SECTION 9

INSTRUCTIONS PERTAINING TO DIESEL UNITS AND RAIL DIESEL CARS

1.0 General

1.1 Fire protection appliances must not be damaged in any way.

1.2 Steam generator separator blowdown valve must not be operated at or near stations or other locations where there is danger of scalding persons and should not be operated when freezing weather prevails at locations where resulting ice accumulations will cause hazardous conditions, particularly at switches, interlocking or where signal mechanisms are located.

1.3 In case of mishap or fire to diesel units or rail diesel cars, the engines and fuel pumps should be stopped, emergency fuel cutoffs tripped and battery switches opened as soon as possible.

1.4 Before passing over railway crossings at grade, the throttle must be reduced to No. 4 position or lower at least eight seconds before reaching the crossing. If speed is less than 25 M.P.H. and throttle is in No. 4 position or lower, the throttle must be reduced one position, adhering to the same eight second interval. This procedure is necessary to ensure decay of motor and generator voltage to a safe level to prevent damage to electrical equipment from flashovers.

1.5 In case of injury or death resulting from an accident involving a steam generator or diesel engine, the parts of equipment involved should, if possible be left undisturbed until after inspection.

1.6 Employees must not place feet on any valve, wheel or handle to avoid turning same accidently, nor on front door or panel to prevent scuffing of paint.

1.7 Before working in the engine room or electrical cabinets, employees should shut down engine and open battery switch unless required for test or inspection.

1.8 Air Box hand-hole covers must not be removed while the engine is running.

1.9 Engine base doors must not be opened within half hour after shutting the engine down, except to permit inspection immediately following initial engine start up after engine overhaul.

1.10 When necessary to enter separate radiator compartment, employees must first shut the engine down.

1.11 The opening of engine compartment doors on road switcher units in motion is prohibited except in case of emergency.

1.12 When locomotive consists are in motion, personnel may move from one unit to an adjoining unit only when both units are equipped with communicating walkways or vestibules. On units equipped with hinged walkways, the walkways should be in the raised position, with safety chains in place, when single unit is operated or when coupled to other units not equipped with communicating walkways or vestibules.

1.13 Nullifying the operation of the safety control foot pedal or any other safety control system or device is prohibited.

1.14 Locomotive consists of more than one unit must not exceed twenty-five miles per hour when making backward movements, unless controlled from the unit leading the movement.

When an engine consist of three or more units is required to make a back-up movement, a member of the crew must be on the leading unit in direction of movement and in position from which signals necessary to the movement can be properly given. Crew member must also be in position to warn persons standing on, or crossing, or about to cross the track.

1.15 Except for snowplows, movements not headed by a locomotive must not exceed twenty-five miles per hour. If the locomotive is not equipped with a pilot in the direction of movement, that movement is also restricted to twenty-five miles per hour.

1.16 Diesel units of different gear ratios may be coupled and operated together. When this is done, it will be the responsibility of those in charge of the train to see that speed of train is restricted to that of the lowest geared unit in the train, including those being moved idling or dead.

Exception — Rebuilt DS-12, DS-15 and DS-17's while limited to 35 MPH when operating, may be hauled dead, or isolated, at speeds not exceeding 65 MPH.

1.17 Within block and interlocking signal systems should locomotive consists or rail diesel cars be stopped on sand, whether sanders are operated manually or automatically, they must be moved off the sanded rail immediately to ensure proper operation of the signal system. If they cannot be moved, flag protection prescribed by Uniform Code of Operating Rule 99 for OUTSIDE ABS TERRITORY must be provided

1.18 Diesel units should not be operated through water of a depth of more than three inches above top of rail. They may be operated through water if the

depth is three inches or less above top of rail, but at a speed not exceeding three miles per hour. Should it be necessary for a diesel unit to be operated or handled through water above rail level, report must be made at the first terminal.

1.19 In all instances where diesel units or rail diesel cars are required to be set out on line, hand brakes must be applied and it must be known that the brake will hold the units or cars. If hand brake is inoperative, the unit or car must be coupled to equipment having operative hand brakes which must be applied. Doors should be locked, using coach key. If window locks provided, side windows must be locked from the inside.

1.20 Diesel units or rail diesel cars must not be stopped over open flame switch heaters unless absolutely unavoidable in which case they should be moved off promptly or switch heaters extinguished.

