The tool boxes of all engines are to be examined periodically without notice, and any Driver found in charge of an engine short of the full complement of tools, or having tools belonging to another engine in his possession must be reported to the Chief Mechanical Engineer.

Stores not to be issued without an order.

81. No stores to be issued by Storeman without an order from the Locomotive Foreman or his representative, who will be held responsible for their economical use. Receipts to be obtained for all stores issued.

Duties, &c., of Locomotive Storemen.

82. The Locomotive Storemen are directly under the Railway Storekeeper as far as the stores are concerned, and will receive their instructions from him as to their duties as regards the receiving, issuing, and care of the stores. Their first care will be the custody and issue of stores, and keeping all records in connexion therewith. They will still, however, be under the supervision of Locomotive Inspectors or Foremen, who will return their time and see that they are fully employed, should they not be fully occupied in the stores work.

Requisitions for stores in every case to be forwarded to the Chief Mechanical Engineer, signed by Locomotive Inspector or Foreman. Returns of daily issues to be also forwarded to Locomotive Accountant as usual.

Ordering and custody of iron and brass.

83. All new material, brass work, copper work, iron, steel, &c., required for engine or other repairs, must be ordered from the Railway Storekeeper at Newport by the Locomotive Storemen, on orders countersigned by the Locomotive Foremen, and entered in the Storeman's books, and kept in his custody together with the other stores.

Any old brass work or other surplus material should not be allowed to accumulate, but must be sent to the Workshop Manager, Newport ; a list of

same to be sent to the Chief Mechanical Engineer. While small quantities of material of this kind are in running sheds, they are to be given into the charge of one of the senior men or the Locomotive Storeman, whichever may be found most suitable, and the man to whom the charge is given will be held responsible for the safe custody of all such material.

Method of ordering stores.

84. All stores or other articles required must be ordered from the Railway Storekeeper through the Chief Mechanical Engineer.

Examination of stores.

85. All stores are to be carefully examined, and any of inferior quality are to be at once rejected, and the matter reported to the Chief Mechanical Engineer.

Samples not to be tested.

86. Samples of stores are not to be taken on trial without authority from the Chief Mechanical Engineer.

Inferior coal to be rejected.

87. All coal received must be carefully examined, and any consignment of inferior quality is to be rejected and particulars reported at once.

Weekly reports on quality of coal to be sent.

88. Weekly reports are to be forwarded to the Chief Mechanical Engineer showing the quality of each consignment of coal supplied.

Coal to be measured on to engines.

89. The coal delivered to engines is to be properly measured, and the Officer in Charge must see that such fuel is not shovelled on to engines when barrows or baskets for measurement are provided. Trucks loaded with coal must be promptly discharged and put into traffic.

Drivers to be warned against extravagance.

90. Upon receipt of the monthly return of the consumption of Locomotives, Foremen will carefully check the consumption of fuel and stores for the different engines, drawing the attention of employés to any extravagance which may be observed and obtaining their explanations as to the cause.

Economy in oil and fuel requisite.

91. Special attention should be given to the necessity for reducing the consumption of oil and fuel as much as possible.

Return showing balance of fuel to be compiled.

92. A quarterly return is to be sent to the Locomotive Accountant, showing the balance of wood and coal for the quarter.

To do this correctly it will be necessary for a careful record to be kept of all supplies received either direct from the Storekeeper or from other stations, and also of all issues whether to engines or other depôts.

The daily return sent to the Locomotive Accountant is to include issues of all descriptions.

Damaged lamps.

93. Lamps broken or damaged in any way must be reported in writing at once to the Locomotive Foreman who will inquire into the cause of breakage, and, if it is the result of carelessness, forthwith report the particulars to the Telegraph Superintendent. Any one neglecting to report at the time of the breakage of a lamp while in his charge will be called upon to pay for the damage, however caused. Lamps requiring repair are to be sent to the Telegraph Superintendent, Melbourne. They must be duly way-billed on a parcels way-bill, and have a ticket on them showing what station they are forwarded from. Guards are instructed not to receive a lamp for transmission without a way-bill.

Wood for steaming purposes.

94. Steaming wood is never to be burned on powder trains, and during the dry season its use is to be discontinued altogether.

Care must be taken that the regulation allowance of 10 feet of wood is not exceeded for lighting-up purposes.

Precautions to be observed when steaming wood is used.

95. Should it be necessary to burn wood for steaming purposes fire bars must be properly regulated, and kept as close as possible; blast pipes must be kept clean, and Drivers should be instructed to run with the dampers as close as possible to prevent sparks escaping from chimney or ash pan. They must also be instructed to carefully examine spark arresters every day to see if there be any holes through which sparks might escape.

Cleaning of blast pipes.

96. During the dry season special care is to be taken to keep blast pipes thoroughly clean for at least 12 inches from the top while in position. To enable this to be done, a bag made with a strong elastic crinoline steel on the top is to be dropped down and held by a string. This top will spring out and fill the pipe, and so prevent the dirt going down the faces.

Engines to be fitted with spark arresters.

97. No engines are to be permitted to run unless fitted with spark arresters in good condition. Any Driver not cleaning his spark arrester every day is to be reported.

Brick arches and baffle plates to be kept in good order.

98. Brick arches and baffle plates must be kept in good order, and are to be replaced when worn out.

Suitable fire bars to be supplied. 99. Locomotive Foremen and Drivers in Charge are held responsible for seeing that the proper and most suitable fire bars, which will be determined by the Chief Mechanical Engineer, to suit the various classes of coal used by the Department, are supplied to the engines under their charge, and that they are maintained in good condition.

Outside tradesmen not to be employed. 100. No expense must be incurred by employing the services of outside tradesmen (such as blacksmiths, plumbers, &c.), except in urgent cases of emergency, and in such cases the authority of the Chief Mechanical Engineer must be obtained as soon as possible.

Alterations to engines or stock. 101. No alterations of any kind are to be made to engines or stock without written authority from the Chief Mechanical Engineer.

Should improvements suggest themselves, they should be submitted with full details showing the advantages claimed, and, if possible, a sketch should be attached to report.

Vehicles off the line. 102. No engine or vehicle is to be allowed to run after having been off the line at points, or from any other cause, unless such engine or vehicle has been carefully examined by the Foreman or Officer in Charge, who will gauge the wheels and axles, and examine the springs, &c.

Cow catchers. 103. All engines are to be fitted with cow catchers, with the exception of those used for shunting and working suburban traffic.

Tube drifts not to be used. 104. Locomotive Foremen will see that tube expanders only are used, and that the utmost care is exercised to avoid damage to tube plates. Tube drifts are never to be used.

Repairs to be executed. 105. All work reported in the Driver's Repairs Report Book (which is to be kept in a convenient place in the shed) must receive prompt and immediate attention, according to the urgency of each case; no engine is to be allowed to leave a shed unless it is in good order.

Locomotive Foreman to supervise repairs. 106. The Locomotive Foreman must, when on duty, supervise running-shed repairs to engines and boilers.

Running-shed repairs. 107. No extensive repairs are to be carried out in the running sheds, unless by special permission of the Chief Mechanical Engineer. (See Boiler Regulations, pages 52 to 60.)

Material for light-running repairs may be ordered from the Workshop Manager direct.

Any delay in obtaining material for such work is to be reported.

Overhauling of engines. 108. If any engine requires overhaul or repairs of an extensive nature, which necessitates it being sent to the workshops, a detailed list of repairs required is to be made out on Form C, and sent to the Chief Mechanical Engineer, to be forwarded to the Workshop Manager.

On receiving an engine from the workshops after repairs it must be examined and tested most carefully, and any defect in either workmanship or material which may be apparent must be reported promptly and fully.

Engines to be overhauled during slack season.

109. Advantage should be taken of the slack season to send all engines that require overhaul or boiler examination to the workshops for that purpose.

Arrangements for this being done should be made with the Workshop Manager through the Chief Mechanical Engineer. (See Boiler Regulations, pages 52 to 60.)

Transfer of engine.

110. Before any engine is transferred from one section to another, the Locomotive Foreman having charge of it must have it examined, and the tools checked over to see that none are missing. The Locomotive Foreman receiving the engine must also make a similar examination and report.

Examination of side rods.

111. Locomotive Foremen must instruct all Engine-men and Cleaners to very carefully examine the side rods of all engines, particularly the "A" and "B" classes, every day to see that they have no cracks.

The cracks usually occur on the under side of the rods, about one-third of the distance from the crank pin. They also occur in the middle of the length of the rod.

All rods which show any indication of flaws or cracks should be taken out and sent to Newport, and reported in the usual manner.

Buffer beams to be examined.

112. The wooden buffer beams of engines must be carefully and regularly inspected, so that their condition may be noted. If necessary to test the soundness of the beams one or more small auger holes should be bored in each. A record is to be kept of each inspection.

Examination of axles.
Circ. 22.94.

113. The axles of every locomotive engine and tender are to be examined for flaws by the shed fitter once every fortnight.

A record is to be kept in a suitable book of such examinations.

Crank axles.

114. Crank axles must be thoroughly examined with the eccentric sheaves off at least once in every six (6) months, and with the connecting rods off at least once in every three (3) months. If any flaws are discovered, but not bad enough to warrant the engine to be taken out of running, they must be carefully marked with a fine centre punch, and a record kept of them in a book. The axle must be examined monthly after the flaw is discovered.

Straight axles.

115. Straight driving axles must be thoroughly examined with the eccentric sheaves off at least once in every six (6) months. If a flaw is discovered monthly examination must be made and records to be kept the same as with crank axles.

When an engine is lifted the journals must always be stripped and thoroughly examined for flaws.

Tyres and wheels.

116. Tyres and wheels must be thoroughly examined at least monthly for flaws, especially on the flange of tyre, and if any flaws are discovered in the flange reaching to the body of the tyre, the engine must be taken out of running. All flaws to be recorded.

Pistons, valves, and cross-heads.

117. Pistons and cottered cross-heads must be examined at least once in every six (6) months. Slide valves must be examined and

the steam and exhaust ports cleaned out at least once in every three (3) months. The cross-heads are to be taken off the piston and valve rods and the cotter holes examined in each case. If any flaws are discovered the gear must be at once sent to the workshops for repairs. The thickness of slide valves to be recorded, and no valve to be allowed to run under three-eighths of an inch thick. A record is to be kept of each examination, showing the wear and condition of these valves, and the date when the next examination should take place.

Examination of
Westinghouse
brakes on engines.

118. Locomotive Foremen must see that the Westinghouse brake is properly attended to, and the following instructions strictly observed:—

- Triple valves on engines and tenders to be cleaned every three months.
- Air valves on pumps to be cleaned every three months.
- Hose pipes to be examined every three months.
- Hose pipes between engines and tenders to be examined every two months.
- Brake cylinders on engines and tenders to be examined at intervals to see that the leathers on pistons are thoroughly tight.
- Drivers are to report brakes that are not properly taken up; main reservoirs that are not regularly drained (weekly); and pumps that are not properly cleaned.
- A proper supply of duplicates to be kept in stock.
- A proper kit of tools to be always maintained.
- Maintenance books to be regularly and accurately entered up.

Fitters are supposed to study the construction of all the different parts of the brake, and have a knowledge of its working.

Drivers' brake valves to be examined occasionally to make certain that reserve pressure springs are in good working order.

All reports to be forwarded to the Rolling-stock Inspector by Locomotive Foreman.

Westinghouse
gauges.

119. Westinghouse brake pressure gauges on engines must not be interfered with in any way. If they get out of order they should be taken off the engine, carefully packed, and sent to Newport for repairs. Spare pressure gauges to be used in their place.

Returns to be
sent in.

120. The following returns are to be regularly sent in by Locomotive Foreman to the Chief Mechanical Engineer's Office:—

- Daily return of engines lit up.
- Weekly return of engines, men, &c., at depôt.
- Weekly return of quality of coal received.
- Monthly return of examination of axles and tyres.
- Monthly return of examination of fire and smoke boxes and repairs made.
- Monthly return of engines and where running.
- Quarterly return of examination of slide valves, safety-valves, and water spaces.
- Reports and certificates as per Boiler Regulations, pages 52 to 60.

