

UNION PACIFIC RAILROAD COMPANY
Northwestern District

Oregon Division
Special
Instructions
No. 14

Effective Thursday,
November 1, 1956

Superseding Special Instructions No. 13

Employees whose duties are in any way affected
thereby, must have a copy of these instructions
with them while on duty.

D. F. WENGERT,
General Manager

J. G. KIMMELL,
General Superintendent

C. B. LISHER,
Superintendent

NOTE: Changes in this issue are printed in type same as this.

Railroad Watches

2 (R). Employees listed below and other employees as may be designated, are not subject to Operating Rules 2 and 2 (A), but they must, while on duty, have a reliable railroad grade watch* which must not vary more than 30 seconds from correct time:

(*A railroad grade watch is one equipped with a lever set.)

Safety and Courtesy Representatives	Traveling Firemen
Station Agents	Station Agents
Trainmasters	Operators
Assistant Trainmasters	Outside Hostler Helpers
Traveling Conductors	Assistant Yardmasters
Road Foremen of Engines	

(†Except when assigned in offices where standard clock is located.)

2 (S). Employees must present their watches to officers and supervisors for time comparison upon request.

2 (T). Referring to Operating Rule 2, yard helpers of crews making main track movements are subject to provisions of this rule.

2 (U). Train dispatchers, station agents, operators and employees who are required to use a reliable railroad grade watch, must not wear wrist watches while on duty.

Where Time Applies

5 (R). At Biggs, time shown in time-table schedules and in train orders applies at the end of double track.

At The Dalles, time shown in time-table schedules and in train orders for first class trains applies at the passenger station.

Signals

7 (R). Employees on trains and engines which operate in territory where they are governed by the rules of another railroad, must provide themselves with necessary signal equipment to fully comply with such rules.

7 (S). When starting trains with diesel helper on rear end of train, trainmen will be stationed in a position to relay signals to start from head end to crew on helper engine.

When it is not possible to relay signals, the following method will be used:

When ready to move, engineer on head end will make a 15-pound automatic brake pipe reduction, return brake valve to running position and wait three minutes. Engineer on helper engine will start three minutes after his gauge shows brake pipe pressure being restored.

8 (R). Yellow flags by day and yellow lights by night will be used by switchtenders and herders.

Proceed signals as well as stop signals given by switchtenders must be answered.

8 (S). Electric lanterns may be used by switchtenders, herders and interlocking signalmen for displaying yellow lights.

Reduce and Resume Speed Signs

10 (R). Reduce Speed sign showing by figures the maximum speed permitted, placed on engineer's side of track, indicates that the track 2500 feet distant is in condition for a speed of not more than indicated by the sign. Example: 60-40-25 will indicate maximum speed of 60 MPH for streamline trains, 40 MPH for other passenger trains, 25 MPH for freight trains.

Resume Speed sign placed on engineer's side of track, indicates that the Reduce Speed location has been passed.

The entire train must pass over the designated location at the specified speed.

Such speed restrictions will also be shown in time-table or superintendent's bulletin.

10 (S). Referring to Operating Rule No. 10 (h). On portions of the division where there is no joint operation of trains with another company, when a yellow flag or yellow light is found on the engineer's side of the track, or is displayed by a flagman, train must be prepared to stop at a red signal one and one-half miles from the yellow signal instead of one and one-fourth miles.

Engine Whistle Signals

14 (R). Operating Rule 14 (a) and Air Brake Rule 1048 are changed as follows: When an emergency exists and it is necessary to use engine whistle to call for brakes to be applied on moving train or cars or when necessary to use engine whistle to signal some other movement to stop, a succession of short sounds must be used.

Operating Rule 14 (p) is changed as follows: When necessary to use engine whistle as an alarm for persons or livestock on track, Whistle Signal 14 (l), two long, one short, and one long sounds, must be used.

14 (S). In addition to locations listed in Operating Rule 14 (l), engine whistle must be sounded and bell rung approaching private crossings when view of crossing is obscured or where it can be seen that persons or vehicles are approaching or in vicinity of the crossing.

15 (R). On portions of the division where there is no joint operation of trains with another company, first paragraph of Union Pacific Rule 15 contained in Consolidated Code of Operating Rules is changed to read as follows:

"15. The explosion of two torpedoes is a signal to immediately reduce speed to 20 miles per hour or as much slower as conditions require, keeping close lookout for train or obstruction. After reducing to 20 miles per hour, speed must not be increased until train has reached a point one mile from where the torpedoes were exploded. The explosion of one torpedo will indicate the same as two, but the use of two torpedoes is required in all cases."

Headlights

17 (R). Oscillating red headlight on engine so equipped must be displayed under the following conditions:

When train becomes disabled or makes sudden stop due to unusual occurrence, or when an adjacent track is obstructed or there is possibility of it being obstructed;

When head end protection is required;

When occupying main track in meeting an opposing train, until opposing train dims its headlight and switch is lined to permit opposing train to enter siding, except this does not apply in CTC territory.

When red headlight is displayed, an opposing train on same or adjacent track must stop before passing headlight, ascertain the cause and be governed by conditions.

17 (S). Except on Fifth Subdivision, headlight must be displayed, burning bright, to the front of every train by day and night, except as otherwise prescribed by the rules.

17 (T). Where Operating Rule 17 refers to rear of tender, it also applies to rear of diesel locomotives.

17 (U). Oscillating white headlight on engines so equipped must be displayed by night while passing through cities and towns and while approaching and passing over public crossings.

Markers and Rear End Lights

19 (R). Oscillating red rear end light on passenger trains must be displayed from sunset to sunrise and when day signals cannot be seen due to weather or other conditions. It must also be displayed by day when the train is moving under circumstances in which it may be overtaken by another train.