1.21 When a locomotive consist experiences a continuous wheelslip indication that cannot be rectified by the application of sand or reduction of throttle, diesel units are not to be isolated until it is known that all wheels are rotating freely, and that there is no evidence of overheating or disintegration of rotating electrical equipment.

1.22 Yard units equipped with solid journal bearings, when being delivered new or after having undergone a truck overhaul or wheel replacement, are limited to thirty miles per hour for the first 100 miles or over the first subdivision, whichever is the greater. Units equipped with blunt trucks, after complying with the above, are not to exceed forty miles per hour.

1.23 Locomotive Engineers must observe the load meter when operating the locomotive, but par-

ticularly so when under heavy load. If the hand of the ammeter enters the short time rating zone, under slow speed full throttle conditions, the short time rating zone must not be exceeded. Reducing the throttle reduces the cooling air flowing to the traction motors, therefore the short time is also reduced. Should it appear the short time rating will be exceeded, the Train Dispatcher must be advised and the train either reduced or doubled up the grade.

In addition, the units must never be powered up to hold a train at a standstill on a grade, and care must be used when starting heavy trains to avoid traction motor stall burns.

2.0 Maximum Number of Diesels to be Coupled Together in One Consist

2.1 A basic consist is the number of diesel units which may be coupled together, providing current timetable permits, and is limited by the number of driving axles as follows:

	Maximum Driving Axles
2.2 **On Rail Weighing less than 100 lbs. per yard**	16

There are no exceptions to this rule except as specially authorized in writing by the Chief Engineer.

2.3 **On Rail Weighing 100 lbs. per yard or more**	
— Basic consists comprising a combination of units, some with and some without, or all without coupler alignment control	20

— Basic consists comprising a combination of units all with coupler alignment control. Between Revelstoke and Coquitlam or Roberts Bank . . 30
Between Thunder Bay and Quebec City on solid trains of covered hoppers 30
See item 4.1.

— Other Locations 24

— In pusher service between Rogers and Glacier, subject to specified restriction as to location of units in the train, and provided all are 6-axle units with coupler alignment control 36

NO ADDITIONAL UNITS ARE TO BE COUPLED TO THIS PUSHER CONSIST

2.4 **Coupler Alignment Controls**

The following locomotive classes are equipped with coupler alignment controls:

1. All DRF Units:
   4500-4573, 4700-4744, 5400-5414, (QNS & L), 5500-5799, 5800-5879, 5900-6069.
2. DRS 24 Units:
   4200-4250.
3. DRS 22 Units:
   5000-5025.
4. DRS 20 Units:
   3000-3040.
5. DRS 17 Units:
   8200-8203, 8487-8543, 8611-8708, 8801-8823, 8825-8839.

2.5 **Additional Units to Basic Consists in Item 2.3**

On rail weighing 100 lbs. per yard or more, unless prohibited by timetable instruction, additional dead, isolated or operating units may be added to the rear of the basic consist up to the following total number of coupled units:

8 units of 1800 HP or less,

10 units of mixed low and high HP units, or

12 units of 2000 HP or over.

The following precautions and restrictions must be observed:

The weight of the dead or isolated units must be included in the weight of the train.

The total train tonnage must not exceed the haulage capacity of the basic consist.

Extreme care must be taken when starting and accelerating trains to prevent a separation or a derailment on curves caused by excessive draft forces.

When seven or more units are coupled together the automatic brake is to be used instead of the independent brake for controlling locomotive speed. The independent brake will be used to hold the locomotive when stationary.

If the added units are to be operated for traction, the PC feature must be checked for operation.

When necessary to place an 8000 series DRS-10 class locomotive in a multiple unit consist it is to be marshalled next to the lead unit.

SPECIAL RESTRICTIONS WEST OF CALGARY AND FORT MACLEOD:

The basic consist in item 2.3 must not be exceeded unless all units have alignment control couplers and dynamic brake cut out switches.

2.6 Dynamic Brake

Except as otherwise restricted, full available dynamic braking may be used with up to a maximum of four units. When more than four units are coupled in multiple control, the dynamic brake must be cut-in on the lead unit and up to three units next to train or next to dead or isolated units added to the basic consist. Units required to have the dynamic brake cut out that are not equipped with a cut-out switch, must be isolated.

