VICTORIAN RAILWAYS

ROLLING-STOCK BRANCH

INSTRUCTIONS

FOR THE

Guidance of Enginemen

in connexion with the

Handling of Long Goods Trains over Undulating Sections of Line

By Authority:
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INSTRUCTIONS TO ENGINEMEN.

The instructions contained in this pamphlet are issued with the object of assisting Enginemen in handling long goods trains over sections of line where quick changes of grade exist, so that breakaways may be averted.

GENERAL.

(1) In the case of double-headed trains, drivers should confer at the starting point so that there may be a complete understanding between them as to the whistle code contained in the General Appendix, page 269, and also as to the method to be adopted in negotiating sections of line where changes of grade exist.

(2) Generally, the method outlined below should be adopted:—

(a) Where "humps" are to be negotiated at or soon after reaching the foot of a grade, the speed of the train should be so regulated when topping the grade that the train will "bunch" gradually and the speed down the grade should be regulated by the Westinghouse Brake, when the train should pass through the "dip" at a moderate speed with the brakes off.

(b) In lifting the train out of the "dip" the slack in the couplings should be taken up one by one as is done when starting a train from rest, and this can be more effectively done at a low speed.

BENDIGO DISTRICT.

Bendigo-Nandaly Line.

Bendigo-Eaglehawk.—Up and Down trains.—When passing through the "dip" about mileage 105 the train should be "bunched"; the engine hand brake should be applied for a short time to insure this.

Eaglehawk-Marong. — Up trains. — After passing mileage 109¾ the speed of the train must be regulated so that when passing mileage 108¾ the train will be running at a moderate speed with the brakes off, and so permit of the slack in the couplings being taken up gradually.

(NOTE.—Diagrams of the above sections are posted at Depôts in the District, and should be perused by Enginemen.)

Korong Vale-Wychetella.—Up trains.—After passing mileage 159 the speed of the train should be so regulated that the slack in the couplings may be taken up, after passing through the "dip" at about mileage 158¼, without causing a jerk.

Down trains.—At mileage 159 the engine hand brake should be applied, and the train kept "bunched" until reaching Wychetella.

Eaglehawk-Piangil Line.

Myer's Flat-Woodvale.—Up trains.—After topping the bank at mileage 108¼, the speed of the train should be so regulated that the slack in the couplings may be gradually taken up and the train taken over the "hump" at mileage 108 with the couplings taut.

(NOTE.—A diagram of this section is posted at Depôts in the District, and should be perused by Enginemen.)

BALLARAT DISTRICT.

North-Western Line.

Windermere-Burrumbeet. — Up trains. — After leaving Burrumbeet, the speed of the train should be so regulated that, when the engine is approaching the "dip" at mileage 85½ the train will be running free (*i.e.*, all brakes off) at a moderate speed, so that the slack in the couplings may be taken up and kept taut to Windermere.

Buangor-Dobie.—Up trains.—At mileage 118½, the train will be "bunched", and the engine hand brake must be applied to keep the train "bunched" in passing over the "hump" at mileage 117¾.

Great Western-Stawell.—Up trains.—Approaching the "dip" at mileage 143 the train must be running free (*i.e.*, all brakes off) and at a moderate speed. Great care must be exercised in taking up the slack in the couplings when lifting the train out of the "dip".

Stawell-Deep Lead. — Up trains. — After leaving Deep Lead the speed of the train should be regulated by the Westinghouse Brake so that the engine will reach the "dip" at mileage 153½ at a speed not exceeding 25 miles per hour with the brakes off. The engine should commence steaming at mileage 153¼, and the slack in the couplings taken up gradually and the train lifted out of the "dip" and over the "hump" with the couplings taut.

Approaching mileage 151 the speed should be so regulated that the engine will top the grade at a low speed, which should not be increased till reaching the Distant signal.

With double-headed trains, the driver of the leading engine should signal the driver of the second engine to commence steaming at about mileage 153¼, and the

latter driver should be signalled to shut off steam before reaching the Junction at mileage 151. This will permit the leading engine to bring the train over the "hump" at a low speed and prevent jerks to the couplings.

Down trains.—The driver should leave Stawell cautiously, and the speed to mileage 151½ should not exceed 20 miles per hour. Approaching the "hump" at mileage 152¾, the speed should be 20 miles per hour with the brakes off; the regulator should then be opened and the slack in the couplings taken up gradually when the train should go over the "hump" and through the "dip" when the couplings taut.

With double-headed trains, the driver of the leading engine should signal the driver of the second engine to commence steaming at a point about mileage 153½ that will insure the train going through the "dip" with the couplings taut.