Turn tables.

121. The Chief Mechanical Engineer's Branch will be responsible for the keeping in repair and working order of all turn tables, and will execute all minor repairs thereto. Existing

Lines Branch will render assistance in connexion with heavy repairs or repairs to foundations or woodwork.

Locomotive Foremen to call attention of the Inspector of Works of the district to any defects appearing in foundations, &c., and report same to the Chief Mechanical Engineer.

Lifting cranes. **122.** All lifting appliances will be under the control of the Existing Lines Branch, with the exception of those in the Newport, Port Melbourne, or other Locomotive sheds, and the hydraulic cranes at the Echuca wharf.

The columns and chains of the hydraulic cranes at Echuca, which were formerly under the control of the Existing Lines Branch, will be in future supervised by the Chief Mechanical Engineer's Branch. All the gear, columns, and chains must be frequently and closely examined, and the chains annealed at least once every two years.

Water supplies. **123.** All reservoirs, tanks, pipes, water meters, syphons, valves, fire plugs are to be under the control of the Existing Lines Branch.

The water cranes at Ballarat, Bendigo, Seymour, Benalla, Wodonga, Geelong, Stawell, Maryborough, Echuca, Sale, Warragul, Korumburra, and Dimboola will be kept in repair by Chief Mechanical Engineer's Branch. All other cranes to be attended to by Existing Lines Branch. Hose bags to be provided by Chief Mechanical Engineer's Branch, and ordered from Newport.

Pumping machinery, &c., &c. **124.** All steam and wind pumping machinery is to be kept in repair by the Chief Mechanical Engineer's Branch. Great attention

must be paid to the working of water meters, especially those which are used in connexion with the supply of water from or to trusts and private parties; these meters should be examined and tested by Existing Lines Branch at least once in every two years, and more often if there be any suspicion that they are defective. Care must be taken that no waste occurs; and any leaky pipes, overflow valves at tanks, or other leakages are to be at once reported to the Inspector of Works of the district, and, if not attended to within a reasonable time, the fact to be reported to the Chief Mechanical Engineer.

Oiling of windmills. **125.** Windmills will be kept oiled by the Existing Lines Branch (defects in same to be reported to nearest Locomotive representative), and cost to be charged to Chief Mechanical Engineer's Branch. Traversers (hand and hydraulic) and truck turn tables are to be kept in repair by the Existing Lines Branch.

Weighbridges. **126.** Weighbridges are under the control of the Traffic Branch.

Foremen to give assistance. **127.** With a view to economy, and to avoid sending fitters and others long distances to execute small repairs, Locomotive Foremen are to render all mechanical and other assistance to Inspectors of Works in the repairs of the foregoing, wherever practicable, on application from the Inspector of Works.

Cost to be charged. **128.** The net cost of time and material in connexion with such assistance, and also repairs to turn tables and cranes, to be charged against the Existing Lines Branch, except in the case

of repairs to pumping machinery and shop cranes, for which the cost is to be charged against Chief Mechanical Engineer's Branch.

REGULATIONS FOR EXAMINING AND TESTING
LOCOMOTIVE AND OTHER BOILERS.

New boilers.

129. New locomotive boilers, before being put into use are to be thoroughly examined and tested with warm water at a pressure of 175 lbs. per square inch, and a certificate that this has been done and the boiler is satisfactory, signed by the Workshop Manager and the Foreman Boilermaker, Newport, is to be forwarded to the Chief Mechanical Engineer, and filed in his office. A press copy of this certificate is to be retained by the Shop Manager in a book kept by him for that purpose.

Withdrawal of tubes, &c.

130. The tubes of all locomotive boilers shall be withdrawn at the Newport or Port Melbourne workshops, and the boilers and casings thoroughly examined internally by the Workshop Manager or Locomotive Foreman and Foreman Boilermaker at the following intervals, and under the following conditions:—

Boilers of passenger engines, first examination before the train miles run are 175,000, which mileage may be run in five (5) years.

Boilers of goods engines, first examination before the train miles run are 140,000, which mileage may be run in four (4) years.

Boilers of passenger engines, second examination before the further train miles run are 105,000, which may be run in three (3) years.

Boilers of goods engines, second examination before the further train miles run are 87,500, which may be run in two and a half ($2\frac{1}{2}$) years.

After the above periods have elapsed and miles run the tubes must be withdrawn, and all boilers examined at intervals of not less than two and a half ($2\frac{1}{2}$) years.

Total life.

131. When a passenger engine has run 400,000 miles, which may be at the end of thirteen (13) years, and when a goods engine has run 350,000 miles, which may be at the end of eleven (11) years, the Chief Mechanical Engineer shall decide whether the boiler is to be continued in use.

Withdrawal of tubes at country depôts.

132. On obtaining special permission from the Chief Mechanical Engineer in each case, the Locomotive Foremen at Ballarat and Bendigo may withdraw the tubes from a specified number of engines. The tubes must not, however, be replaced until the boiler has been inspected and reported on jointly by the Foreman Boilermaker, Newport, together with the local Locomotive Foreman, and it is to be understood that the repairs are under the general supervision of the Workshop Manager, Newport, who must be notified when repairs are effected, so that the Foreman Boilermaker or Inspecting Boilermaker may inspect them jointly with the Locomotive Foreman concerned.

Locomotive Accountant to furnish mileage.

133. The Locomotive Accountant shall furnish every month printed lists of the mileage run by each engine, a copy of which will be sent to the Workshop Manager and to each of the Locomotive Foremen.

Report of examination of boilers.

134. When the tubes are withdrawn, a complete report in detail showing the state of the boiler, fire box, &c., is to be forwarded by the Workshop Manager with his recommendation to the Chief Mechanical Engineer, who shall decide what repairs, &c., are to be executed. After the repairs have been executed the boiler shall be tested, and a similar certificate to that stipulated in the case of new boilers is to be forwarded to the Chief Mechanical Engineer.

Report of repairs to accompany engine.

135. When an engine is sent from Newport or Port Melbourne, reports in duplicate showing the repairs executed and the history of the boiler, and the mileage run, and the approximate date when the tubes are to be next withdrawn, are to be forwarded to the Chief Mechanical Engineer by the Workshop Manager, Newport, or Locomotive Foreman, Port Melbourne, respectively. These reports will be forwarded to the Locomotive Foreman to whom the engine is sent. One of the reports is to be retained by the Locomotive Foreman, and sent with the engine to whatever running shed or workshop it may afterwards be sent, and a receipt obtained for same. The duplicate reports are to be noted by the Locomotive Foreman, and returned to the Chief Mechanical Engineer.

Locomotive Foremen must apply for these reports should they not receive them, and their non-possession by Locomotive Foremen will not relieve them from any responsibility.

Locomotive Foremen to notify Chief Mechanical Engineer.

136. Locomotive Foremen at running sheds must, before carrying out extensive repairs to any engine under their charge, such as turning up wheels, lining axle boxes,

&c., first see from the last repairs report and from the mileage return whether the time has arrived for the withdrawal of the tubes, and, if so, they must notify the Chief Mechanical Engineer so that the engine may be sent to Newport or Port Melbourne for that purpose.

Records of life of boilers to be kept.

137. A complete record of the life of and repairs to all boilers is to be kept by the Workshop Manager, Newport, and by the Locomotive Foreman, Port Melbourne, as far as concerns the engines repaired at that shed. A similar record is also to be kept in the Chief Mechanical Engineer's Office.

Monthly returns to be furnished.

138. The Workshop Manager must furnish a monthly return to the Chief Mechanical Engineer, showing the boilers which have run the mileage specified, and which require the tubes withdrawn. The necessary arrangements will then be made for their being sent to the shops. This duty will devolve on the Chief Running Inspector.

Engines at running sheds.

139. Engines at running sheds are to have their boilers, fire boxes, &c., thoroughly examined inside and out, as far as practicable, by taking off the dome and safety valve covers, &c., and tested by the Inspecting Boiler-maker in conjunction with the Locomotive Foreman of the district or shed at intervals of not less than twenty (20) months for boilers five (5) years old, and eighteen (18) months for those over five (5) years old.

Light repairs.

140. Any light repairs that may be shown to be required by the examination are to be executed by the Locomotive Foreman of

the shed. Boilers requiring heavy repairs are to be taken out of running and instructions asked for.

Testing. 141. After the repairs (if any) are executed the boilers are to be tested with warm water by the above officers at a pressure of 25 per cent. above the working pressure.

Joint certificate. 142. A joint certificate, signed by the Locomotive Foreman of the district or shed and the Inspecting Boilermaker, showing the result of the examination and test, and that the repairs have been executed, is to be forwarded to the Chief Mechanical Engineer in each case, and then sent to the Workshop Manager to be noted.

Press copy of certificate. 143. A press copy of these certificates and a record of all repairs executed to boilers at any time in running sheds are to be entered by the Locomotive Foreman in a book kept specially for the purpose.

Fire boxes, &c., to be examined. 144. Locomotive Foremen must also see that the fire boxes, smoke boxes, and boilers of engines under their charge are also thoroughly examined by a Boilermaker once a month, or oftener if necessary, for broken stays, bulges, cracks, &c.

Several instances have occurred of damage to tube plates and holes through the use of drifts instead of expanders. Locomotive Foremen must see that tube drifts are not used under any circumstances, and that boilers are perfectly cool when repairs are being executed. A monthly return of repairs to fire boxes and boilers, showing by whom the repairs were executed, is to be sent to the Chief Mechanical Engineer not later than the 3rd of each month.

Washing out. 145. Locomotive Foremen are to see to the safety of the boilers of the engines under their charge, and to see that they are properly washed out at least once a week, or after running six hundred (600) miles; that all plugs are taken out; and that the top of fire box, tubes, barrel and water spaces round the fire box are kept clear of scale and dirt.

Tops of fire boxes and water spaces. 146. Locomotive Foremen are to personally examine the top of fire boxes through the plug holes as far as practicable every three (3) months, as also the barrel and water spaces by passing a long rod along the barrel of the boiler, and a thin wire around and up the water spaces where ordinarily good water is used. If the water used is dirty this examination should be made oftener.

Boilers not to be blown off. 147. To prevent straining of the plates by rapid cooling and consequent unequal contraction locomotive boilers must not, under any circumstances, be blown off for the purpose of washing out. In all cases the water must be allowed to get as cold as possible before the blow-off cock is opened, and then simply run off.

In cases of emergency, when it is necessary to wash the boiler out, and light up the engine in order to take up special running, the injectors must first be put on, and the steam pressure reduced to a minimum. Cold water may then be gradually added through top washing out plug to the hot water in the boiler to cool it down. The blow-off cock may then be opened, and washing out proceeded with. Care must also be taken to see that the brick arch in fire box is also fairly cool before starting to wash out.

Safety valves and pressure gauges. **148.** The safety valves and pressure gauges of every engine are to be checked with the Standard Pressure Gauge by the Locomotive Foreman, and the safety valve connexions are also to be examined, cleaned, and oiled once every three (3) months, and a record kept of same. In no case is the pressure to be increased beyond that fixed at the workshops, and pressure gauges must not be taken to pieces or repaired unless at Newport.

Safety valve and dome joints. **149.** All safety valve and dome cover joints to be made with gauze wire and red lead, and not with asbestos or indiarubber insertion.

Lead plugs. **150.** Lead plugs in crown of fire boxes are to be taken out every month. The old lead is to be melted out, and the plug refilled with new sheet lead melted, and a record kept of same. At out stations a duplicate lead plug is to be kept, and this work is to be done by the Driver.

Gauge cocks, &c. **151.** Gauge cocks and gauge glass cock plugs are to be taken out when a boiler is washed out and wire passed through holes. The plugs to be rubbed into the shell with clean tallow after cleaning. They are to be left working freely. Boilers must not be run with dirty water. The water must be renewed as often as possible before getting very dirty. Dirty water, quick blowing off, and washing out whilst hot must not be allowed.

Engines standing idle. **152.** In the event of any engines standing not in use for over a week at a time, all the water must be run out of boiler and all plugs left out until engine is required again.