Note:

In the event the dynamic brake is inoperative on one or more of the three units next to the train, the dynamic brake on the next closest unit(s) to the train may be cut-in.

Dynamic brake must not be used if any unit of a locomotive consist, whether working, isolated or dead, is not equipped with alignment control couplers.

Exception:

The dynamic brake may be used on the locomotive consist if only one unit in the consist is not equipped with alignment control couplers and can be handled next to the lead unit.

2.7 If weight of rail or current timetable limits the number of diesel units which may be coupled together, extra dead or disabled units must be marshalled in the train according to Section 9, Subsection 3.0, item 3.3.

2.8 **Restrictions in Backup and Pushing Movements**

- train brakes must be released before applying power.
- use only enough power to start the locomotive and keep it moving very slowly until the entire

train or cut of cars has started after which power may be gradually increased as required.

— observe the loadmeter and note slight variations in current as slack closes. Watch for any unusual changes in amperage which may be the result of train buckling. If this is observed, promptly apply the independent brake and close the throttle.

The following restrictions apply when it is necessary to handle fifty or more cars in a backup movement, shoving movement, doubling over, or any occasion when a diesel consist pushes a train or cars:

— *on upgrades, curves or through turnouts:*
no more than twelve powered axles may be used.

— *on straight and level track:*
no more than eighteen powered axles may be used.

— *when isolating working units to limit powered axles:*
isolate units starting at the second unit of the consist and use as operating units the lead unit and units closest to the train or cars to push the movement.

2.9 Assisting Engines

Except as provided in special instructions, when an assisting engine consist exceeds eight working axles and cannot operate as part of the basic consist on the head end, it must be cut into the train behind sixty percent (60%) of the trailing train tonnage.

Trains or movements handling equipment restricted to rear-end movement only must not be

assisted by an engine coupled behind the restricted equipment.

3.0 Instructions Concerning the Movement of Disabled or Dead Diesel Units in Trains

3.1 Speed restrictions for disabled and dead diesel units are governed by gear ratio of diesel units or bridge and track limitations outlined in timetables and special instructions, except when more stringent restrictions are specified on the waybill in accordance with section 9 subsection 3.0, paragraph 3.5.

3.2 If diesel units are damaged or become defective, but are not rendered inoperative, they must be handled at a speed authorized by the Superintendent.

3.3 Dead or disabled diesel units that cannot be placed at the head end of a train to comply with Section 9, Subsection 2.0, may be handled in the train but must be separated from the locomotive consist handling the train and from other diesel units by at least six loaded cars except that two dead or disabled diesel units may be coupled together. In no case should a dead or disabled unit be more than sixteen cars from the locomotive consist handling the train.

WEST OF CALGARY AND FORT MACLEOD, dead, disabled and isolated units without alignment control couplers, marshalled in the train, must be separated from each other by at least three loaded cars.

3.4 Dead diesel units in every instance must be accompanied by waybill, except when being moved to first terminal after failure on the line.

3.5 The appropriate mechanical officer at the originating point must notify the chief dispatcher,

storekeeper and yardmaster in writing of the movement of dead diesel units specifying speed restrictions, if any, that are to be observed. This information must be stamped or written conspicuously on the face of the waybill. The yardmaster at EACH terminal, other than the originating point, must notify the mechanical officer who will be responsible for inspection of the diesel unit. After being advised by the mechanical officer that the diesel unit is in a safe and suitable condition for movement, the yardmaster must advise the chief dispatcher of the restrictions required and secure his authority as to the train in which the diesel unit is to move. The chief dispatcher must notify the connecting division of the movement and restrictions required, and the conductor and engineman of the train handling the dead units must be notified in writing by the train dispatcher.

3.6 When there is possibility of damage from freezing, engine cooling water and steam generator water must be drained from supply tanks and systems of dead diesel units before shipping.

3.7 Except in emergency circumstances the air brake system of all trailing units of a diesel consist must be cut-in so as to respond to the operation of the automatic and independent brake valves in the controlling cab of the consist. When it is necessary to dispatch a consist with air brakes cut-out on part of the consist, it may be done only to move the consist to the first point where repairs can be made. In this case the Engineman handling the consist must be notified.