With a full load, the speed should be increased gradually after passing the "hump" at mileage 152¾, as a speed of 30 miles per hour is necessary at mileage 153¾ to take a full load over the grade.

Deep Lead-Glenorchy.—Down trains.—The speed of the train approaching mileage 158¼ should not exceed 25 miles per hour with the brakes off, and when the engine has passed over the public crossing, the regulator should be opened and the slack in the couplings taken up gradually, and the train taken over the "hump" with the couplings taut.

(Note.—Diagrams of the section Stawell-Glenorchy are posted at Depôts in the District, and these should be perused by Enginemen.)

Pimpinio-Dimboola.—Up trains.—The train should be taken into the "dip" at about mileage 214¼ at a moderate speed (with brakes off) so that it will be necessary to steam over the "hump" and keep the couplings taut.

Down trains.—The "dip" at mileage 223, and the "hump" at mileage 223½, should be negotiated in the same manner as described for the Up journey.

Dimboola-Gerang. — Up trains. — After leaving Gerang, the train should be kept "bunched" until after passing over the "hump" at mileage 234.

Diapur-Miram.—Up trains.—Approaching mileage 265¼, the speed of the train should be so regulated that when steaming over the "hump" the slack in the couplings may be taken up gradually. The couplings should also be taken up gradually before ascending the grade commencing at mileage 263¼. The train should be kept "bunched" from mileage 261 until after passing over the "hump" at mileage 260¼.

Down trains.—Approaching the "humps" at mileages 264 and 266½, the speed of the train should be so regulated that when steaming over these "humps" the slack in the couplings may be taken up gradually.

Lillimur-Serviceton,—Up and Down trains.—When on the level at mileage 280¼, the speed of the train should be so regulated that the slack in the couplings may be taken up gradually in ascending the grade.

MARYBOROUGH DISTRICT.

Maryborough-Merbein Line.

Bet Bet-Goldsborough.—Up trains.—When passing through the "dip" at mileage 128¼, the engine hand brake should be applied to gradually "bunch" the train in going over the "hump". The speed of the train should be regulated into the "dip" at mileage 127½, and the engine should steam over the "hump" with the couplings taut. The train should be kept "bunched" approaching mileages 126¾ and 122, where care should be exercised to prevent the engine surging away from the train.

Goldsborough-Bealiba.—Down trains.—When descending the grade at mileage 134, the speed of the train should be so regulated that, when commencing to

steam up the grade at mileage 134¾, the slack in the couplings may be taken up gradually, and the train hauled over the "hump" with the couplings taut. Over the section between mileages 135½ and 136¼, the train should be kept "bunched", and care should be exercised to prevent the engine from surging away from the train when passing through the "dips".

Bealiba-Emu.—Up and Down trains.—Approaching mileage 141¼, the speed should be regulated so that the engine may steam over the "hump" with the couplings taut.

Up trains.—Double-headed trains, when approaching the change of grade at mileage 139¼, must be handled in such a manner that will insure the train striking the foot of the grade at a speed not exceeding 15 miles per hour with the brakes off, the regulators of both engines being closed. When the engines are on the grade, the regulators of both engines must be opened (the driver of the leading engine to exercise judgment in signalling the driver of the second engine) and the train lifted over the grade at a speed not exceeding 15 miles per hour.

Down trains.—With double-headed trains, the speed must not exceed 20 miles per hour after leaving Bealiba until the whole train has passed over the change of grade at mileage 139¼.

Emu-Carapooee.—Up trains.—Approaching mileage 149, the engine hand brake should be applied to keep the train "bunched" when passing over the "hump".

Cope Cope-Donald.—Down trains.—The speed of the train approaching mileage 180¾ should be so regulated that the train may pass over the "hump" with the couplings taut.

(Note.—Diagrams of all the sections enumerated in this District are posted at Depôts, and should be perused by Enginemen.)

SEYMOUR DISTRICT.

North-Eastern Line.

Wallan-Seymour.—Up trains (double-headed).—(a) The maximum speed of the train from Seymour to Goulburn Junction should not exceed 20 miles per hour. Both engines must steam until the whole train has cleared the Seymour Yard, when the driver of the second enginge must close his regulator and allow the leading engine to do all the work until the engines have passed the Signal Box at Goulburn Junction, where the driver of the leading engine must signal the driver of the second engine to again commence steaming, and assist in the usual manner.

(b) Approaching mileage 52, if the train has to be checked, rolling down the bank, this must be done with the aid of the Westinghouse Brake, but care must be taken to see that the brakes are fully released before passing the road crossing at the foot of the grade at mileage 52. The driver of the leading engine must then open the regulator and, when he feels that he has the weight of the train, must signal the driver of the second engine to commence steaming.