Boiler tubes and blast pipe. **153.** The tubes of all engines are to be thoroughly cleaned every day, and the blast pipe taken down once every three months to permit of those tubes being cleaned, which cannot be otherwise reached. The blast pipes are to be burned out before being replaced.

Tenders and tanks. **154.** The tanks of all engines to be cleaned out at least once every six (6) months.

Smoke boxes. **155.** Smoke boxes are to be cleaned out daily, and when closing smoke-box doors care must be taken to see that all the ashes and dust are cleaned out of recess, in order that the door shall close perfectly tight.

Spark arresters. **156.** No engine is to be permitted to run unless fitted with a spark arrester or arresters in good condition. They must be brushed with the wire brush supplied for the purpose and kept perfectly clean, at least, once every day by the Fireman; the Driver being responsible that this is done.

As a general practice single arresters should be used in winter months, and double arresters in summer months.

Arresters when taken out for storing should be carefully labelled with the number of the engine to which they belong.

Neglect of instructions to be reported. **157.** The Inspecting Boilermaker must report to the Chief Mechanical Engineer cases of neglect of these instructions which come under his notice when examining boilers.

Stationary boilers. 158. All stationary boilers of pumping engines, &c., are to be thoroughly examined inside and out by the Inspecting Boilermaker in conjunction with the Inspector or Locomotive Foreman of the district every year, and tested with warm water by them at a pressure of 50 per cent. above the working pressure every two (2) years.

The Locomotive Foreman of the district and the Inspecting Boilermaker will be held jointly responsible that these boilers are examined and kept in repair.

Where portable or other boilers exist which cannot be internally examined, except by cutting to pieces, they must be reported to the Chief Mechanical Engineer with full particulars as to age, work done, water used, &c.

Unqualified persons not to caulk tubes. 159. No unqualified person is to be permitted to caulk the tubes of any engine. If any repairs become necessary a Boilermaker is to be obtained.

PART III.

INSTRUCTIONS TO ENGINE-MEN.

Issue of time-tables. 160. Every employé of the Chief Mechanical Engineer's Branch of the Victorian Railways connected with the working or running of trains is to be supplied, at the station where he is located, with a copy of every fresh issue of the Working Time-table, in accordance with Regulations 3 and 4, and every such employé is held responsible that he thoroughly examines it so far as his own station is concerned.

Where there is a Locomotive Foreman or Driver in Charge at a station it will be his duty to see that the men connected with his Branch receive their copies by the time named. Engine-drivers and Certificated Firemen will also be held responsible that they are supplied with all Service and Special Time-tables, also Appendices to the Working Time-table, as per above instructions.

All Engine-drivers and Certificated Firemen will be held responsible that they are provided with a copy of the latest published Rule Book, the last one being Regulation XIX., of the Victorian Railways Commissioners, dated 21st September, 1891; also with a copy of this Instruction Book. No excuse will be accepted for neglect of this important duty. They must give the necessary receipts in ink for the above, and be conversant with all the regulations contained in them, and in the Appendix to the Working Time Table.

Engine-men to leave their addresses.

161. Engine-men must leave their private addresses with the Locomotive Foreman or Driver in Charge, so that they may readily be found.

Time allowance before and after trains.

162. All train engines (passenger, goods, and suburban) are to be booked out at the time tabled starting time.

The Driver's time commences at 45 minutes before the time tabled starting time. This 45 minutes includes both time for all engine requirements, and time for getting on to train 15 minutes before starting time as per Regulation 332.

In exceptional cases, which shall be decided by the Chief Mechanical Engineer, extra time will be allowed to Suburban trains starting from Spencer-street, Prince's-bridge, or Flinders-street, for docking trains where the distance of the siding or the weight of the train, justifies an addition to the ordinary time allowed. Suburban engines which have to run coupled along the Viaduct (Melbourne), and any other Suburban engines specially situated, will also be similarly treated on their merits. A list of these exceptional cases to be sent by the Locomotive Inspector to the Chief Mechanical Engineer's Office every month for approval, before extra time is allowed.

Where the engine of any train is ordered out into the yard by the Traffic Branch earlier than 15 minutes before starting time, the extra time for which it is ordered out will be paid for on its being certified to by the Traffic Branch. If the time vary from day to day, a ticket must accompany each running sheet, but if the Traffic Officials can fix the time for a week or a month, one ticket will be accepted for the latter period named.

All train engines are to be allowed not more than 45 minutes after arrival of train for putting engine away. The total time to be allowed before and after trains must not exceed $1\frac{1}{2}$ hours, but the division of it may be varied at the discretion of the Locomotive Foreman.

Pilot engines which work more than one shift are to be allowed 45 minutes for getting ready at the commencement of work, and 45 minutes for putting engine away at finish of work.

In the case of train engines working broken shifts, the usual time (45 minutes), before and after, will be allowed at the commencement and finish of work, and an allowance of half-an-hour will be made for putting engine away after the first half of shift, also for getting engine ready for the second shift.

Coming late on duty.

163. Locomotive Foremen have been instructed to report any Driver who does not come to his engine 45 minutes before starting time. Any Driver so reported will be entered in the Conduct Book for the first offence, and punished by fine or otherwise for a repetition.

Drivers to come on duty on shed days.

164. Drivers must come on duty on their shed days and attend to their engines as may be required.

Neglect in this respect will be treated as absence without leave.

Trains to be run to time.

165. Drivers will take notice that where the times of arrival and departure are not expressly stated in the time-tables the time specified is that of departure from stations, and in all cases trains should arrive in sufficient time to enable shunting (if any) and other work to be

done, in order that they may leave at the appointed hour. Every effort must be made by Guards and Drivers to keep time shown in the time-tables. For exception see second paragraph of Regulation No. 204.

Trains keeping
bad time.

166. Many complaints have recently been made of bad time being kept by main line trains and branch line trains connecting with main line trains.

Locomotive Foremen will please instruct all Drivers to use every effort to keep good time, and to report every case where passenger or mixed trains are more than five (5) minutes late, and the cause.

Station-masters at terminal and junction stations have been instructed to make personal inquiry into every case of more than five (5) minutes delay, and any Driver considered to blame will be severely dealt with.

Notices to be
examined.

167. Drivers, before starting on return journeys, must ascertain what extra trains (if any) have been put on the road since they examined the notices at their home station.

Reports to be
furnished.

168. Drivers are to report fully, in writing, to their Foremen after arrival every incident that occurs in their trips, such as hot journals, &c., on engines, carriages, or waggons (numbers to be given), bad loading or stowing of goods, defective couplings, &c., defects in the road wherever observed.

Late arrivals and detentions of all kinds are also to be specially reported in writing after arrival.

Care must be taken to specify distinctly the cause of the detention, showing whether it was want of

steaming power, accident, or from shunting or other causes beyond the control of Engine-men.

All accidents or casualties involving injury to passengers or employes, damage to rolling-stock, or serious delay to trains must be promptly reported by telegram to the Chief Mechanical Engineer, full information to be given as to time, place, cause, and nature of accident.

Details of break-
ages to be given.

169. In all cases of accidents or break-ages to the draw gear of vehicles, Drivers must be particular to specify in their reports whether the draw bar, draw spring, "U" bolt, side chains, links, &c., broke, giving number and class of vehicle, and also state clearly whether the train parted or not.

In all cases where possible the broken part to be forwarded to Rolling-stock Inspector for examination.

In all cases of accident to engines (such as the breaking of a side rod) where there is the slightest possibility of the permanent way being injured, the nearest Permanent-way Man must be at once informed so that the road may be examined before another train passes over it.

Reporting repairs
required.

170. Any repairs required to engines must be reported in the Repairs Report Book, which will be kept for that purpose in the running shed. When any special work is required, Drivers should see the Foreman and explain the case personally in addition to furnishing a written report and entering it in the Repairs Report Book.

Fires to be
reported.

171. Engine-men must, at all times, keep a sharp look-out for fires occurring close to or anywhere near the railway line, and report

the same as soon as possible to their Locomotive Inspector or Foreman, giving full particulars as to locality and cause of fire, so that immediate inquiry may be made into all the circumstances connected therewith. Reports to be sent by telegraph, if necessary, and the nearest Permanent-way Repairer notified.

Every precaution is to be taken to prevent fire escaping from the ash pan as well as from the funnel.

Several cases have recently come under notice of Engine-men failing to report fires as instructed, all Drivers are now informed that any future omission of this kind will be severely dealt with.

Tobacco smoking. 172. Tobacco smoking is strictly prohibited while standing at platforms, or when shunting within sight of the public.

Parcels not to be carried. 173. Parcels must not be carried on Engines for employés or the general public.

Persons without passes not to ride on engines. 174. Drivers must not allow any one to ride on their engines unless by special authority from the Chief Mechanical Engineer. Employés and others holding passes specially endorsed for engine may be permitted to travel on engines, and in a few special cases permits may be given from the head office for visitors and others to travel on engines; but it must be distinctly understood that in all cases a proper pass or railway ticket must be held by the passenger as well as the permit from the Chief Mechanical Engineer.

Disputes between Engine-men and Guards. 175. Should any dispute arise between the Driver and Guard of a train, it is most desirable that a third party (other than the Fireman) should have his attention called to the subject in dispute, so as to give evidence in case of inquiry.

Water cranes to be securely put away. 176. Engine-men, after using water cranes, must see that they are left clear of the roads and securely fastened. (See Regulation 404.)

Lamps to be lit at stations. 177. The lighting of engine lamps should, as far as possible, be done at stations, or when engines are not moving, to minimize as much as possible the risk of Engine-men falling off the foot plate.

Firemen to assist in traffic work. 178. Firemen are to assist in traffic work at the following places, as per Regulation 335:—

- (a) At all stations in charge of women, and at sidings with no one in charge.
- (b) To uncouple engines when necessary at Watering Stations, Spencer-street, Flinders-street, Prince's-bridge, Geelong, Ballarat, Ararat, Stawell, Maryborough, Kyneton, Castlemaine, Bendigo, Seymour, Benalla, and Warragul excepted, and to couple on again.
- (c) To uncouple engines running round trains at suburban stations outside Prince's-bridge, Flinders-street, and Spencer-street, and to couple on trains; but whenever a Traffic man is available to couple up the engine without interfering with his other duties, after it has run round the train, he is to do so.

(d) To assist in loading butter, eggs, cream, perishable and van goods at small stations when engine is standing at platform, and time can be saved in so doing.

Engine-man not to do shunting without both Driver and Fireman.

179. Any Driver shunting a train without a Fireman, or some other person acting as such, on the foot plate, or any Fireman or other unauthorized person shunting an engine or train by himself in the absence of the Driver will be liable to dismissal. (See Regulation 335.)

Engines not to be fired in tunnels.

180. Drivers should avoid firing up when passing through tunnels. All fires should be as bright as possible before entering.

Engines not to be fired up in goods sheds.

181. Drivers of pilot engines are not to fire up unnecessarily when in the goods sheds.

Engines not to be permitted to blow off.

182. Attention is called to the waste of fuel occasioned by some Drivers permitting their engines to blow off hard, particularly when standing at platforms.

This practice must be carefully guarded against, and any Driver offending in future will be punished.

Care to be used in starting and stopping.

183. Drivers are to use the utmost care both in starting and stopping trains, so as to avoid any injury to passengers or live stock, or damages to draw gear.

Care required in handling live-stock trains.

184. Complaint has been made that the mortality amongst cattle carried in trucks is on the increase. This is attributed to want of care on the part of Engine-drivers in starting and stopping trains too suddenly, thus jerking the animals off their legs.

Engine-men are cautioned to exercise the greatest care in starting, stopping, and shunting live-stock trains. Any neglect of this instruction will be severely dealt with.

Live stock trespassing.

185. Great care must be taken to avoid killing any live stock which may be trespassing on the line, and, if necessary, the engine must be brought to a full stop to avoid killing or injuring stock.

Full reports to be furnished when stock is injured or killed.

Trains on Staff ticket stopping at stations in charge of women.

186. When it is found necessary for a train carrying a Staff ticket to stop at a station which is in charge of a woman, the Driver must at once inform the woman in charge that he is travelling on Staff ticket, so that the necessary danger signal may be exhibited for ten (10) minutes to protect the rear of the train.