4.0 Solid Trains of Covered Hoppers between Thunder Bay and Quebec City

4.1 The following stipulations apply:

- basic consist must not exceed five (5) units all with coupler alignment control;
- DRF 30 units in the basic consist must be marshalled in leading position;
- the dynamic brake must be cut out on the second unit;
- no additional units may be coupled to the basic consist;
- all possible must be done to avoid stopping on any grade, particularly the controlling grade for any subdivisions;
- extreme care must be taken when starting and accelerating trains to prevent a separation or derailment on curves caused by excessive draft forces;
- special attention must be directed to the instructions in paragraph 2.8 covering back up movements.

SECTION 10

DUTIES OF ENGINEMEN AND FIREMEN (HELPERS)

Enginemen

Taking Charge of and Before Moving Diesel Locomotives:

1.0 Maintenance Points

1.1 Apply and release air brakes. Operate communicating signal on units in passenger service to ensure that it is in working order.

1.2 Test the operation and recovery of the safety control pedal or the "Reset and Sensing Control" (RSC) for proper operation.

1.3 Check lights, including cab, hood, signal (classification), headlight, back-up light and ditch lights on engines so equipped, see that they are all working.

1.4 Know that flagging equipment is on the unit and in good order.

1.5 Know that fire extinguishers are in place on each unit and seals not broken.

1.6 Check hand brakes to ascertain if properly released.

1.7 Check that bell and whistle are in working order.

2.0 Where No Shop Staff Is On Duty

2.1 Start up engines as prescribed, if shut down.

2.2 See that air brake system is set up for the required service.

2.3 Apply and release air brakes. Operate communicating signal on units in passenger service to ensure that it is in working order.

2.4 Test the operation and recovery of the safety control pedal or the "Reset and Sensing Control" (RSC) for proper operation.

2.5 Check lights, including cab, hood, signal (classification), headlight, back-up light and ditch lights on engines so equipped, see that they are all working.

2.6 Know that flagging equipment is on the unit and in good order.

2.7 Know that fire extinguishers are in place on each unit and seals not broken.

2.8 Check hand brakes to ascertain if properly released.

2.9 Check that bell and whistle are in working order.

2.10 Check that steam generator is operating as required, including water supply.

2.11 On all units check the following:
That air hoses and jumper cables between units are properly connected and that air hoses not in use are hung up in dummy couplings or places in receptacles provided. Ensure walkway platforms and guard rail chains are secured in proper position.

2.12 Inspect the running gear for visible defects.

2.13 Try sanders.

3.0 At a Run Through Point

3.1 Examine the work report of the incoming Engineman.

3.2 Check lights, including headlight, signal (classification) lights, back-up light and ditch lights on engines so equipped, see that they are all working.

3.3 Know that flagging equipment is on the unit and in good order.

3.4 Check that bell and whistle are in working order.

3.5 Make brake test as prescribed.

Before Leaving Diesel Units When Going Off Duty:

4.0 At a Run Through Point

4.1 Complete Form M.P. 74.

4.2 Should relief crew not be present, follow instructions given in items 5.1 and 5.2.

5.0 At Other Than a Run Through Point — Unattended Engines Left Running

5.1 Open the generator field switch.

Move the selector handle or transition lever to the OFF position

Move the reverse handle to OFF position and remove the handle.

5.2 Apply sufficient hand brakes firmly and test their effectiveness. Leave automatic brake valve cut in on controlling unit with handle in Running or Release position and independent brake valve handle in full application position.

5.3 Except where shop staffs or other authorized persons are in attendance, if the unit is to be left outside or in an unheated engine house in freezing weather and terminal heating facilities are not available.

a) Know that all doors and windows are closed.
b) See that the steam generator is operating in RUN or LAYOVER in accordance with instructions.

5.4 Complete Form M.P. 74.

6.0 Engines Shut Down

6.1 Open the generator field switch.

Move the selector handle or transition lever to OFF position.

Move the reverse handle to OFF position and remove the handle.

6.2 Apply sufficient hand brakes firmly and test their effectiveness. Leave automatic brake valve cut in on controlling unit with handle in Running or Release position and independent brake valve handle in full application position.