(c) Approaching mileage 49, the speed of the train must not exceed 20 miles per hour with the train running free (*i.e.*, all brakes off), and the driver of the leading engine must open the regulator and steam until he has taken up the slack in the train, when he must signal the driver of the second engine to commence steaming, and the train should come out of the "dip" with the couplings taut.

(d) In negotiating "humps" such as exist at mileages 44½ and 38¼, both drivers must, after topping the grade, notch up their engines and regulate the speed of the train so that the rear portion will crowd on the engines gradually, and reach the foot of the grade

with the train "bunched"; when steaming up the grades which follow, both drivers must exercise care in again taking up slack in the couplings.

Down trains.—(a) After leaving Wandong, the train should be controlled by the Westinghouse Brake so that the speed at mileage 35¼ will not exceed 20 miles per hour with the brakes off. The regulator must then be opened and the train taken over the "humps" and through the "dips" at mileages 35¼ and 35¾ at a uniform speed that will keep the couplings taut. The train should then be allowed to drift, and when approaching mileage 37½, the speed should be regulated to 20 miles per hour, and the train taken over the "humps" and through the "dip" at mileages 37½ and 38¼ with the couplings taut.

(b) The train should then drift through Kilmore East to mileage 40, where the engine should commence steaming and lift the train over the "hump" at mileage 40¼ with the couplings taut. After passing this "hump", the train should drift to mileage 42, where the engine should again steam and lift the train over the "hump" with the couplings taut. After passing this "hump" the train should be controlled by the Westinghouse Brake, so that the speed limit will not be exceeded, and when approaching mileage 43¼ the regulator should be opened, and the engine steam over the "hump" keeping the couplings taut. In descending the grade after passing over the "hump", the train should be so controlled that, at mileage 44 the speed will not exceed 20 miles per hour with the breaks off, and when the engine has passed over the crossing at about mileage 44¼, the regulator should be again opened and the slack in the couplings gradually taken up in passing through the "dip".

(c) Approaching mileage 55¼, the speed of the train should be so regulated by the Westinghouse Brake that it will be necessary to steam over the "hump" at mileage 55½. After passing the "hump", the regulator

should be closed, and the train allowed to drift through Tallarook and up the grade till the speed is reduced to 15 miles per hour, when the regulator should be opened and the train hauled to mileage 57 with the couplings taut.

(NOTE.—Diagrams of the Wallan-Seymour section are posted at North Melbourne and Seymour Depôts, and these should be perused by Enginemen.)

GEELONG DISTRICT.

South-Western Line.

Allansford-Warrnambool.—Up trains.—Approaching mileage 164½, the speed of the train descending the grade should be so regulated that it will be necessary to steam out of the "dip" and keep the couplings taut.

Down trains.—Approaching mileage 164¾, the speed of the train should be so regulated that it will be necessary to steam out of the "dip" and over the "hump", and the couplings should be taut in doing this.

Garvoc-Panmure.—Up trains.—When entering Garvoc station, the engine hand brake should be applied to prevent the engine surging away from the train.

Down trains.—When topping the grade at about mileage 145½, the engine should be notched up and haul the train over the grade at a medium speed.

Boorcan-Terang.—Up and Down trains.—The speed of the train at mileage 132¾ should not exceed 15 miles per hour with the brakes off. The train will be "bunched", and care should be exercised in taking up the slack in the couplings in ascending the next grade.

Stoneyford-Pomborneit.—Down trains.—Mileage 113 should be approached at a low speed, and the engine should steam over the "hump" keeping the couplings taut.

Larpent-Pirron Yallock. — Down trains. — In descending the grade to mileage 103¾, the speed of the train should be so regulated that, when passing through the "dip" the speed will not exceed 30 miles per hour with the brakes off, and care should be exercised in again taking up the slack in the couplings.

Grovedale-Pettavel.—Up trains.—At mileage 52½, the train will be drifting, and it should be kept "bunched" by the use of the engine hand brake.

Ararat-Portland Line.

Ararat-Maroona.—Up trains.—(a) After passing mileage 140, the train must be controlled down the grade so that the speed may be gradually increased, in passing over the Jackson's Creek Bridge, to not less than 25 miles per hour at the foot of the next grade. A speed of 25 miles per hour is necessary at that point to take a full load over the grade.

(b) Approaching the "dip" at mileage 135¼, the speed of the train should be so regulated that it may be possible to take up the slack in the couplings when passing through the "dip".