Staff irregularity.

187. Attention has been directed to a practice found to be in vogue at some stations of Station-masters delivering Staff tickets tied to a ring, and *Drivers accepting the same without seeing the Staff for the section.* It is important that this practice should be rigorously put down, and also that of Drivers entering terminal stations with passenger trains relying on and using the Westinghouse brake.

Assistant engines.

188. Engines assisting a train in the rear must not leave the train until they have passed through the block section (see Regulation 372). This is to enable the Signaller to give "Line clear" to the box in rear.

Engines sticking on Footscray bank. 189. To prevent delays to traffic the following steps are to be taken should a down goods Driver stick on the bank and be unable to take the load to Footscray:—

Fifteen trucks are to be cut off and taken to the siding at Footscray, engine to return on same road for remainder of train, which must be taken through to Williamstown or Newport if it would cause delay to traffic to stop for first portion. Guards to give the Driver the necessary written order, and protect train in accordance with Regulations.

Irregularities in block system. 190. Irregularities of the block system will be treated most seriously, and any neglect in obeying signals will not be overlooked.

Signals extinguished or imperfectly shown. 191. It has been stated that Drivers are not so strict in reporting cases of imperfect or extinguished signals as they should be, and they are warned that any neglect of this kind will be met with severe punishment. They must not only take care that their own proper signals are in good order and properly worked, but look back after passing stations and see that they are showing properly for trains in an opposite direction. Reports are to be made to the Locomotive Foreman by Drivers as well as to the Officer in Charge of the station where the irregularity occurs.

It is found that instances have occurred of Drivers passing home signals while at danger on receipt of a green light or other hand signal. Special attention is again directed to Regulations 116, 117, and 118,

which prescribe that home signals must never be passed when at danger except as provided for in Rule 118.

Drivers are also specially cautioned that when they pass an interlocked home signal at danger it is possible for the signalman to alter the road and derail the train or engine, whereas if they wait till the home signal is lowered nothing of this kind can happen.

Drivers to look out for hand signals. 192. Engine-drivers should not content themselves with merely observing the fixed signals, but are earnestly warned that their unceasing attention should be given to the state of the road and to the possibility of hand signals being required to be seen and acted upon at any moment.

Gangers and Repairers when executing the needful repairs to the line must not only arrange to avoid delaying the regular trains, but must also remember that a special train may have to be run at any moment.

Proper head signals to be carried. 193. The practice of issuing cards to Gangers and Gatekeepers in the Existing Lines Branch, notifying them of the running of special trains, has been discontinued.

Engine-men must be careful to carry head or tail signals when necessary, and must give special attention to whatever hand or other signals they may receive at crossings.

This order applies more particularly to light engines which may be required to run at short notice. The Driver, especially when going round quick curves, must have his engine thoroughly under control, and keep a specially sharp look-out for signals or obstructions.

Drivers not to start without Guard's signal.

194. The attention of all Drivers is especially called to Regulation 263, which provides that Guards must instruct the Driver as to the starting, stopping, and general working of the train. It has been ascertained that a practice has grown up of Drivers moving their trains without receiving a proper signal from the Guards. Drivers of goods trains are therefore specially instructed that they must not start from terminal or road-side stations without a signal from the Guard.

When Drivers stop at road-side stations they must not move or start their full train without a signal from the Guard. The engine or any portion of the train must not be uncoupled for shunting purposes at road-side stations until the Guard has secured the train and given the necessary signal. This order applies to trains on main lines, and is not intended to apply when a portion of a train is shunting in a station yard under the direction of the station staff.

Overshooting platforms.

195. If from any cause a train overshoots a platform, the Driver is not to set back until he receives a signal from the Guard.

Hand signalling when shunting is done at night.

196. Shunters have been directed to use the following signals when shunting at night in yards, viz. :—

When a train or engine is required to move forward, a White light is to be moved slowly up and down.

When a train or engine is required to put back, a White light is to be waved slowly from side to side.

When a train or engine is required to stop, a Red light is to be shown.

When shunting is completed, a steady White light is to be shown to the Guard, who will repeat and then show Green light to the Driver and blow his whistle, upon which signal the Driver can start.

Hand signals in Melbourne yard.

197. All instructions given by the Yard Inspector must be obeyed by Engine-men as well as Shunters, and hand signals are to be accepted in the Melbourne yard when authorized by him and given by Yardsmen, Yard Foremen, or Assistant Yardsmen.

Drivers challenging signals.

198. Drivers are not to challenge for another road until they have passed the points on the road on which they are running.

Good look-out to be kept in Melbourne yard.

199. Engine-men are again reminded that they are to keep a good look-out for all signals when leaving and arriving in Melbourne yard.

Look-out to be kept passing signal boxes.

200. All Drivers, whether working passenger, goods, ballast, or any other description of train, must keep an eye on every signal box as they pass, to observe and act on any hand signal which the Signaller may find it necessary to give.

Train divided signal.

201. Engine-men must note carefully Regulations 146, 187, 293, 358, 382, and other regulations concerning signals, but particularly those referring to the "Train Divided" signal, which is a Green lamp or flag waved slowly from side to side. This signal may not often be used. It is all the more important, therefore, that Drivers should be on the alert to understand and obey it when given.

Unlocked doors. 202. While trains are running with unlocked doors Drivers and Firemen must keep as constant a look-out as possible while running to see that all is safe.

Engines on lines with cattle pits. 203. Engines with only one cow catcher may run tender first during daylight on lines where there is no turn-table available to turn them. Drivers to run cautiously and keep a good look-out.

Engine-men in all cases when approaching cattle pits must sound the whistle at such a distance from the crossing as will give ample notice of the approaching train.

Public crossings. 204. Great care is to be observed at all crossings used by the public, and the whistle must always be sounded when approaching them.

Shunting on the Australian wharf. 205. Drivers when shunting trucks down to the Australian wharf are to bring their trains to a stand-still when the foremost vehicle arrives at the north side of the wharf road. Two shunters will then walk in front of the train, the speed of which must not exceed 4 miles an hour until the trucks reach their destination.

On returning, the same precaution is to be observed.

Care to be shown when shunting at Newport. 206. Great care must be exercised when shunting in and about the Newport workshops. When running on the roads between the shops the speed of the engine must be reduced to dead slow, the whistle must be frequently sounded, and all vehicles being shunted must be coupled to the engine. A sharp look-out must always be kept as a precaution against accidents.

Precautions during race traffic at Flemington. 207. When race traffic is being run between Melbourne and Flemington, Drivers of all trains must approach Franklin-street, Newmarket, and Coburg Junctions with extreme caution.

Drivers of race trains to see that their tenders are well loaded with coal, and tanks filled with water, so as to add as much weight as possible when running tender first.

All race trains must leave Spencer-street engine first.

Trains not to be run before time. 208. Any Driver arriving before time with his train, or running at too high a rate of speed, will be punished. (Except as provided for in Regulation 204.)

Speed through junctions and facing points. 209. Drivers must not run through junctions and facing points at a greater speed than 12 miles per hour.

Speed round curves. 210. Engines entering on or coming off branch lines through curves on to the main lines at junctions are not to exceed 12 miles per hour. (See Regulation 388.)

Speed of express trains. 211. The speed of express trains must not be excessive when running over points and crossings, through stations, and around curves.

By the strict observance of this rule complaints will be avoided from passengers who get alarmed at the oscillation of the train.

Speed down long inclines. 212. Drivers are strictly instructed to use every care in descending long inclines at a moderate rate of speed, especially on the Main and North-Eastern Lines.

Speed of goods
train in Melbourne
yard.

213. The speed of goods trains inwards and outwards between Dudley-street Signal Box, Melbourne, and Goods Yard, Spencer-street, is not to exceed 5 miles an hour. Drivers and Firemen in charge of trains must also keep a special look-out when travelling between the above-named points.

Speed between
Oakleigh and
Caulfield.

214. The speed of trains passing over the level crossings between Oakleigh and Caulfield must not exceed 20 miles an hour.

Speed of trains.

215. Trains travelling over the principal viaducts must not run at a greater speed than 15 miles an hour. This also applies to the Viaduct between Spencer-street and Flinders-street.

Trains passing through the junctions on the north side of North Melbourne must not exceed a speed of 15 miles an hour, nor when passing over the curves on each side of the Merri Creek-bridge between Bennett-street, North Fitzroy, and Northcote Station.

Trains passing over Glenorchy-bridge and Stratford River-bridge and the Wooden Viaducts approaching it must not exceed a speed of 15 miles an hour. This also applies to the bridge $2\frac{1}{2}$ miles from Katamatite.

Trains must not run over the "800-ft. radius" curve, crossing the Plenty-road to the Clifton Hill Station, at a greater speed than 8 miles an hour.

Trains running on Grampians Quarries Line must not exceed a speed of 12 miles an hour.

Trains passing over the level crossing between Oakleigh and Caulfield and over the Emu Creek-bridge, Terang side of Boorcan, are not to exceed 12 miles an hour.

No train is to exceed 30 miles an hour between Traralgon and Sale.

No train is to exceed 40 miles an hour running from Dog Trap Gully to Rowsley.

Trains running through Junction leading to Coal Mines at Korumburra must not exceed a speed of 8 miles an hour.

The special attention of Drivers is called to Regulation 388 with regard to the speed to be run in passing through facing points.

Speed between Kew
Junction and
Hawthorn.

216. Drivers running on the Camberwell and Box Hill Lines must not exceed 12 miles per hour around the curve between Kew Junction and Hawthorn Station.

Speed between
South Yarra and
Hawksburn.

217. The speed of express and other trains is not to exceed 20 miles an hour when passing over the curves between South Yarra and Hawksburn, and on the south side of Richmond.

Speed through
Mordialloc.

218. The speed through Mordialloc Station must not exceed 12 miles an hour.

Drivers to stop
between Beech-
worth and Everton.

219. Drivers when running from Beechworth to Everton are to almost stop their trains at the summit of the steep incline and commence the descent without steam.

Examination of
trains.

220. Engine-men must approach the platforms at all examining stations at a speed not exceeding eight (8) miles per hour, so as to permit the Examiners to touch the boxes of the vehicles on the train.

Examination of
trains, branch lines.

221. On branch lines where there are no Train Examiners at the junction or terminal station, Engine-drivers must examine all vehicles on their trains every trip.

Locomotive Inspectors and Foremen will issue detailed instructions to all Drivers in their districts, to insure this order being carried out. These instructions are to be varied as may be required on account of future changes of time-table or running arrangements.

Precautions
against fire.

222. The utmost care must be taken during the dry season to have fire bars as close as possible, to prevent fire dropping out on the road. The admission of air by the fire-box shoots must also be carried out to the fullest extent practicable, so as to enable the engine to run with damper nearly closed.

Spark arresters, smoke boxes, tubes, and ash pans are to be kept clean, and blast pipes are to be kept clean and to their full size.

Directions for
burning coke.

223. Drivers when burning coke can by a little care and management bring their engines into the shed with a comparatively thin fire by breaking the coke in small pieces for the last firing or two and firing thin all over the box.

Firewood, if used with discretion, will also assist to reduce the quantity of coke in the fire boxes if used towards the end of the journey.

Sand not to be
used at points.

224. Injury is sometimes done to points and crossings by the injudicious use of sand at such places.

Drivers must be very careful to abstain from using sand when passing over points.

Engines to have
half-a-gauge glass
of water.

225. Engines when ascending inclines are never to have less than half-a-gauge glass of water, otherwise there is danger of burning the fire boxes and tubes. (See Regulation 396.)

Engines not to be
allowed to prime.

226. Drivers must not allow their engines to prime, as many carriages have been injured from that cause, in addition to numerous complaints of damage to passengers' clothes.

If priming arises from dirty boilers the fact is to be reported in writing at once, otherwise it will be treated as due to unskilful driving.

Daily examination
of engines to be
made.

227. The wheels, tyres, axles, side rods, brake screws, nuts, blocks, and all working parts of engines are to be carefully examined every day by Drivers, and if found worn or in any way defective they are to be at once reported.

Screw jacks to be
kept clean.

228. Drivers will be held responsible for keeping the screw jacks and screw couplings of their engines clean and in good order.