6.3 Shut down engines as prescribed.

6.4 Except where shop staff or other authorized personnel are in attendance, if the unit is to be left outside or in an unheated engine house in freezing weather, ensure all doors and windows are closed and see that protective heater, either on board or wayside, is properly coupled and operating before leaving the unit unattended. If protective heater is not available, drain units in accordance with Form D.E. 102.

6.5 Complete Form M.P. 74.

Taking Charge of Rail Diesel Car Consist:

7.0 At Maintenance Point

7.1 Apply and release air brakes and check the operation and recovery of the safety control foot pedal or equivalent device. Check operation of conductor's valves. Operate communicating signal to ensure that it is in working order. Check window defroster in winter months.

7.2 Check signal (classification) lights and headlight, and see they are in working order.

7.3 Know that flagging equipment is on the RDC consist and in good order.

7.4 Know that hand brakes are released.

7.5 Check that bell and whistle are in working order.

8.0 At a Run Through Point

8.1 Examine the work report of the incoming engineman.

8.2 Check signal (classification) lights and headlight, and see they are in working order.

8.3 Know that flagging equipment is on the RDC consist and in good order.

8.4 Check the bell and whistle are in working order.

8.5 Know that hand brakes are released.

8.6 Make brake test as prescribed.

9.0 Where No Shop Staff Is On Duty

9.1 Start up engines as prescribed, if shut down.

9.2 Apply and release air brakes and check the operation and recovery of safety control foot pedal or equivalent device. Operate communicating signal to ensure that it is in working order.

9.3 On RDC consists exceeding 6 cars, or under circumstances when the straight air brakes is cut out, the straight air train line cut out cock must be open at the controlling end. The dummy coupling used should be equipped with a vent port to prevent build-up of air pressure in the straight air pipe.

9.4 Check signal (classification) lights and headlight, and see they are in working order.

9.5 Know that flagging equipment is on the RDC consist and in good order.

9.6 Know that hand brakes are released.

9.7 Check that bell and whistle are in working order.

9.8 Blow out condensate from reservoirs.

9.9 Try sanders.

Before Leaving Rail Diesel Cars When Going Off Duty:

10.0 At Other Than a Run Through Point — Engines left Running

10.1 Apply hand brakes and test for effectiveness.

10.2 Place throttle and reverse levers in the off position and remove handles. Leave master plug applied.

10.3 Make a full straight air brake application and leave brake valve handle in position. When RDC consist exceeds 6 cars or under other circumstances when the straight air brake is cut out, the straight air brake must be cut in and the straight air train line pipe cut-out cock at the controlling end of the RDC consist closed.

10.4 See that signal (classification) lights and headlights, including oscillating headlight when provided, are extinguished.

10.5 Know that doors and windows are closed in operating end.

10.6 Complete Form M.P. 74.

Engines shut Down

10.7 Apply hand brakes and test for effectiveness.

10.8 Shut down engines as prescribed. Follow instructions for draining engines and service water in winter months when necessary.

10 9 Place throttle and reverse levers in off position and remove handles. Remove master plug.

10.10 Make a full straight air brake application and leave brake valve handle in that position. When RDC consist exceed 6 cars, or under other circumstances when the straight air brake is cut out, the straight air brake must be cut in and the

straight air train line pipe cut-out cock at the controlling end of the RDC consist CLOSED.

10.11 See that signal (classification) lights and headlights, including oscillating headlight when provided, are extinguished.

10.12 Know that doors and windows are closed in operating end.

10.13 Complete Form M.P. 74.

11.0 At a Run Through Point

11.1 Complete Form M.P. 74.

11.2 Should relief crew not be present follow instructions given in items 10.1 to 10.13 inclusive.

Firemen (Helpers)

12.0 Duties of Firemen (Helpers)

12.1 The duties of Firemen (helpers) when employed on diesel units are as follows:

a) To assist the Engineman.
b) To comply with the provisions of the Uniform Code of Operating Rules and instructions relating thereto.
c) To operate the steam generator and its appurtenances, and take water from facilities where no maintenance or shop staff is employed. The advice or assistance of the Engineman may be called upon, if required.

12.2 It must be clearly understood that the Engineman, not the Fireman (helper) is responsible for the diesel unit or units in his care. A Fireman (Helper) is not required to patrol diesel units, except as directed by the Engineman or as may be required for the operation of steam generators.

12.3 Firemen (Helpers) are to go to engine rooms only when requested by Enginemen or when necessary to attend steam generators in use heating trains.