Red rear end light must be extinguished when train is clear of main track and rear end protection is not required.

19 (S). On portions of the division where there is no joint operation of trains with another company, in complying with Operating Rule 19 (A) at night when a red light is not available, a marker lamp must be securely fastened to rear end of rear car so as to display red light to rear.

When train is clear of main track at night to be passed by another train, the red light must be removed, except in CTC territory.

19 (T). When the rear unit of a train is equipped with built-in markers, they must be lighted both day and night and the requirement that markers display green lights to front and side will not apply.

Except between Portland and Seattle, when rear car of a passenger train is equipped with an oscillating red rear end light on which an auxiliary marker is mounted, markers need not be displayed as required by Operating Rules 19 and 19 (A). When such train is clear of main track at night and rear end protection is not required, the red rear end light must be extinguished and the auxiliary marker must display green light to rear. Rear trainman is responsible for proper display of the auxiliary marker as well as the rear end light.

19 (U). Except on Fifth Subdivision and branches, Bend Branch, Wallula Branch, and Yakima Branch, when a diesel road-switch locomotive equipped with built-in classification signal lamps is running light or is at the rear of a train, the classification lamps will be used as markers, displaying red or green lights to the rear in accordance with the rules. The requirement that markers display green to front and side will not apply.

Indicators

24 (R). Referring to Operating Rule 24: Helper engines will display their engine number in indicators, except when used on head end of train, train number will be displayed.

Switch Lights

27 (R). At stations where reflectorized type switch lamps are in use, in case of headlight failure, or engine backing up, trains and engines must approach facing point switches at restricted speed.

27 (S). Switch lights will not be used on branches shown below:

Joseph	Pomeroy	Tucannon
Pilot Rock	Dayton	Connell
Heppner	Sierra Nevada	Wallace
Condon	Tono	Pleasant Valley
Grass Valley	Olympia	

Pendleton, except main track switches in Walla Walla yard
Trains and engines must approach facing point switches on these branches prepared to stop if switch is not in normal position.

Conditional Stops

28 (R). A green and white signal will be used to stop designated trains at conditional stops shown in time-table.

28 (S). A white indicator board displayed at a station will indicate to trains doing local work that there are cars to be moved or freight to be loaded.

Use of Engine Whistle

32 (R). Within the city limits of Spokane, Pendleton and Pomeroy, it is unlawful to sound engine whistle except to signal flagman or interlocking signalman, or to prevent accident not otherwise avoidable.

At Walla Walla, the use of the engine whistle at the public crossings at West Cherry Street and Gardeners' Association just west of Mill Creek Bridge, is prohibited except to prevent accident not otherwise avoidable.

Clearances

83 (R). Clearance Form A must be received as follows:

Black River	—all westward trains;
Centralia	—all westward Grays Harbor Branch trains originating at Blakeslee Jet.;
Centralia	—all eastward Tono Branch trains originating at Wabash;
Independence	—all westward CMStP&P trains originating at Helsing Jet.;
Walla Walla	—all trains;
Wallula	—all eastward Wallula Branch trains;
Wallula	—all eastward Yakima Branch trains;
Ayer	—all trains;

83 (S). Northern Pacific clearance must be received as follows:

Reservation	—all eastward second-class and extra trains passing through Tacoma;
Tacoma, McCarver Street	—all eastward second-class and extra trains originating at Tacoma.

83 (T). Trains are not required to receive clearance as per Operating Rule 83 (B) as follows:

Troutdale	—trains entering or leaving Kenton Line if train order signal indicates Proceed;
Argo	—all westward CMStP&P passenger trains;
Richland Junction	—Trains 361 and 373;
N. P. Crossing, Spokane	—all eastward S. I. trains;
Tucannon	—all trains;
Bolles	—all trains;
Midvale	—all trains;
Turner	—all westward trains.

When there is no operator on duty, trains are not required to receive a clearance as per Operating Rule 83 (B) as follows:

Hooper Jct.	Connell	Pomeroy
Starbuck	Moscow	Condon
La Crosse	Burke	Heppner
Sunnyside	Colfax	

Train No. 68 will not be required to receive clearance at Manito when operator is not on duty and train order signal indicates "proceed".

Trains originating in new yard Spokane need not receive clearance at their initial station as required by Rule 83 (B). Westward trains en route Spokane-Tekoa Branch which originate at new yard must receive clearance at Dishman, which will confer same authority on Spokane-Tekoa Branch as when received at their initial station. Westward trains en route Sixth Division which originate at new yard must receive clearance at NP Crossing which will confer same authority on Sixth Division as when received at Spokane.

All trains originating at The Dalles en route Bend Branch must receive SP&S Railway Company clearance card at The Dalles Yard Office.

83 (U).

A clearance received at	By	Will confer the same authority on	As when received at
Ayer	Eastward trains	Connell Branch	Hooper Jct.
La Crosse	Westward trains	Sixth Subdivision	Hooper Jct.
Walla Walla	Eastward trains	Dayton Branch	Bolles
Dayton	Westward trains	Pendleton Branch	Bolles

Train Registering Exceptions

83 (V). At Seattle, information required by Operating Rule D-83 will be issued to CMStP&P first-class trains by train order and delivered by operator on platform to conductor who will register by register ticket.

83 (W). Information required by Operating Rule S-83 or D-83 need not be received at:

Peninsula Jct.—all westward trains and engines;
Argo —all westward U. P. and CMStP&P trains and engines, but must move at restricted speed Argo to Seattle;

N. P. Crossing, Spokane—all eastward trains and engines.

Conductors of the following trains may register by register ticket, per Operating Rule 83 (A), when operator on duty:

La Grande	—Nos. 105 and 106;
The Dalles	—Nos. 106, 106, 17, 18, 11, and 12;
Black River	—all trains;
N. P. Crossing, Spokane	—all U. P. first-class trains and all G. N. trains;
Marengo	—U. P. first-class trains;
Hooper Junction	—all trains Sixth subdivision;
Ayer	—all first-class trains;
Manito	—all trains;
Wallula	—all trains.