Down trains.—(a) After passing mileage 139, the speed of the train should be so regulated that it will pass over the Jackson's Creek Bridge at a moderate speed. When steaming up the grade from mileage 139¾, the slack in the couplings must be taken up gradually.

(b) At mileage 143, the train should be kept "bunched" by the use of the engine hand brake.

(Note.—Diagrams of the Ararat-Maroona section are posted at Depôts in the District, and should be perused by Enginemen.)

Maroona-Calvert. — Down trains. — Approaching mileage 145½, the speed of the train should be so regulated that the couplings may be kept taut from that mileage to mileage 147½.

Willaura-Stavely.—Down trains.—The train should be taken cautiously over the "hump" at mileage 155½, and the speed so regulated into the "dip" at mileage 156½ that the slack in the couplings may be taken up gradually and the train taken out of the "dip" at mileage 156¾ with the couplings taut, and remain taut until mileage 159½ has been passed.

Dunkeld-Hamilton.—Down trains.—In approaching the "dips", such as exist at mileages 179¾ and 195¼, the speed of the train should be so regulated that, in steaming out of the "dips" the slack in the couplings may be taken up gradually, and the "humps" beyond the "dips" surmounted with the couplings taut.

Mountajup-Willaura.—Up trains.—The "humps" at about mileages 180 (between Mountajup and Dunkeld), 158¼ and 157 (between Stavely and Willaura) should be negotiated in the same manner as outlined for Down trains between Dunkeld and Hamilton.

Geringhap-Maroona Line.

Westmere-Mininera.—Up trains.—At mileage 134, the train should be kept "bunched" by the use of the engine hand brake.

Berrybank-Lismore.—Down trains.—At mileages 96 and 102½, the train will "bunch." The "dips" should be reached at a moderate speed, and care should be exercised when taking up the slack in the couplings when commencing to steam.

Wingeel-Poorneet.—Up trains.—At mileage 77, the train will be "bunched", and care must be exercised in taking up the slack in the couplings when commencing to steam.

Murgheboluc-Inverleigh.—Up trains.—In passing over the "nip" at about mileage 60, the train should be "bunched" by the use of the engine hand brake.

and the train should be kept "bunched" till reaching about mileage 55½, where care must be exercised in taking up the slack in the couplings when commencing to steam.

DANDENONG DISTRICT.

Eastern Line.

Narre Warren-Berwick.—Up trains.—In rolling down the grade after leaving Berwick, sufficient momentum should be attained to push the engine over the "humps" and through the "dips" between mileages 26 and 24½, with the engine hand brake on and the train "bunched".

Tynong-Bunyip.—Up and Down trains.—For trains not stopping at Garfield, the speed through the station should not exceed 20 miles per hour, and the train should be "bunched". Care should be exercised in taking up the slack in the couplings when ascending the grade in either direction.

Down trains.—When topping the "hump" at mileage 46¼, the speed of the train should be so regulated that the drop into the "dip" at mileage 46½ may be made at a moderate speed with the brakes off; this will permit of the slack in the couplings being taken up gradually when lifting the train out of the "dip".

Longwarry-Drouin.—Up trains.—With double-headed trains, the speed after leaving Drouin should be so regulated that it will be necessary to steam over the "hump" at mileage 55 and keep the couplings taut.

Drouin-Warragul.—Up trains.—Passing through the "dip" at mileage 57, approaching Drouin, the engine hand brake should be applied to keep the train "bunched" into Drouin.

Nilma-Darnum.—Up trains.—When lifting the train out of the "dip" at mileage 64, care should be exercised in taking up the slack in the couplings.

Morwell-Traralgon.—Up trains.—Leaving Traralgon with double-headed trains, both engines must steam to the top of the grade at about mileage 96½, where the second engine should be signalled to shut off steam, and the leading engine will then haul the train over the "humps" and through the "dips" to mileage 94 at a speed not exceeding 20 miles per hour.

Traralgon-Loy Yang.—Down trains.—With double-headed trains, both engines must steam to the top of the grade at about mileage 98¾, where the second engine should be signalled to shut off steam, and the leading engine will haul the train through the "dips" and over the "humps" to about mileage 100¼, at a speed not exceeding 20 miles per hour. (NOTE.—Diagrams of the sections enumerated between Narre Warren and Loy Yang are posted at North Melbourne and Traralgon Depôts, and these should be perused by Enginemen.)

Loy Yang-Flynn.—Up trains.—After passing mileage 106, the train should be gradually "bunched" by the use of the engine hand brake. The train should be kept "bunched", and proceed at a moderate speed to about mileage 102½, where the slack in the couplings should be taken up gradually.

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