Lubrication of
dead engine.

229. When a dead engine forms part of a train load, the Driver of the train engine will be responsible for the lubrication of the second engine.

Engine disabled.

230. In case of an engine becoming disabled, either partially or wholly, the Driver must communicate with his Foreman by wire, and, where possible, take such steps as will enable him to work the engine and train either to the end of the journey or to the nearest station.

Engine derailed. 231. In all cases where an engine has been derailed the Driver must make a careful examination of all the working parts, especially the axles and springs, and before continuing the journey he is to move the engine carefully a few revolutions to ascertain that it is in a fit condition to run.

Engines or vehicles off the road. 232. In all cases of engines or vehicles getting off the line Drivers must endeavour to ascertain the cause and report.

No vehicle is to be allowed to run after having been off the road until the wheels have been gauged.

Vehicles derailed. 233. In cases where vehicles are derailed between stations during the running of any train the Driver is to make a careful examination of the running portions, and if found safe to travel the vehicles may be taken to the nearest siding and left for the Rolling-stock Inspector to examine. The Rolling-stock Inspector to be promptly advised, by telegraph if necessary.

Engines assisting up Warrenheip bank. 234. In running up the Warrenheip bank when one or more engines are assisting a train in the rear they will not be coupled to the train, which must carry the usual tail signal in the rear; and the assisting engine, or the rearmost engine only if more than one engine, must also carry a tail signal.

Lines where engines may not run coupled. 235. Only one engine is permitted to be attached to any train between Castlemaine and Maryborough, Dimboola and Serviceton, between Beechworth, Myrtleford, and Beechworth Junction, the Goulburn Valley Line, and on the Gippsland Line beyond Oakleigh. If the load is too heavy for one engine, the train must be

divided. The bridges on these lines are not intended to carry two engines coupled.

Two engines may be coupled over the Glenorchy-bridge, but on the strict condition that the speed is limited to 10 miles an hour.

Lines where tank engines may not run. 236. Tank engines must not be run beyond Mordialloc on the Frankston Line, nor beyond Ringwood on the Healesville Line. The "O" class may run to Mornington.

INSTRUCTIONS FOR WORKING THE GRADES LEADING TO LOCOMOTIVE COAL GEARS AT MELBOURNE, BALLARAT, BENDIGO, WARRAGUL, SEYMOUR, AND ELSEWHERE.

Locomotive coal gears. 237. (a) The loads are always to be pushed up the incline, and are to be limited as under:—

Class of Engine.	Grade 1—20. Load in tons.	Grade 1—22. Load in tons.	Grade 1—25. Load in tons.
A	97	106	119
B, M, U	80	87	98
C, H, J, F	68	75	84
D, E	104	113	128
G, K	70	76	86
L, P, V	78	85	96
N	59	65	73
O	96	105	118
Q	94	109	116
R	106	116	131
R (new)	115	126	142
S	93	102	115
T	88	97	109
W	100	109	123
X	116	127	143
Y	129	141	159

(b) As each waggon reaches the level the brake is to be let down. The Driver should also apply the engine brake, if necessary, on reaching the level, but not before.

(c) All coal waggons must be properly marshalled before being sent to the gears.

(d) When a rake of hoppers is placed on the stage, the empty waggons should be withdrawn before a second rake is sent; and to effect this it is advisable that the engine pushing the trucks on to the stage should remain coupled and bring them back.

(e) Should medium or other waggons be on the stage, either empty or partially or wholly loaded, a second lot must not be placed on the same road until all the brakes of the standing waggons have been pinned down.

(f) No kicking or double shunting is to be allowed under any circumstances. Engines must remain attached till the waggons are at a stand and secured.

(g) Drivers before going on or coming off the coal gears must see that their boilers show a full glass of water, and to run engine first on the up grade; every care must be taken to keep sufficient water over the crown of the fire box when on grade.

Instructions for
use of continuous
brake.

238. (a) Drivers of trains or engines fitted with automatic continuous brakes are cautioned against placing implicit reliance upon the continuous brake for the purpose of stopping at terminal stations, or at road-side stations, when another train is standing on the same line of rails.

(b) The time to be gained by coming *into a terminal station* at a high rate of speed is insignificant when the great risk attendant upon such a proceeding is taken into consideration.

(c) When approaching terminal stations, and stations where obstructions exist on the same line of rails, Drivers are to work their trains with the hand brakes, *excepting in cases of emergency, when the continuous brake is to be brought into operation.*

(d) In all other cases the continuous brake is to be used, due regard being paid to the momentum of the train, so as to avoid overshooting the platforms.

(e) In the event of a connexion breaking or brake not working properly on any carriage, the Driver must send his Fireman to shut off the connexion or release the brake on such vehicle.

Precautions to be
observed entering
terminal or dead-
end stations.

239. Engine-drivers in charge of trains must approach all terminal or dead-end stations and junctions from the trailing end with great care, having their trains well under control, so that they can stop with certainty by means of their ordinary hand brakes. Where traverse tables exist the engine should stop clear of same.

Each train must be brought to a stand 4 or 5 yards before reaching the stop buffers, or the rear or yard end of any carriages that may be standing on the platform lines. A vigilant look-out must be kept by Drivers on entering the platform sidings, to see how far such sidings are clear, and regulate their speed accordingly.

Use of Westinghouse brake in shunting.

240. In station yards where regular pilot engines are employed the Westinghouse brake may be used when shunting so long as Drivers exercise the utmost care to apply the brake with skill so as to avoid injury to rolling-stock, such as breaking draw bars, draw chains, &c.

Drivers will be held to the fullest extent responsible for any damage they may do by unskilful application of the brake.

RUNNING SHED RULES.

Shed running sheet to be examined.

241. A shed running sheet will be posted daily in every running shed for the information of all concerned, and Engine-men must examine it carefully before leaving duty.

Engine-men left off the sheet.

242. Any Engine-man whose name does not appear on that sheet must report himself to the Locomotive Foreman before leaving the premises otherwise he will be treated as being absent without leave.

Engine-men absent from duty.

243. Any Engine-man absent from duty on leave through illness or any other cause must report himself to the Locomotive Foreman before 5 p.m. on the day before he wishes to resume.

Economy in fuel and stores necessary.

244. Great care is to be used to reduce to the lowest possible point the consumption of fuel and stores. Economy in these matters will be taken into consideration when promotions are being made.

Drivers must personally sign all fuel and store tickets at the time they receive the material. The signature of the Fireman or any one else will not be accepted.

245. Engine-men must test the level of the water in their boilers immediately on getting on the foot plate by opening the test cocks and checking by the lower-gauge cocks.

This should be repeated at intervals during the day, and also the last thing at night before the engine is put away.

Whistle to be sounded.

246. Before moving an engine in the shed or station the Driver must sound his whistle and see that the line is clear.

Engine to be given steam gradually.

247. Engine-men must remember that it is at all times essential that steam be put in the cylinders gradually, both at starting and while running.

Turn tables.

248. Drivers are in all cases to run cautiously up to turn tables, and to stop their engines before running on. Where necessary the Fireman should be sent forward to ascertain that the table is right for use. When the engine is placed on the table ready for turning, the Driver must put the reversing lever in mid-gear, open the release cocks, and see that all brakes are securely applied.

Care of hose.

249. The washing-out hose, after being used, is to be carefully rolled up and stowed away in the place appointed for it.

Running sheets.

250. Drivers must deposit their running sheets in the place set apart for them, either before leaving duty *on the day of running or before 8 a.m. next morning*. Failure to do so will lead to severe punishment.

They must fill in carefully the exact amount of coke, coal, wood, oil, tallow, and waste used each day, and must attend carefully to the classification of mileage; and on no account is shunting or other work to be charged to an engine when standing.

Any Driver falsifying his sheets will be liable to dismissal.

Oil for lamps not to be shown.

251. Oil used in lamps is not to be shown on running sheets.

Drivers' tokens.

252. Drivers and Firemen are required, before leaving the running shed at the end of the day, to take up their tokens, and, upon being called for early train, they must hand the tokens over to the Caller-up.

In the event of an Engine-man having neglected to take up his token, he will be required to sign his name in a book carried by the Caller-up.

This system has been introduced solely for the protection of Engine-men, and any breach of it will be severely dealt with.

Watches to be sent to Telegraph Superintendent.

253. Drivers when going on holidays should forward their watches to the Telegraph Superintendent, in order that they may be examined and, if necessary, cleaned and repaired, so as to be available for use on the Driver's return to duty.

Tubes to be cleaned daily.

254. All engines are to have their tubes thoroughly cleaned every day by the Fireman before he leaves duty.

Putting engines in shed.

255. Drivers must see that their Firemen thoroughly clean their ash pans and smoke boxes before putting their engines away, and must see that they are supplied with sufficient fuel, and are thoroughly equipped for the next day's work, unless specially instructed otherwise by the Locomotive Foreman.

Dropping of fires.

256. The places appointed for dropping fires and cleaning ash pans are the ash pits at coal stage, and any Driver doing this work elsewhere, particularly in the proximity of wood heaps, will be severely punished.

Tank and boiler to be filled.

257. No engine is to be put away until both tank and boiler have been filled with water.

Fuel to be stacked carefully.

258. Drivers are to use every care in stacking firewood and coal on the tenders to prevent them falling off on to the line. (See Regulation 337.)

Sand boxes to be kept full.

259. Before leaving the shed every Driver must see that the sand boxes of his engine are full of dry sand, and that the delivery pipes are clear.

If necessary, the sand is to be freely used, to increase the effect of the brake or prevent the wheels slipping.

Washing out of
boilers by Drivers.

260. At stations where boilers are washed out by Engine-men, the Driver will be held personally responsible for the work being properly done (see Boiler Regulations, pages 52 to 60.) At least every three months all boilers should have a thin wire passed into the plug holes, and between the stays of fire box, to feel for any accumulation of scale or dirt.

The barrel of boiler should have a long rod passed through the plug hole in smoke box, to feel that no scale or dirt has accumulated, and a record is to be kept of such examination.

Care necessary in
replacing plugs.

261. After a boiler has been washed out great care should be observed in replacing the plugs, to see that they are not put in across the thread.

Boilers not to be
blown off.

262. To prevent straining of the plates by rapid cooling and consequent unequal contraction, locomotive boilers must not under any circumstances be blown off for the purpose of washing out. In all cases the water must be allowed to get as cold as possible before the blow-off cock is opened, and then simply run off.

In cases of emergency, the injectors must first be put on, and the steam pressure reduced to a minimum. Cold water may then be gradually added—through the top washing-out plug—to the hot water in the boiler. The blow-off cock may then be opened, and washing out proceeded with. Care must also be taken to see that the brick arch in the fire box is cool before washing out is commenced.

Tools to be carried.

263. Engine-men will be held responsible for seeing that the following tools are on all engines under their charge:—

No.	Article.	No.	Article.
3	Head lamps	1	Tommy bar
1	Tail lamp	1	Chisel bar
1	Hand-signal lamp	1	Pinch bar
1	Indicator lamp	2	Jack bars
1	Gauge-glass lamp	2	Screw jacks
2	Oil bottles	2	Ratchets
1	Small bottle	1	Shovel
2	Oil feeders	1	Long-handled shovel
1	Tallow can	1	Pricker
1	Tallow kettle	1	Fire dart
2	Shifting spanners	1	Tube dart
5	Ordinary spanners—1, $\frac{7}{8}$, $\frac{3}{4}$, $\frac{5}{8}$, $\frac{1}{2}$ in.	1	Plug rod
1	Set of gland spanners	4	Plugs
1	Set of Westinghouse brake spanners	1	Spring clip
1	Box spanner for mud plug	1	Double-hook chain
1	Brake spanner, $1\frac{1}{2}$ -in.	1	Draw chain
2	Files	2	Spare links
2	Flat chisels	1	Piston chock
2	Crosscut chisels	2	Deals for screw jacks
5	Assorted punches	1	Piece of tarred rope
2	Drifts cotters	1	Piece of spun yarn
1	Hand brush	1	Piece of canvas
1	Copper hammer	1	Piece of copper wire
1	Coal hammer, large	4	Wood wedges
1	Hand hammer	1	Box of fog signals (12)
1	Tomahawk	1	Box of gauge glasses
1	Saw		Gauge-glass washers
1	Bucket		Assorted split pins
1	Set of piston draw cotters		Nuts and washers
1	Set of valve spindles cotters		Axle-box packing
2	Padlocks with duplicate keys	$\frac{1}{2}$	Pound of waste
		1	Disc
		1	Red flag
		2	Packing drawers
		1	Steel brush for spark arresters.