Train registering exceptions:

Albina	—only trains which originate or terminate at that station will register;
Argo	—only trains which originate or terminate in U. P. yard at that station will register;
Centralia	—Grays Harbor Branch trains originating or terminating at Blakeslee Jct. must register in U. P. train register in N. P. telegraph office;
Vancouver	—all trains must register by N. P. Form 608 and will be furnished check of register by train order or register check Form 602 issued by operator;
Zillah	—only first-class trains will register.

Identification of Trains

87 (R). On double track westward trains between The Dalles and Crates and eastward trains between The Dalles and Biggs must make necessary identification of all trains met or passed.

Stopping Trains at Meeting and Passing Points

89 (R). When a train, either on main track or on siding, is to be stopped to be met or passed by another train, or is stopped by a CTC signal at leaving end of a station, stop should be made not less than 300 feet from fouling point or signal, when length of train will permit, and train remain at that point until train to be met or passed has departed.

89 (S). At Troutdale, when necessary for eastward trains to stop on freight line to meet other trains, stop must be made clear of fouling point of siding.

Movements in Yards

- 93 (R).** Yard limits include territory shown:
Albina —from 930 feet west of Signal 6.3 to North Portland Jct. and to M.P. 10, Kenton Line, including East Portland, Albina and Kenton;
Troutdale —on Kenton Line only;
Oregon Trunk Jct. —on Bend Branch only;
Aberdeen —between yard limit sign just east of Cosmopolis and N. P. yard limit sign at Myrtle St. west of Aberdeen depot;
Spokane —between yard limit sign west of West Spokane and yard limit sign at Hill.

93 (S). The following instructions govern while using trackage of Northern Pacific Terminal Company at Portland:

Trains and engines using tracks 1 to 10 inclusive, Portland Union Station, must move at restricted speed when passing a train receiving or discharging passengers, and must not cross High Shed at passenger station unless proceed signal is received from station master or his assistant, or preceded by a member of the crew when passage over the High Shed is seen to be clear and it is safe to proceed.

Interlocking at south end of freight and passenger yards governs all trains and engines entering or leaving yards.

When the home signal indicates Stop, the following whistle signals will be used to call for desired route: (When conditions are favorable, hand or lantern signals should be used instead of whistle signals.)

- For Albina o
- For Troutdale o
- For S. P. Main Line o
- For S. P. Yard o o
- For East Second Street o o
- For S. P. & S. to East Side o o

When the home signal indicates Proceed, the whistle signal must not be sounded.

93 (T). Tracks of U. P. and N. P. within yard limits at Zillah-Attalia and Huntsville are used jointly by trains and engines of both companies for switching purposes, being governed by Operating Rule 93.

93 (U). Trains and engines are authorized to cross N. P. main track at Athena to make movements to and from Preston-Shaffer elevator, being governed by Operating Rule 93.

93 (V). At Spokane Union Station, trains and engines will be governed by signals from switchtenders.

Freight equipment, other than caboose and low cars, must be handled through Spokane Union Station on Track 5.

Track 5, the most northerly track in Spokane Union Station yard, will normally be used as the running track.

93 (W). At Seattle Union Station, trains and engines on eastward main track must stop clear of Signal 1827-A when waiting for eastward trains that are to use crossover from Tracks 7 and 12.

Railroad Crossings and Junctions

98 (R). Trains and engines must be governed by the following at the railroad crossings and junctions indicated:

Location	Railroad Crossed, or Junction With	Trains Which Have Precedence	How Governed
East Portland. (S.E. Second Ave. between S.E. Main and S.E. Madison Sts.)	S. P. & S.	U. P.	Stop signs.
Peninsula Jct. (M.P. 5.8 Kenton Line)	Seattle main track.		Special Instruction 663 (S).
Holsing Jct.	C. M. St. P. & P.	U. P.	Automatic block signals. Special Instruction 261 (R).

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98 (R). Continued.

Location	Railroad Crossed, or Junction With	Trains Which Have Precedence	How Governed
South Aberdeen. (Donovan Mill)	N. P.	N. P.	Stop signs.
●lympia. (Jefferson and 7th Sts.)	N. P.	U. P.	Stop signs.
Tacoma. (Dempsey Mill Spur)	N. P.	N. P.	Stop signs.
Tacoma, Tidewater.	N. P.		Semi-automatic interlocking. Special Instruction 98 (S).
Seattle. (Spokane and Whatcom Aves.)	N. P.		Stop signs.
Seattle. (Whatcom Ave. and Holgate St.)	N. P.		Stop signs.
Seattle. (Whatcom Ave. and Massachusetts St.)	N. P.		Stop signs.
Seattle. (Railroad Ave. and Atlantic St.)	P. C. N. P. C. M. St. P. & P.		Stop signs, and signals from watchman.
Ayor. (M.P. 264.0)	Sixth Subdivision and Tekoa-Ayor Branch.		Special Instruction 98 (T).
Marengo. (M.P. 306.4)	C. M. St. P. & P.		Special Instruction 98 (U).
Spokane. N. P. Crossing (M.P. 163.5)	N. P.		Interlocking.
G. N. Crossing (M.P. 164.2)	G. N.		Interlocking.
Manito. (M.P. 143.4)	C. M. St. P. & P.		Special Instruction 98 (U).
Farmington. (M.P. 103.2)	N. P.	U. P., except passenger trains have precedence over freight trains.	Gate set normally against N. P.
Garfold. (M.P. 95.3)	N. P.	U. P.	Stop signs.
Colfax. (M.P. 77.1)	G. N.	U. P.	Gate and automatic interlocking signals. Gate set normally against G. N.
Oakesdale. (M.P. 39.75)	G. N.	U. P.	Stop signs.
Oakesdale. (M.P. 39.73)	N. P.	N. P.	Stop signs.
Thornton. (M.P. 30.67)	G. N.	U. P.	Gate.
Riparia. (M.P. 17.3)	N. P.	U. P., except that passenger trains have precedence over freight trains.	Gate set normally against N. P.