SECTION 11

DEPORTMENT OF UNIFORMED CONDUCTORS AND TRAINMEN

1.0 Appearance and Deportment of Uniformed Conductors and Trainmen On Duty

1.1 Patrons of the railway form impressions as to the efficiency of the employees and the excellence of the service by the appearance and deportment of men who are employed on or about the Company operated passenger trains.

1.2 Clothes should be kept cleaned, pressed and in good repair. Plain white or light blue shirt with dark blue or black four-in-hand or bow tie and black shoes, properly polished, are to be worn.

1.3 Conductors and Trainmen, must, at all times, be clean shaven, have neatly trimmed hair, and present a tidy appearance. Caps must not be worn on the back or side of the head and should be changed when they become crushed or frayed.

1.4 Uniformed men, whose coats are intended to button, are to keep them buttoned at all times, except that train Conductors and sleeping car Conductors are exempted while selling or collecting tickets.

1.5 When standing by trains to entrain or detrain passengers, employees should stand erect, ready and attentive to assist passengers, using stepping boxes where provided and necessary and taking every precaution to avoid accident or injury.

1.6 Employees deadheading or off duty must not visit with employees on duty, thereby interfering with them in the performance of their work.

1.7 Employees, while on duty in or about passenger stations, or on passenger cars, should refrain from the use of chewing gum, etc.

THIS PAGE LEFT BLANK
INTENTIONALLY

SECTION 12

1.0 HANDLING OF LIVESTOCK

1.1 Method of handling livestock and the condition of cars furnished for the transportation thereof is important. Packing companies, livestock associations, railway companies and stockyards are making every effort to convey livestock from shipper to packing house with a minimum of damage and loss, due to bruising of livestock in transit.

1.2 It is important that all employees be fully aware of the necessity of carefully inspecting equipment and that defects such as loose or protruding nails, bolts, broken slats, damaged floors etc., be corrected before the cars are supplied or placed for loading.

1.3 Care must be exercised to ensure rough couplings are not made when handling cars containing livestock.

1.4 Defective or non-standard gang planks or toe boards which do not fit closely into the car doors should not be used. All such appliances should be inspected at frequent intervals and repairs effected at once.

1.5 Bruising may be caused by the use of rods, sticks, canes or whips in loading and unloading animals; this practice must not be indulged in by employees, who should also endeavour to prevent others from doing so Extreme care should be exercised in keeping platforms and unloading docks, etc., in good condition; when wet or icy, they should be properly cleaned and sand or cinders sprinkled on such spots as well as in alleys where the cattle are required to make a sharp turn in order to get into the pen. If any injury does occur

from any cause, it should be promptly reported to the Superintendent.

1.6 When spraying of hogs is performed, as requested by shippers or consignees, a steady stream of water is not to be directed on the animals, but it is to be sprayed against the ceiling of cars and allow to drip on the animals.

1.7 Exchange of animals at stockyards is not permissible. Employees observing or being informed of such exchanges must promptly report all available information to the railway representative in charge of yards.

1.8 In the case of all livestock shipments originating at or destined to any point on CP Rail, or passing over any of its lines, the date and hour at which said livestock was loaded must be clearly shown on the waybill and where livestock has been rested, fed and watered in transit, the date, hour and place at which it was last rested, fed and water must also be shown on the waybill

1.9 United States laws, violations of which provide for heavy penalties, prohibit confining of livestock in cars for over TWENTY-EIGHT HOURS, unless prevented by storm or other accidental or unavoidable causes which cannot be anticipated or avoided by the exercise of due diligence and foresight, except when the THIRTY-SIX hour release (CPR Form 1090) is signed by the owner or person in charge of that particular shipment, and notation made on the waybill accordingly in the place provided for this purpose on the front of the waybill, in which event, the time of confinement may be extended to THIRTY-SIX HOURS.

1.10 No carrier shall confine in a railway car,

a) equines, swine or other monogastric animals for longer than 36 hours; or

b) cattle, sheep, goats or other ruminants for longer than 48 hours.

1.11 Subsection 1.10 does not apply to ruminants that will reach their final destination in Canada where they may be fed, watered and rested without being confined longer than 52 hours.

THIS PAGE LEFT BLANK
INTENTIONALLY