Tools of engines.

264. No Driver is to take tools from one engine to another. If short of tools he must apply to his Foreman.

Any Driver found in charge of an engine short of tools, or having tools belonging to another engine, will be punished.

Cleaners not to move engines in steam.

265. Cleaners or other unauthorized persons are not to move engines in steam under any consideration. (See Regulation 335.)

All engines are to be out of gear and the brake hard on while getting up steam.

Cleaners not to interfere with release cocks, &c.

266. Cleaners must not interfere with release cocks, injectors, or blowers of engines.

If the engines they are cleaning should blow off, or fail to make steam, they must at once notify the Foreman.

Lighters-up to be informed when boilers are empty.

267. Any employé letting the water out of a boiler for the purposes of examination or repair should notify the Lighter-up and hang on the front of the boiler a plate bearing the words "Boiler Empty."

Red flags to be fixed to engines under repairs.

268. Any Fitter or other employé disabling an engine for repairs must affix red flags to both the buffers.

INSTRUCTIONS FOR THE USE OF THE SIGHT-FEED LUBRICATOR ON VICTORIAN RAILWAY ENGINES.

Action of sight-feed lubricators.

269. The action of the sight-feed lubricator is as follows:—When steam is admitted into the lubricator it is condensed in the

globe, at the same time it is condensed in an internal pipe in the globe and charges the sight-feed glass with water. On opening the water valve the pressure is admitted to the bottom of the oil chamber, and forces the oil through an internal pipe to the sight-feed valve. By then opening the retention valve a jet of dry steam is admitted to the cylinders, and by opening the sight-feed valve the oil passes by its specific gravity through the water in the sight-feed glass to the retention valve. Here it is met by the jet of dry steam which mingles with the oil and forces it away in the form of a spray to the steam chest and cylinders where it lubricates the valves and cylinders.

Directions for working.

270. Drivers should closely attend to the directions given hereunder:—

To fill the lubricator.—Close steam and other valves, open the drain valve and the filler plug; then fill with oil, allowing about 1 inch for the expansion of oil.

To fill the feed glass with water.—Open the steam valve one turn and close retention valve.

To lubricate.—Open the steam valve three (3) turns, then open the water and retention valves a quarter of a turn, and regulate the drops of oil by the sight-feed valve.

Broken glass.—If the glass breaks, close the steam valve and the retention valve and feed by hand until the glass is replaced by opening the hand-feed valve and pouring in oil.

To replace a feed glass.—Take out the filler plug and drop the glass in.

To replace a sight-feed glass.—Take out the valve seat and push the glass up

To clear the sight-feed glass.—Close the steam, water, and retention valves, open the drain valve a little, and remove the sight-feed valve seat.

Note.—The lubricator should be refilled when the oil disappears in the feed glass. All oil must be strained before being used, and the lubricator must be blown through once a fortnight. The mountings must not be tampered with.

The following hints will also be found useful:—

- (a) Keep the gland nuts well “topped up,” packing will not then require to be compressed so hard, and broken glasses will be avoided.
- (b) Use strips of hose bag for packing, and always have some on the engine, also some spare glasses.
- (c) The bottom gland nut or sight-feed glass serves two (2) purposes, viz., it splits a joint and keeps the glass tight.
- (d) If the oil run up the side of sight-feed glass instead of the centre, tighten up the bottom gland nut “one cant.”
- (e) If the water be lost in sight-feed glass, tighten up the bottom gland nut “one cant.”
- (f) The sight-feed glass can be cleaned while running by shutting off the lubricator and opening the retention valve fully, or when the oil chamber is empty by leaving the drain valve open and opening the steam and sight-feed valves.

- (g) When lubricating the Westinghouse brake cylinder only, and double or treble sight-feed lubricators are fitted, the retention valves on the opposite side should be closed.
- (h) When an engine has finished running and is “at rest” in the shed, the lubricator should be worked freely for two minutes.
- (i) It is essential that the oil kettles be kept clean. By observing this much trouble will be saved.

INSTRUCTIONS FOR WORKING THE WESTINGHOUSE BRAKE.—TO DRIVERS.

271. Drivers must see—(a) that the top or steam cylinder is sparingly lubricated with oil; (b) that the air cylinder is lubricated with a small quantity of petroleum (tallow or oil must not be used in the air cylinder, as they destroy the hose pipe); (c) that the air pump is constantly run, but never faster than is necessary to maintain the required pressure in train pipe, say, for goods and passenger suburban trains 50 to 60 lbs., and for express and high speed passenger trains 70 to 80 lbs.

If a Driver finds the air pressure in his train too high, he can easily reduce it by applying the brake with full power, and then releasing it.

Drivers when coming on to a train, or when carriages are being attached, must have the air pump working and the brake regulator in the neutral position; this will enable them to accumulate a high pressure of air in the main reservoir, and so obtain an excess of air without increasing the pressure in the working reservoirs of the engine and tender. When the coupling-up is completed, the Driver must

let the accumulated air pass into the train, and immediately replace the handle in the neutral position; the Driver will then see by the reduction of air in the gauge if the Guard has tested the brake.

The Driver must, before starting, ascertain from the Head Guard how many vehicles are fitted, and that the pipe of the Westinghouse brake is connected ready for working.

Great loss of time would be caused by Drivers shutting the steam off the donkey pump, and so allowing the train pressure to drop, by leakage in the train pipe, until the triple valve is lowered by the superior pressure in the reservoir, and thus applying the brakes. The brake is applied by a decrease of air in the main pipe, and if the decrease is made by leakage it acts the same as if the decrease had been made by allowing air to escape by way of the regulator.

To apply the brakes lightly, the regulator valve on the engine must be partially opened, and as soon as the gauge shows a reduction of from 5 to 8 lbs. this valve must be gently closed.

The brakes are fully applied when the pressure shown in the gauge is reduced by 25 lbs.; any further reduction would be waste of air. In cases of emergency, however, the Driver's valve must be fully opened to let all the air in the brake pipe escape.

Long trains require more careful handling than short ones, and a greater quantity of air must be discharged from the brake pipe.

The brake should be applied in good time, so that a moderate application may stop the train, and avoid jerks and skidding of the wheels.

In releasing the brake, the regular handle must be moved back against the stop for about ten seconds, and then placed in the second position, where it must remain while the train is running.

To prevent a rebound, the Driver should release the brakes in proper time before coming to a dead stop.

Delays will be caused by Drivers not releasing all the brakes in the train, some of the blocks remaining on in consequence of not keeping the brake regulator in the extreme back position long enough to release the brakes properly. The regulator should be brought back smartly, so that the force of the extra pressure can instantly release the blocks from the wheels of the whole train. An extra pressure of 20 lbs. in the main reservoir will give a great force upon the pistons of the triple valves, and is sufficient to drive them up. Delays will occur if Drivers neglect to keep this amount of extra pressure in their main reservoirs.

After a train has been reduced to a very slow rate of speed, it must be finally stopped by a hand brake on engine or tender (except in cases of emergency), and the Westinghouse brake must not be on when the train stops. This also applies to stopping trains at water cranes.

Delays may arise from connecting portions of trains carrying different pressures; and to avoid detention from this cause Drivers must be careful not to leave more than 50 lbs. pressure in a train when detaching at junctions or termini. The Driver who intends to couple-up at such places should, as already advised, carry a high pressure, say 70 lbs., in the main reservoir, for the purpose of releasing any brakes which may happen to be on.

If vehicles having different air pressures be coupled together, the brakes will apply themselves on those which have the highest pressure.

It is most important that Drivers should let the water out of their main reservoirs, drip cups, and triple valves at least once a week.

When two engines are coupled together, the Driver of the leading engine must take charge of the brake and work it as he would on an ordinary train, not considering the second engine except as a vehicle. The Driver of the second engine must keep his handle in the neutral position, and donkey engine slowly and steadily working. By this means he shuts off all communication from main reservoir to train pipe, and the pressure in the reservoir is kept above that in the brake pipe, otherwise the brakes would apply themselves by air escaping from the train pipe past the Driver's valve to main reservoir.

Drivers must call the attention of the Train Examiner at the first examining station to any irregularity in the working of the brakes. They must also enter the number of each car or waggon on which brakes work badly in their reports. This applies to both passenger and goods trains, and any Driver unable to give numbers of vehicles complained of for brake failure will be considered wanting in attention to duty.

Firemen will be held responsible that they learn the use of the Westinghouse brake, when employed on engines so fitted; and no Fireman will be promoted until he has proved that he is perfectly competent to work it properly.

PART IV.

INSTRUCTIONS TO OFFICERS AND EMPLOYÉES IN WORKSHOPS.

INSTRUCTIONS TO WORKSHOPS MANAGERS AND FOREMEN.

272. Workshop Managers and Foremen are responsible for the good care of the shops, machines, and plant under their control, the efficient performance of all the duties connected therewith, the economical disposition of all stores and material, and for the carrying out of all orders and circulars issued by the Chief Mechanical Engineer. Foremen and Time-keepers must be on duty at the opening of the works each morning, and see that all hands are punctual in their attendance.

273. The workshops should at all times present an orderly and tidy appearance, and tools of all description should be kept in good condition, and in recognised places.

274. Managers and Foremen are to use every endeavour to reduce the cost of work by the exercise of their skill in the use of modern appliances and modern methods. They are to impress on the members of the staff generally the necessity for activity and zeal in the execution of their respective duties.

275. The work turned out of the shops is to be of the very best description. No bad work is to be tolerated on the score of cheapness; at the same time economy as well as efficiency is always to be kept in view.

Stores.

276. Before starting upon any work it is advisable for the Manager or Foreman to satisfy himself that extra expense will not be incurred through having to wait for stores, and the non-receipt of stores must be reported.

Orders from running sheds.

277. Orders from running sheds for work on engines that are in daily use should receive prompt attention.

Engines examined.

278. When an engine is sent to the shops for an overhaul, the Workshop Manager will have it examined carefully to see that it has been used properly, that all lubricators are in proper working order, and all the oil holes are clear and free from grit. He will also have the safety valves examined to see that they have not been tampered with, and the boiler and the fire box to see that they are sound and free from scale, and that the tubes have been kept properly cleaned. Should this examination show that there has been the slightest carelessness, it is his imperative duty to report the matter fully and immediately to the Chief Mechanical Engineer.

Gear to be examined and annealed.

279. All engines and tender, buffer, coupling and draw gear must be carefully examined and thoroughly annealed every time an engine is in the shops for general overhaul, or at periods not exceeding two years. Also all car and waggon draw hooks, pins, and side chains must be annealed every time a vehicle is in the shops for general overhaul, or at intervals not exceeding two years, and full particulars recorded.

Weighing of engines.

280. Each engine, as it leaves the shops, is to be carefully weighed, and particulars recorded.

Engine springs.

281. All engine springs are to be carefully tested.

Cow catchers fitted with plates.

282. The cow catchers of all locomotives should be fitted with plates to protect the bars from the side chains and hooks.

Ash pans.

283. The ash pans of locomotives turned out of shops must be supplied with perforated doors or wire netting, and be made to fit closely to fire box.

Nothing to be left in exhaust steam pipes or passages of engines.

284. The greatest care should be exercised in seeing that when an engine is under repairs no bolts, pieces of iron, &c., are left in the boiler, exhaust or steam pipes, or passages.

Leading hands in the workshops should be specially warned on the subject, and informed that the person in charge of the work will be held responsible for any accident or injury caused to an engine by neglect of this order, and will be severely dealt with.

Wheels—Equal diameter.

285. All wheels placed under vehicles should be approximately of equal diameter.

Height of stock.

286. The chimneys or any other portions of engines or stock must not exceed the maximum height allowed by standard diagram, and no vehicle should be passed for service that will not pass the standard clearance.