Continued on page 5.

98 (R). Continued.

Location	Railroad Crossed, or Junction With	Trains Which Have Precedence	How Governed
Walla Walla. (M.P. 47.9)	N. P.	U. P.	Stop signs.
Walla Walla. (M.P. 47.3)	W. W. V.	U. P.	Gate.
Langdon (M.P. 44.2)	W. W. V.	U. P.	Gate.
Milton. (M.P. 37.0)	W. W. V.	U. P.	Gate.
Parker. (M.P. 91.3)	N. P.		Automatic Interlocking.
Donald. (M.P. 89.35)	N. P. (gauntlet track).		Automatic Interlocking. Special Instruction 672 (R).
Auker. (M.P. 28.9)	W. W. V.	U. P.	Gate.
Dayton. (M.P. 13.10)	N. P.	U. P.	Stop signs.
Dayton. (M.P. 13.11)	N. P.	U. P.	Stop signs.
Pullman. (M.P. 19.3)	N. P.	U. P.	Stop signs.
Wallace. (M.P. 80.4)	N. P.	U. P.	Stop signs.
Wallace. (M.P. 80.6)	N. P.	U. P.	Stop signs.

98 (S). At N. P. Crossing, Tacoma-Tidewater, when stopped by semi-automatic interlocking signal and no conflicting movement is evident, a member of crew must go to the crossing, remove padlock from derail switch machine, and then operate time release. At expiration of time interval, indicator lamp will light to indicate that lock is released to permit operation of derail. After derail is properly lined, if signal does not change to an indication permitting the train or engine to proceed, member of crew will signal his engineer to proceed if no train or engine is approaching on conflicting route.

Should electric lock fail to operate, break seal, insert switch key and operate lock. After movement completed notify dispatcher.

98 (T). At Ayer, movement of trains and engines from Tekoa-Ayor Branch from junction to depot is authorized by proceed indication of automatic block signal.

When signal displays Stop indication after switch is opened, train or engine must wait three minutes, and if no conflicting movement is evident, may proceed without sending a flagman ahead, but must move at restricted speed.

Westward first-class trains at or seen to be approaching junction will have precedence over other westward trains and engines from junction to depot.

98 (U). At Marengo, eastward C. M. St. P. & P. trains and engines are governed by Dwarf Signal 3068 in making movement to Union Pacific main track. When dwarf signal displays Stop indication after operation of time release, movement may be made only under flag protection. (See Operating Rules 522 and 523.)

All train movements between Manito and Plummer Junction will be made under the direction of the Milwaukee Railroad and subject to timetable and train orders of that company.

At Manito, junction switch will be lined and set for normal movement from Union Pacific to the Milwaukee. The upper unit of color light block Signal 1437 at the junction switch will govern movements from the Union Pacific track to the Milwaukee track, and trains may move without stopping from Union Pacific line onto the Milwaukee, being governed by the indication displayed by upper unit of this signal. Trains using exclusive Union Pacific track will stop in either direction and line the junction switch for move to be made, being governed on westward movement by indication of lower unit of Signal 1437, and on eastward movement by indication of Signal 1436.

At Plummer Junction a color light dwarf signal equipped with the letter "S", as per Rule 601 G, has been installed at the clearance point of the new Union Pacific connecting track. When the letter "S" is illuminated the main track switch may be opened, and if the signal then indicates "Proceed", movement to main track may be made, complying with Rule 513.

98 (V). At N. P. Crossing, Spokane, Spokane International trains and engines must stop clear of Signal 1640. If there is no conflicting movement, junction switch may be lined for movement to Union Pacific track. When Signal 1640 displays Stop indication after switch is opened, train or engine must wait three minutes and if no conflicting movement is evident, may proceed after sending flagman ahead, but must move at restricted speed.

Drawbridges

98 (W). Trains and engines after stopping at stop signs must not proceed onto draw span of bridge between Montesano and South Montesano until they have called for, received and acknowledged proceed signal from bridge tender, and in addition must be governed by position of derail located 128 feet east, and derail located 195 feet west of trestle leading to drawbridge. During certain hours each day draw span will be left open for river traffic and derails will be set in derailling position. If necessary for train or engine to use drawbridge during such hours, notify Agent Montesano or dispatcher to call drawbridge operator.

98 (X). At Tacoma, all trains and engines after stopping at stop signs must not proceed onto draw span of bridge at Tacoma until they have called for, received and acknowledged proceed signal from bridge tender.

98 (Y). At drawbridge, M.P. 23.45 Wallace Branch, trains and engines after stopping at stop sign must sound four short sounds of engine whistle and may proceed when proceed signal is received from bridge tender. If proceed signal is not received from bridge tender, flagman must be sent ahead to drawbridge to give proceed signal if draw span is found properly closed and locked.

Two long sounds of engine whistle must be sounded before moving over bridge.

No bridge tender on duty between 5 A.M. and 9 A.M. and between 5 P.M. and 9 P.M. During these hours draw span will be left open for river traffic.

98 (Z). At M.P. 17.23, Tekoa-Ayor Branch, trains must stop before passing over drawbridge and then proceed if draw span is seen to be closed.

Flag Protection

99 (R). On portions of the division where there is no joint operation of trains with another company, last paragraph of Operating Rule 99 is modified as follows:

"Night signals—A white light, not less than ten torpedoes and six red fuses."

At night and during foggy and stormy weather, a lighted red fuse will be used for hand signals required by Operating Rule 99.

99 (S). At Hood River and The Dalles, when passenger train stops at passenger station, engineer will not sound whistle for flagman to protect rear of train, but when on the time of a first-class train or in foggy or stormy weather, when ready to proceed, flagman must be recalled by engine whistle.

These instructions do not relieve conductor or flagman of the responsibility of protecting as required by the rules.

99 (T). Trains may be relieved from protecting against following extra trains by train order, Example 7 of train order Form Z, only on the following branch lines:

- Connell Branch between Hooper Jct. and Connell.
- Dayton Branch between Dayton and Turner.
- Pomeroy Branch
- Umatilla Branch
- Joseph Branch
- Pilot Rock Branch
- Heppner Branch
- Condon Branch
- Grass Valley Branch
- Pendleton Branch between Walla Walla and Alto.

99 (U). On following branches between 6 A.M. and 6 P.M. daily, a speed of 10 MPH must not be exceeded by all extra trains approaching and moving on curves and where view is obscured, looking out carefully at all points for track cars and men working on track without flag protection. Speed on curves must be such as to be able to stop within one-half the distance track is seen to be clear and whistle signal 14 (I) must be sounded frequently:

Condon Branch;	Alto to Bolles (on
Grass Valley Branch;	Pendleton Branch);
Olympia Branch,	Heppner Branch;
Dayton Branch;	Grays Harbor Branch;
Starbuck to Relief (on	Pomeroy Branch;
Tucaunon Branch);	Umatilla Branch.
Hooper Jct. to Connell (on	
Connell Branch);	

99 (V). On portions of the division where there is no joint operation of trains with another company, in protecting train as required by Rule 99, flagman must place first set of torpedoes one-half mile from rear of his train and must place second set of torpedoes one and one-half miles instead of one and one-fourth miles from rear of his train.

Unusual Conditions

101 (R). At Pilot Rock, trains and engines must move at restricted speed, keeping a lookout for cars on or foul of main track west of derail.

101 (S). On Bridge 365.32 over Spokane River and Latah Creek between West Spokane and Cowles, and on Bridge 271.70 over Snake River between Joso and Chew, trainmen and enginemen must watch train and track closely and be prepared to stop should an emergency arise.

Cars or Train Left Behind

102 (R). On portions of the division where there is no joint operation of trains with another company, in complying with Operating Rule 102 (A), if no light is available to be placed on front end of cars left behind, when conditions make it necessary, a trainman must remain at front end of such cars to signal engineer when returning.

Riding on Footboards of Engines

103 (R). In switching with an engine equipped with footboards, when there are no cars ahead of the engine, a yardman or trainman (and not more than one) must ride on leading footboard in direction the engine is moving, except as follows:

When the switches to be passed over can be plainly seen to be properly lined;

Where movement is over crossing protected by watchman on duty; Over street crossings at Portland, Albina, Kenton and on Second Street at East Portland;

At Umatilla, over public crossings just east of M.P. 9.5;

At La Grande, over Fir Street and Greenwood Street;

At Seattle, over Spokane Street, Harbor Island;

At Seattle, over Spokane Street, Alaskan Way;

Where through movement is made:

Between Rieth and Pendleton;

Between Argo and Seattle passenger station or local yard;

Along East Marginal Way, Seattle.

When Diesel-electric locomotive is used, a yardman or trainman may ride on side steps or platform in direction engine is moving instead of on leading footboard.

Public Crossings

103 (S). At public crossing protected by crossing watchman and crossing gates, yard crews must know gates are down and crossing protected before making movement onto or over the crossing. When not so protected the crossing must be protected by a member of the crew.

103 (T). At public crossings protected by automatic crossing signals, bells or gates, every effort must be made to avoid unnecessarily occupying controlling circuits or leaving switches open within the controlling circuits.

When a train, engine, or switching movement has been delayed or stopped within 1500 feet of such crossing, any further movement, either forward or reverse, toward the crossing must be made at restricted speed until it is determined that the crossing signals are operating for sufficient time to stop highway traffic. In case the crossing signals are not operating for the movement, crossing must be protected by a member of the crew, unless a crossing watchman is on duty.

When a train, engine or switching movement is to be made against the normal current of traffic over a public crossing protected by automatic crossing signals, bells or gates, a member of the crew must protect the crossing, unless a crossing watchman is on duty.

103 (U). At Bridal Veil, in switching tracks serving lumber company, movement over the two ramp crossings must be preceded by a member of crew.

At La Grande, eastward trains and engines on any track except main track must not exceed 10 MPH over street crossings at Fir and Greenwood Streets.

At Baker, street crossings at Campbell and Auburn Streets, east of depot, must not be blocked in excess of five minutes by freight trains.

At Fifteenth Street, Tacoma, all trains and engines must stop and a member of the crew must be sent ahead to act as crossing watchman.

103 (V). At The Dalles, public crossings must not be blocked longer than 10 minutes. When a train is to be delayed getting in or out of the yard, crossings must be cut immediately.

103 (W). At Barnhart, when movements to or from ballast pit are made over public crossing, a member of the crew must be stationed on each side of track at the crossing to stop highway traffic.