Turnings and borings to be stored.

287. Turnings or borings of brass, white metal or cast iron, should be stored in separate bins and kept clean, so as to be available when required.

Patterns—
Record of. 288. A complete record is to be kept of all patterns in stock, and all additions are to be posted up regularly.

Advice forms
for goods. 289. Advice forms, filled up correctly, must be forwarded with each consignment of goods or material from the workshops, and receipts obtained from the stations to which they are sent.

Books to be
kept. 290. Carefully-prepared books must be kept, showing the dates each vehicle has been in the shops, and the work executed upon each vehicle in detail.

Condition of
passenger
vehicles after
overhaul. 291. No carriage or passenger vehicle should leave the shop after a general overhaul unless it be fit for two years' active service.

Replacing wheels
and axles. 292. All wheels and axles in carriages and passenger vehicles over twelve years in running must be taken out and put under waggons, the former being replaced with good wheels and steel axles.

A record of the life of all car and waggon axles must be carefully and correctly kept.

No brass less than $\frac{9}{16}$ inch on the crown or $7\frac{3}{4}$ inches long should be fitted with newly turned wheels.

Minimum thick-
ness of tyres. 293. The minimum thickness of tyres under carriages at last time of turning is to be in accordance with lithographed diagram No. 1314, a copy of which has been supplied to Workshop Managers, Inspectors, and Foremen.

Minimum diameter
of axle-bearing. 294. All axles are to be very carefully examined for flaws or defects. The minimum diameter of axle-bearing for carriages is $3\frac{1}{2}$ inches; any of a lesser diameter are to be put under trucks.

Tares of cars and
waggons, &c. 295. Cars and waggons are not to be sent out of the workshops unless the tare has been checked, and alterations made where necessary.

Tarpaulin repairs. 296. Record Books must be kept in the tarpaulin shop of all repairs executed.

Misuse of
tarpaulins. 297. Worn-out tarpaulins should be sent to the Workshops Manager, and all employés should be forbidden to have tarpaulins or pieces of tarpaulins in their possession.

Whenever an old tarpaulin is worn out and taken out of running it must be replaced by a new one similarly numbered.

Tarpaulins—Size
and brand. 298. The size of all new tarpaulins should be, say, 23 feet x 14 feet, made from five lengths of 36-in. canvas.

All tarpaulins should be branded before issue with a register number the letters V.R. and \uparrow , and should be painted with two broad red lines reaching from corner to corner.

Fire brigade. 299. In the workshops a properly-organized fire brigade should be established, composed of employés living in the vicinity of the workshops.

The brigade should be officered by competent men, with a view to efficient working.

Practices should be regularly held, and the men thoroughly trained in the use of the appliances at their command for fire prevention.

A code of fire-alarm signals should be arranged and posted in each shop for the information of all hands.

Watchmen should be fully acquainted with the working of all fire appliances and signals provided at the workshops, as well as the signals to summon any local or city brigade, and the shops must never be left without a watchman being on duty.

The appliances for fire prevention should be kept in perfect order.

Boiler attendants and keepers. **300.** The duties of Stationary Engine Attendants in the workshops will be as follows:—

To be in attendance at all times when engine is required for driving machinery in shops, and in sufficient time before the arrival of the mechanics to admit of the engine commencing work a few minutes before the whistle has ceased to blow.

They will be responsible for having the engine bearings at all times properly trimmed and oiled, and the engine and engine house kept thoroughly clean and tidy.

They will be responsible for having the boiler kept perfectly free from scale and dirt, both inside and outside the tubes, and will immediately call attention to the slightest fault in either boiler or machinery. Each boiler must be washed out once a fortnight

They will be responsible for oiling all shafting and keeping it clean, and at the discretion of the Manager or Foreman will be required to undertake other duties during the day.

INSTRUCTIONS TO OFFICERS AND EMPLOYÉS IN WORKSHOPS.

The following Regulation (No. VIII.) has been issued by the Victorian Railways Commissioners for the guidance of workshops employés, and must be strictly adhered to by them:—

Notice to be given before leaving. **301.** Any employé before severing his connexion with the Department must give one week's written notice of his intention to leave; should he fail to do so, he will forfeit such wages as may be due to him. One week's notice will be given previous to any employé being discharged, except in cases of misconduct.

Working time. **302.** The working time shall consist of 48 hours per week, unless specially arranged otherwise, the time for starting and leaving off work to be fixed by the Chief Mechanical Engineer.

Men late on duty. **303.** A bell or steam horn will be sounded to summon employés to and from their work. Any employé who comes to his work not less than 15 minutes after starting time will have a quarter of an hour stopped from his time; and if arriving more than 15 minutes, but less than 30 minutes late, will have half-an-hour stopped from his time. Workmen will be permitted to start on the arrival of the second train, the time lost to be deducted, but they cannot start if they arrive by a later train. Any employé who comes to his work after 1 p.m., but before 1.15 p.m., will have a quarter of an hour stopped from his time. Employés will not be admitted after 1.15 p.m.

Time on each job
to be shown.

304. All employés must enter and leave the works through the Time-keeper's lodge. Employés will be provided with a book, slate, or board, as may be directed, in which they must enter the exact time spent on each job. Any one neglecting to comply with this regulation will forfeit the time made during such neglect, and any one entering time against work that has not been performed will be liable to dismissal.

Employés to take
up and leave
tickets.

305. Every employé will be supplied with a metal ticket numbered. This ticket he is to take up on entering the shops to work, and on leaving he is, with his own hands, to deposit it in the place appointed for its reception. In the event of an employé losing his ticket through carelessness, or producing his ticket defaced, he will be fined an hour's pay. Any employé who proceeds to his work without taking up his ticket, or who does not deposit his ticket on leaving, will be fined Sixpence. Should an employé take up or deposit two tickets he will be immediately dismissed.

Employés to pass
through lodge.

306. No employé will be permitted to pass from the workshops to the station, platform, or train; and any one going by train from the station on the business of the railway must pass out through the lodge and enter the station by the public entrance.

Employés to be
ready to start work.

307. Employés must be at their proper place of employment and at work when the whistle ceases to blow, or they will be liable to a fine of an hour's pay. Any one ceasing work before the whistle blows will be similarly punished.

Overtime—Eight
hours will be
considered a day's
work.

308. Eight hours will be considered a day's work, and overtime will not be allowed under ordinary circumstances until a full week has been worked, and will be paid for at the rate of single time unless in special cases which shall be decided by the Chief Mechanical Engineer, when time and a half will, if he thinks fit, be allowed. Sunday time will be similarly dealt with, but in no case will overtime be allowed to an employé unless he has worked a full week.

Stores to be signed
for.

309. Employés must not take stores out of the store-room, forged work from the smithy, or any other description of work, without an order signed by the Foreman, and without the same being properly weighed and accounted for to the Storekeeper or person in charge.

Tools missing.

310. Every employé shall have a proper drawer, box, or cupboard for keeping his tools in, under lock and key; the same to be examined periodically, and the stock thereof taken. Should any tools be missing, the employé into whose charge they were given will be required to make good, from wages due to him, any loss or deficiency, ordinary wear and tear excepted.

Other employés'
boxes not to be
opened.

311. No employé should open another's drawer, box, or cupboard, or take any tools belonging to a fellow employé without his leave, unless directed to do so by his Foreman, and in his Foreman's presence; any employé doing so will be fined Five shillings, which will be deducted from his wages. Fines must not be inflicted unless by authority of the Chief Mechanical Engineer.

Tools required
from store.

312. Any employé requiring general tools, viz., taps, dies, gauges, chases, &c., out of the stores, must give his number, with the particular description and size of the tool he requires, to the person in charge, so that it may be entered against him. He must also return the same within reasonable time, and repeat his number, &c., as on taking it out, so that the debit may be written off.

Damage to tools.

313. Any employé accidentally breaking or otherwise injuring a tool and neglecting to inform the Foreman thereof, or carelessly or wilfully destroying any tool or other article, or defacing or altering any drawing or pattern, or otherwise making away with any such tool or other article, shall make the same good at his own expense, or have the value thereof deducted from his wages.

Tools and materials
to be accounted
for.

314. Any employé proceeding to work on the railway out of the workshops will be required to give an account to the Foreman of all tools and materials to be taken with him, and, if lost or broken, he will be required to make good the same from any wages due to him.

Employés not to
order castings.

315. No employé will be allowed to order any castings, smith work, or any description of work whatever, without being duly authorized by his Foreman.

Not to go into
other workshops.

316. No employé will be allowed to go into a workshop other than that in which he is usually employed, unless on business, under a penalty of Five shillings, which will be deducted from his wages.

Strangers not to
be admitted.

317. No employé will be allowed to introduce any stranger into the works without the permission of the person in charge of the works; and any stranger, unless furnished with a permit, must be respectfully requested to leave until he provides himself with the necessary authority.

Spirits not to be
introduced.

318. Any employé found introducing, or causing to be introduced, spirits or fermented liquors into the works, or on the premises, will be instantly dismissed.

Employés not to
leave except at
regular times.

319. Employés must not go out of the works at other than the appointed times without leave of absence and a ticket from their Foreman, which must be delivered to the Lodge-keeper as they go out.

Neglect of duty.

320. Any employé found using oil to cleanse his hands or otherwise improperly using the property of the Department, or putting on his coat, or making preparations for leaving work before the bell or steam horn is sounded, or idling or talking during working hours, will be fined Two shillings and sixpence, and upon repetition of any of these offences will render himself liable to dismissal.

Private work not
to be done.

321. Any employé making a tool without directions from his Foreman will be severely punished. All tools are to be branded † with the number of the workmen who uses them, and any employé doing private work in the shops will be dismissed.

Employés
quarrelling.

322. Any employé using abusive or indecent language, or striking another in the works, will be fined a day's pay for the first

offence, and will be liable to be dismissed from the service should he be guilty of a repetition of the offence.

Lights to be extinguished.

323. Any employé leaving the shops without first extinguishing his light, or, in the case of smiths, without first extinguishing their fires, will be fined Five shillings.

Smoking forbidden.

324. Smoking is strictly prohibited in the stores, carriage and waggon pattern and joiners' shops at all times, and in any other part of the premises during working hours. Any employé found smoking on the premises during working hours will be fined Five shillings for each offence; and any employé found smoking in the stores, pattern, joiners' or carriage shops will be fined Ten shillings for the first offence, and will be liable to be dismissed from the service should he be guilty of a repetition of the offence.

Chips not to be removed.

325. No chips or other property of the Government should be taken out of the works or from the premises of the railway without permission from the Workshop Manager. An infringement of this regulation will render the offender liable to instant dismissal.

Employés to be economical.

326. Employés must appear as clean as circumstances will permit of, and must be economical in the use of stores and materials. They must also pay strict regard to order, regularity, and system throughout the works.

Sobriety necessary.

327. Any employé found showing the slightest sign of intoxication will be dismissed.

Lotteries, &c., forbidden.

328. All persons are forbidden to get up lotteries, raffles, or sweeps within the workshops premises.

Canvassing forbidden.

329. No candidate for parliamentary or municipal elections is to be permitted within the shops for the purpose of canvassing.

Employés' letters.

330. Workshops employés should arrange to have their private letters sent to their private residences, so that there shall not be any loss of departmental time in obtaining them.

Private letters which may be addressed to employés at the shops are to be obtained by them in their own time or in the dinner hour, and not during working hours.

It is to be distinctly understood that no liability is incurred by the Railway Department with regard to the custody, delivery, or non-delivery of any letters addressed to employés.

PART V.

INSTRUCTIONS TO ROLLING-STOCK INSPECTORS, TRAIN INSPECTORS, AND EMPLOYÉS CONNECTED WITH THE EXAMINATION AND LIGHT REPAIRS OF ROLLING-STOCK.

Duties. 331. The most important duty of Inspectors of Rolling-stock, Train Inspectors, and all those connected with the running or repairs of rolling-stock is to see that the whole of the rolling-stock is maintained in a safe and efficient condition to travel on any train, and that any vehicle unfit for service is immediately withdrawn and arrangements made for its repair.