103 (X). The following will govern trains and engines at the public crossings named below:

Location	Instructions
Spokane—Monroe Street.	Normal position of gate is across track. Movement must not be made until gate is open and proceed signal given from middle of street by a member of crew. Gate must be returned to normal position after each movement.
Spokane—Modelia and Washington Street.	All engines using switching tracks must stop clear of crossing and member of crew will ascertain that flashing light signals are operating and bells ringing before proceeding over crossing. Cars must not be left within 30 feet on either side of crossing.
Spokane—Division Street.	Instructions for Monroe Street also apply at Division Street, except it is not necessary to send flagman ahead of train or engine when electric signals are operating covering movements on old main line. Unless absolutely necessary, movements across street must not be made between 6:00 AM and 8:00 AM, 11:30 AM and 1:30 PM, 5:00 PM and 7:00 PM. Between 6:00 AM and midnight, the number of movements across the street is limited to twenty, and the street must not be crossed when to do so would interrupt traffic.
Tekoa—County road at junction switch to McGoldrick's Spur.	Flagman must be on ground and stop traffic before movement is made over the crossing.

Handling Cars Ahead of Engine

103 (Y). Cars, except business cars equipped with spotlight, must not be shoved ahead of engines through tunnel between St. Johns Jct. and Peninsula Jct.

Switches

104 (R). No. 14 turn-outs are installed at all dual control switches in CTC territory except siding switches at Hilgard, Duncan, and west siding switch at Gibbon.

Other switches equipped with No. 14 turn-outs are indicated by a figure "14" on switch target.

104 (S). Switches will be set normally at:

La Grande: Joseph Branch switch—for drill track, Switch to north side lead and roundhouse—for drill track;

Joseph, main track switch, east leg of wye—for wye; Joseph, switch at stem of wye—for east leg of wye; Enterprise, west switch of cross-over between main track and house track—for house track;

Hinkle, junction switch, Umatilla Branch—for running track; Hinkle, wye switches—for running track;

Arlington, Condon Branch switch—for Condon Branch;

Continued on page 7.

104 (S). Continued.

Biggs, spring switch at end of double track—for westward trains; The Dalles, spring switch in westward main track at west end of No. 16 track—for westward main track;

Crates, spring switch at end of double track—for eastward trains;

Kenton, cross-over switch—for extension; Tacoma Jct., junction switch—for C. M. St. P. & P.;

Aberdeen, switch at end of double track—for eastward trains; South Montesano, wye switch on Montesano Branch—for west leg of wye;

Helsing Jct., junction switch—for U. P. main track; Fairfield—switch to G. N. connection on siding—for G. N.;

Hooper Jct. (Connell Branch)—for line via Park; Seltice—for line via Colfax;

Winona—for line via Colfax; Tucannon—for line via Pataha;

Walla Walla passenger station, east switch to No. 2 track—for No. 2 track when passenger equipment is left on No. 1 track;

East wye switch Pendleton Branch—for Wallula Branch; Wye switch Wallula Branch—for movement to east leg of wye;

Yakima, Walnut Street—for main switching lead.

104 (T). At Tacoma, when cross-over switches from Northern Pacific double track to U. P. drawbridge line are handled by trainmen, all such switches must be returned to normal position after movement is completed.

Electric Switch Locks

104 (U). Electric lock is in service on east switch of facing point cross-over between main tracks just west of the subway east of Spokane passenger station (compass directions).

If electric lock fails to release and no train movement is being made on the outward main track, or from Milwaukee roundhouse lead to outward main track, seal may be broken on electric lock and Milwaukee switch key inserted in opening at base of lock. When key is turned to the right, lock will be released. Failure of electric lock must be reported promptly to the Milwaukee chief dispatcher.

Main Track Derails

104 (V). Main track derails are located at the following points:

Pilot Rock (1500 feet west of west switch to new set out track)	Derail will be set in derailing position at all times except when movement being made over track at point where derail located.
Pomeroy (opposite water tank) (90 feet west of section house)	Derail will be set in derailing position only when cars are left standing on main track above it.
Dayton (100 feet east of depot) (150 feet east of west switch to cannery track)	
McAdam (500 feet west of west switch)	Derail will be set in derailing position only when cars are spotted to foul the main track, or when the warehouse track switches are set so as to permit loaders to drop cars west onto main track.
Wacota (500 feet west of west switch)	
Estes (500 feet west of west switch)	
Sulphur (500 feet west of west switch)	
Wallace (M.P. 81.13)	Spring switch point set in derailing position at all times and must be changed for eastward movement.
Wallace (350 feet east of depot)	Derail will be set in derailing position only when passenger train is left standing on main track at the depot west of derail.
Gem (M.P. 84)	Derail will be set in derailing position only while switching is being done above it.
Burke (M.P. 86.3)	
Burke (M.P. 86.4)	Derail must be set in derailing position at all times when not being used.

Sierra Nevada Spur (300 feet east of refinery track switch) } Spring switch point must be set in derailing position at all times except when changed for descending movement.

Sierra Nevada Spur (west of No. 1 track switch at zinc plant) } Derail will be set in derailing position only when cars are left standing on main track above it.

104 (W). At La Grande, while switching movements are being made on east end of drill lead, derail and main power switch will be hand operated.

Speed Restrictions

105 (R). That part of last paragraph of Rule 93 reading, "(See Special Instructions, 105-R)" is changed to read, "(See speed restrictions in time-table.)"

Sidings

105 (S). At Hood River, when necessary to take siding, eastward passenger, mail and express trains will use cross-over from main track to siding.

Brakemen and Firemen Stopping Trains

106 (R). When conditions or signals require that the train be stopped or speed of train be reduced and the engineer or conductor fails to take proper action to do so, or should the engineer become incapacitated, brakemen and firemen must take immediate action to stop train.

Movements Against Current of Traffic

D-151 (R). At points shown below, trains and engines may move against the current of traffic within yard limits without being preceded by a flagman, except when a first-class train is due or when view is obscured:

The Dalles—between Block Signals 867 and 838; Albina and Portland—on parallel tracks between Portland and East Portland or Harding Street, Albina; Spokane—between Union Station and west cross-over near section tool house at West Spokane.

D-151 (S). Unless otherwise instructed, all trains will be routed with current of traffic between East Portland and Albina. When trains are being handled by engines prohibited from moving with current of traffic and it is necessary to operate them over the other track, switchtenders at Albina and towermen at East Portland must see that movement is properly protected by notifying yard engines and other movements.

Train Order Signals

200 (R). Lights will not be kept burning at night in train order signals on branches when operators are not on duty, and trains must be governed by the day indication of such signals.

200 (S). At Kennewick, when train order signal displays Stop indication, stop must be made before engine passes train order signal unless proceed signal is received from operator.

200 (T). At Biggs: When train order signal for eastward trains indicates stop, eastward trains must stop before any part of train or engine passes Automatic Block Signal 1030, unless proceed signal with yellow flag by day or yellow light by night is received from operator.

Train Orders

208 (R). Except at initial stations, when a train's superiority is restricted for an opposing train at the point where the order is issued to it, the order must not be made complete to the train which is being advanced until the operator has placed two torpedoes on the rail not less than 1000 feet from the train order signal in the direction of the restricted train, and the train dispatcher has been notified that torpedoes have been placed. In addition, the restricted train must be brought to a stop by operator, using red flag or red fusee, before the train dispatcher OK's the clearance.

209 (R). Operators must not typewrite Union Pacific train orders or clearances.

Movement of Trains by Block Signals

261 (R). Movement of trains and engines between Helsing Jct. and Independence is governed by automatic block signals and when signals indicate Proceed, trains or engines may proceed regardless of first-class trains.

Continued on page 8.

261 (R). Continued

At Helsing Jet., when signal at junction switch displays Stop indication after junction switch is opened, westward C. M. St. P. & P. trains must comply with Operating Rule 509 (A) and Grays Harbor Branch main track must not be occupied except under protection in accordance with Operating Rule 99 against westward trains on Grays Harbor Branch.

Centralized Traffic Control System

266 (R). At Pendleton, trains from Pendleton Branch to extension of Track 6, must obtain permission from train dispatcher at La Grande before passing Signal 2165.

266 (S). At Encina, Telocaset and Kamela, Clearance Form B required by CTC Rule 266 need not be received by light engine leaving those stations, but movement must be governed by signal indication.

266 (T). Clearance Form B need not be received for movements in CTC territory between Wallula Jct. and Villard Jct.

267 (R). CTC Stop signals located as follows are designated as "starting signals":

- Huntington—M.P. 389.3.
- Baker —M.P. 341.7 and 342.4.
- La Grande —M.P. 289.7 and 290.2.

When stopped by a 'starting signal', members of crew must communicate with dispatcher or operator and be governed by his instructions. Flagman need not be sent ahead unless instructed to do so by dispatcher or operator but movement must be made at restricted speed and Operating Rule 267 must be complied with.

267 (S). When Stop indication is displayed on either of the following signals, in addition to receiving Clearance Form C, flagman must be sent ahead to next signal and movement must be made at restricted speed:

- Eastward stop signal governing movement from joint track from Yakima Branch to Villard Junction;
- Eastward stop signal, located just west of N. P. cross-over east end of Wallula, governing movement to Sixth Subdivision main track;
- Westward stop signals governing movement over Yakima junction switch.

279 (R). In CTC territory, when a work train has been authorized in accordance with Rule 266, the work train may occupy the main track and move in either direction within the designated limits without protection by flagman. This does not, however, modify requirements for proper observance of signal indications or for protection of adjacent tracks not included in the working authority.

Approach Signal Indication

284 (R). Operating Rule 284 is changed as follows:

When an Approach indication is displayed on a block or interlocking signal, train or engine must proceed prepared to stop at next signal. Train exceeding 30 miles per hour must immediately reduce to that speed.

284 (S). On Spokane-Tekoa Branch, when a signal displays Approach indication, trains or engines must immediately reduce speed to one-half the authorized speed at that location, but not exceeding 20 miles per hour, and as much slower as necessary in order to be able to stop before passing the next signal.

Advance Approach Signal Indication

285 (R). Operating Rule 285 is changed as follows:

When an Advance Approach indication is displayed on a block or interlocking signal, train or engine must proceed prepared to pass next signal at not exceeding 40 miles per hour.

Staff System

301 (R). Movements of trains and engines on the Government trackage between Richland Junction (Yakima Branch) and yard limit sign on Government trackage at M.P. 43.8, are governed by staff system.

Divided staff, lettered "A" and "B", will be used and staff boxes are located at Richland Junction and at M.P. 43.8.

When only one train movement is to be made in the staff limits, dispatcher will notify the crew and that crew must have both staffs "A" and "B" in their possession and retain them for the round trip.

When two trains are to be run in these limits, the first train must not enter the staff limits until it has been ascertained that both staffs are in box at that point, and has taken staff "A" for their movement.

Continued on opposite side.

301 (R). Continued.

Second train entering staff limits must have staff "B" in their possession.

After moving through the staff limits, both staffs must be left in staff box. Staff box must be left locked at all times.

Conductor of train which is to move, or has moved, through the staff limits, must register his train on train register at Richland Junction, and indicate staff used, either "A" or "B", or both.

Train or engine movements on Government trackage from end of staff system into interchange yard and wye at North Richland (which is ten miles from Richland Junction) will be governed by yard limit rules and instructions issued by Government dispatcher. When two trains are run, the first train arriving at interchange yard must remain at that point until the second train arrives.

302 (S). Movement of trains and engines on Olympia Branch between Olympia and East Olympia are governed by staff system.

One staff will be used and will be placed in staff box located near yard limit sign, Olympia. Trains or engines, in using branch main track outside yard limits, will secure this staff and retain it in their possession until movement has been completed.