Inspectors and Foremen to be conversant with traffic requirements. 332. The Rolling-stock Inspector and the Inspectors and Foremen under him must make themselves thoroughly acquainted with the traffic requirements in connexion with rolling-stock, reporting anything found deficient as well as any alteration or improvement which may be considered necessary.

Inspectors and Foremen to allot duties and arrange for examination of trains. 333. They are also responsible for the arrangement of the duties of Greasers and Train Examiners, and others, at the principal stations, and for seeing that the examination of vehicles in traffic is carried out in a careful and systematic manner, constantly impressing upon all hands employed the necessity for exercising the most rigid attention in the examination of stock, especially tyres, axles, axle boxes, draw bars, side chains, and all draw and brake gear.

Any carelessness observed in examination must be immediately reported.

Maintenance of stock. 334. All passenger rolling-stock is to be maintained in an effective condition, and vehicles on country lines are not to be allowed to get into a state of disrepair. Advantage should be taken of the slack season to arrange for the removal to the shops of all vehicles which are in need of repairs or overhaul; and all carriages and vans out longer than two years are to be sent in for overhaul as soon as possible.

Vehicles requiring extensive repairs. 335. Vehicles should not be sent to the workshops for extensive repairs until after due consultation by the Workshop Manager and Rolling-stock Inspector.

Waggons for light repairs should be dealt with as far as possible at the Truck Shop, Melbourne.

Vehicles how passed before going into running. 336. Vehicles leaving the workshops, Newport, must be consigned to the Rolling-stock Inspector, and must not be allowed to go into traffic until passed by him.

Repairs. 337. When any vehicle becomes unfit for service a card must be affixed to it stating that it is not to be allowed to run, and it must be repaired without delay.

Repairs to rolling-stock in traffic must not be undertaken unless the vehicles and the men repairing them are properly protected by danger signals. Repairs must not be executed where shunting operations are carried on, or where vehicles are liable to be moved from one place to another.

Vehicles not fit to run. 338. In cases where any vehicle is not safe to travel on its own wheels it must be loaded up for repairs, and a green repairs card

affixed. A prompt report of all vehicles proving defective is to be forwarded to the Workshops Manager through the Rolling-stock Inspector.

Broken axles. 339. Full information accompanied by a sketch is to be furnished in all cases of broken car and waggon axles.

Examination of wheels and axles. 340. Special attention is to be paid to the examination of wheels and axles of rolling-stock to see that the axles are straight and in every respect fit to run.

Wheels for turning up to be sent to Newport. 341. All carriage and waggon wheels which are taken from under rolling-stock are to be sent to the Newport workshops to be turned up or otherwise repaired so that all axles may be thoroughly examined.

These wheels should be sent regularly and periodically.

At large depôts it might be well to wait until a truck load of wheels can be made up, but smaller stations should send in wheels immediately they are taken out, advising the Chief Mechanical Engineer and the Rolling-stock Inspector as to what quantities are despatched.

Vehicles repadded. 342. All vehicles lifted or which have had their pads examined are to have the date chalked on under frame.

Vehicles lifted. 343. All trucks lifted, or having been fitted with new wheels are to have the date painted (not chalked) in the same place.

Tyres. 344. The distances between the inside and the profiles of the tyres should be similar in all the carriage and waggon stock.

Fractured tyres. 345. All cases of fractured tyres must be reported on the proper form.

Derailments. 346. After any engine or vehicle has been derailed from any cause whatever, a thorough examination must be made and the wheels gauged, and full report forwarded to the Chief Mechanical Engineer.

Failures of draw gear. 347. All failures of draw gear are to be reported, full particulars being given.

Damage to stock. 348. All damage to rolling-stock, whether caused by carelessness or not is to be immediately reported. Full particulars to be given, with the name of train or pilot engine causing the damage. An estimate of the cost of repairs to be also given.

Vehicles put off trains. 349. Vehicles having to be put off trains owing to hot boxes, broken springs, or other causes must be reported; and it should be ascertained if possible whether a proper examination was made at the previous inspecting station.

Springs. 350. The springs of all rolling-stock must be quite free to work, especially the ends of the waggon springs in the shoes.

Bogie stock. 351. The frames of all bogie stock should be straight so that an undue strain will not be put on the tension rod.

Stores to be kept. 352. Carriage and Train Inspectors are to keep in stock at all times such stores as are necessary to meet the usual demands; care being taken not to have a surplus stock.

Examination of
Westinghouse
brakes.

353. Carriages on branch lines are to have their Westinghouse brake gear examined as follows:—

Triple valves to be cleaned every four months.
Joints on all iron pipes to be made with lock nuts.

Hose pipes to be examined every three months.
Tap handles to be tested occasionally to see that they are not firing.

Brakes to be tested at every opportunity to see that pistons are tight.

A good supply of brake blocks to be maintained.
Maintenance Carriage Books to be regularly entered up.

Travel of piston in 8-in. double-pistoned cylinder to be not less than $2\frac{1}{2}$ inches and not more than 4 inches.

A proper supply of carriage duplicates to be maintained.

Tarpaulins.

354. Tarpaulin stock must receive special attention, and Rolling-stock and Train Inspectors must promptly report any case of damage caused through the carelessness of employés in sheeting or in any other way.

They will also note any instances of tarpaulins being used for improper purposes, and in reporting must be careful to so describe the sheet that it may be traced with as little correspondence and delay as possible.

Tarpaulins to be
kept clear of rails.

355. Tarpaulins when removed from trucks must be kept clear of the rails so that they may not be damaged by the wheels of passing vehicles.

Greasers—Time of.

356. The Rolling-stock Inspector will return the time of Train Examiners and Greasers at the head stations, but where the duties of such hands are divided the time will be returned by the Locomotive Foreman, or the officer directly in charge of such men.

Pumpers with
combined duties.

357. In cases where Pumpers or others act as Train Examiners arrangements will be made for the proper examination of trains by the officer to whom such hands may be responsible, acting in conjunction with the Rolling-stock Inspector, it being distinctly understood that at all stations other than the three metropolitan stations the Train-examining Staff are jointly under the supervision and control of the Locomotive Inspector or Foreman of the district, and the Rolling-stock Inspector.

INSTRUCTIONS TO CARRIAGE AND TRAIN EXAMINERS.

Trains to be met.

358. Carriage and Train Examiners are to meet all trains on arrival at terminal and depôt stations, and carefully examine every vehicle throughout.

Appliances for
Examiners of
Trains.

359. Examiners must be supplied with efficient tools and appliances to enable them to undertake light repairs at out-stations to avoid the expense of sending men from the workshops or main depôts.

Duties of
Examiners.

360. They are to see that all wheels are fast on the axles, true to gauge, the tyres sound and properly secured, and that the wheels and axles are in good running condition; wheels with sharp flanges, or grooved in the tread, $\frac{3}{16}$ inch on spread, are to be knocked off, and the vehicle sent

to the workshops for new wheels; that axle boxes, guard irons, running and brake gear are in perfect order, and that all hooks, draw bars, buffer gear, &c., are free from flaw and defects; that the under carriage has no slack bolts and nuts, and that split pins, properly split, are in their places.

Tyres to be sounded. **361.** All tyres are to be sounded upon the arrival of all trains at the examining stations, and on the suburban lines, three or four times each day.

Examination of trains. **362.** At all stations departing trains must be made up in time to be examined by Train Examiners, and no train must be started from any station until the Examiner has satisfied himself that the train is fit to run, and has so informed the Guard.

When two trains are timed to depart from one station at or about the same time, thereby not allowing sufficient time for both trains to be examined, the Examiners should report same to Rolling-stock Inspector with a view to having this remedied.

Engine-men have been instructed to approach the platforms of all examining stations at a speed not exceeding eight (8) miles per hour, so as to give the Examiners an opportunity of touching the boxes.

Carriages in need of painting. **363.** When carriages, vans, and other passenger stock become in bad condition, and require painting or general repairs, a report is to be sent in to the Rolling-stock Inspector, giving details of repairs required.

Trucks to be oiled and blocked. **364.** Blockers and Greasers are to note that all trucks standing on departure roads are to be oiled and efficiently blocked before being made up into trains.

Defective glass lights. **365.** Carriage Examiners will be held responsible for complaints of defective glass lights, and other matters affecting the comfort of passengers.

Care of brake gear. **366.** Particular care is to be exercised in regard to all brakes, that the brake gear works freely, that all its connexions are properly secured, and that the blocks have sufficient body to complete the following journey; also that all working parts, connexions, and coupling pipes are efficiently maintained.

Brake connexions to be in perfect order. **367.** Train Examiners must see that the brake connexions are perfect and properly adjusted for the wear of the blocks and wheels, by being uniformly taken up. The pistons of double-pistoned cylinders should each travel not less than 2 or more than 4 inches.

Those of single-pistoned cylinders should not travel less than 4 or more than 8 inches on carriage stock. For waggons consult Figure 4 on diagram for taking up Q.A. brakes.

Hose couplings to be united and cocks open. **368.** They must also see that hose couplings are united and the cocks in the pipes are open, except in the case of the one at the rear of the last vehicle, and that the joints are all tight.

Triple-valve cocks to be open. **369.** The cocks under the vehicles connecting the triple valves with the train pipes are to be full open, and the release valves and wires in good order.

Irregularities on brake working to be removed and reported. **370.** Examiners must, on the arrival of trains, ascertain from the Driver if any irregularity exists in the working of the brake, and if so it should be rectified before the train starts.

If the defect be too serious to be repaired without causing delay, the brake should be cut out and the vehicle carded for repairs to brake when empty.

A detailed report to be sent by the Train Examiner to the Rolling-stock Inspector.

WESTINGHOUSE COMBINATION BRAKE GEAR.

Cutting brakes
off waggons.

371. There are two patterns of taps used for cutting brakes off waggons.

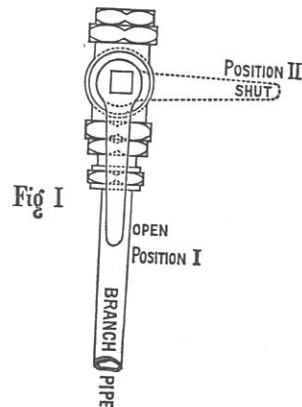
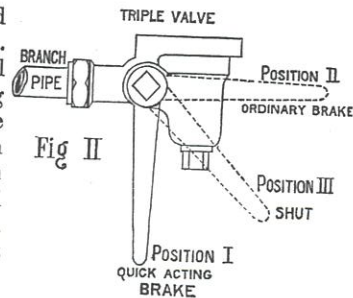


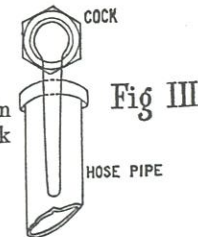
Fig. I. A two-way tap fitted into the branch pipe, which is open when the handle stands in a line with branch pipe (Position I.), and shut when handle stands at an angle of 90° across the branch pipe (Position II.).

Fig. II. A three-way tap fitted on to the body of the triple valve. When the handle is vertical (Position I.) the quick-acting valve is in operation; when the handle is horizontal (Position II.) the triple valve works as on the ordinary brake gear; and when placed midway between (Position III.) the brake is cut off.



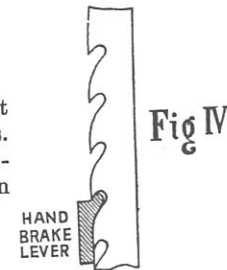
Position of Hose Pipe Handles.

Fig. III. The connexion through the train is open when the handle of train pipe cock stands in a line with the hose pipe.



Taking up Brakes.

Fig. IV. Examiners should be careful not to take brakes up too close to the wheels. When a brake is fully taken up the hand-brake lever should travel four (4) teeth down the guide.



Release wire not
to be bent over.

372. Employés must not pull the release wire on the trucks and bend it over to keep open the release valve to facilitate shunting.

A short pull of a few seconds is sufficient to release brakes if taps are properly shut off and pressure retained in pipes when uncoupling.

*Issued by authority of the Victorian Railways
Commissioners.*

T. H. WOODROFFE,
Chief Mechanical Engineer.

9th February, 1895.

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