Trains or engines will not be able to make movements out of East Olympia until the staff has been obtained from Olympia and is in their possession. Dispatcher will instruct crews how this staff will be secured.

After movements are completed, staff must be placed in staff box, and securely locked.

Automatic Cab Signal System

456 (R). Automatic Cab Signal Rule 456 does not apply when a train is proceeding after having been stopped by a block signal governing movement through a block in which slide warning detector fences are located. In such case, movement through the entire block must be made at restricted speed regardless of the fact that the cab signal changes to a less restrictive indication.

Slide Detector Signals

509 (R). On Yakima Branch, between M.P. 41 and M.P. 42, slide detector signals, designated by triangular number plates, are in service. When signal displays Stop indication, train must stop before passing and may then proceed at restricted speed to signal at opposite end of protected territory, looking out for damaged rail or obstruction, and wire report must be made to chief dispatcher and superintendent.

Block Signals

509 (S). Between Hinkle and Portland, Spokane and Hinkle and between Spokane and Manito, Operating Rule S-509 (A) applies.

509 (T). When a slide warning device plug is found pulled or controller operated but no obstruction on or damage to track is found, the plug must be replaced, if practicable, or controller re-set by depressing "Re-set" button, and conductor must make report to train dispatcher from first stop or first open telegraph office.

509 (U). At Marengo, dwarf signal governs movements from east leg of wye to main track. After switch is opened, signal will display yellow indication when block is clear, except when block is occupied west of Signal 3066, signal will not display yellow indication until three minutes after switch is opened.

Track Occupancy Indicators

512 (R). Trainmen must observe indication displayed by track occupancy indicators before changing derail or main track switch.

A switch must not be opened to permit a movement to a main track when Occupied indication is displayed, unless the movement is properly protected.

Indication displayed by track occupancy indicator is not authority for a train or engine movement, and does not relieve enginemen and trainmen from protecting the train as required by the rules.

Entering or Fouling Main Track

513 (R). In CTC territory, when movement to main tracks is authorized by train dispatcher, movement may be made without waiting three minutes after switch has been properly lined.

Standing on Sanded Rail

518 (R). Bus cars, light weight motor trains of three cars or less, any locomotive without cars, or cuts of less than four cars, must not be permitted to stand on sanded rails on main track or between the fouling point and the switch on sidings.

Remote Control Switches

526 (R). Remote control switches are located as follows: (See Rules 526 to 528.)

Location	Under control of
Troutdale, junction switch to freight line and east switch of siding on Kenton Line.	Operator, Troutdale
Hinkle, main track switch at west end of passenger yard.	Operator, Hinkle

Routes Through Interlocking

605 (R). To indicate the route to be used through interlocking, the following whistle signals will be used:

At East Portland:	
For Portland	—
For Albina	— o
For Graham	—
For S. P. Main Line	o —
For S.E. Second Ave.	o o —
For S. P. yard	o — o
For transfer track	— o —
For East Side Freight Terminal	o o —
At St. Johns Jct.:	
For North Portland Jct.	—
For Kenton	— o
For St. Johns	o —
At Peninsula Jct.:	
As westward trains or engines approach and pass whistling posts and microphones located approximately one-half mile in advance of home interlocking signals on Kenton Line and North Portland Jct. Line, engineers will sound whistle signals as follows:	
For tunnel and main track to Albina	—
For tunnel and yard lead to Albina ..	— o
At Argo:	
For Seattle	—
For yard lead	— o —
From Seattle to Pacific Coast R. R.	— o —
From Argo yard to Georgetown lead ..	— o
At N. P. Crossing, Spokane:	
For Spokane Union Station	o o o
For old yard	o o o
For East Spokane	o o o
For N. P. transfer	o o o
For G. N. transfer	— — —

605 (S). At Troutdale, upper unit of interlocking signal, located just east of the junction switch, governs westward movements via Graham and the lower unit governs westward movements via Kenton line.

When lower unit displays a green light, movement is authorized on Kenton Line main track. When lower unit displays a lunar light, movement is authorized into Kenton Line siding.

Proceed indication of interlocking signal located just west of junction switch will authorize eastward trains from Kenton Line to proceed to train order office.

Interlocking

663 (R). Movement of trains and engines between St. Johns Jct. and Peninsula Jct. is governed by interlocking which is operated from St. Johns Jct.

At St. Johns Jct., when a green light or green flag is displayed by operator to train or engine leaving Albina via yard lead, it will indicate that route is lined and switch at east portal of tunnel is in proper position for movement via North Portland Jct. When interlocking signal indicates that route is lined for movement through tunnel and a green flag or green light signal is not displayed, it indicates that switch at east portal of tunnel will be lined for movement to Kenton.

When a train or engine is stopped by interlocking signal at junction of North Portland and Kenton Lines, member of crew must immediately notify operator at St. Johns Jct. If operator is unable to clear signal, he must communicate with train dispatcher who may authorize flagman to precede the train or engine, examine route and report to operator at St. Johns Jct. If track is clear, operator will then authorize train or engine to proceed at restricted speed.

A member of crew must obtain authority from operator at St. Johns Jct. before hand-operating any switch within interlocking

Continued on opposite side.

663 (R). Continued.

limits and before hand-operating electrically controlled switch at junction of North Portland and Kenton Lines. After using electrically controlled switch, it must be restored to position in which it was found and operator at St. Johns Jct. notified.

663 (S). Movement over railroad crossing with Seattle main track M.P. 5.8, just west of Peninsula Jct., is governed by color light signals. Electric lock derails are in use. Trains or engines must obtain authority from operator at St. Johns for movement over this crossing and operator will release electric lock for operation of derails. After movement is completed, derails must be restored to normal position and locked with switch lock and operator notified. If operator is unable to release electric lock, he may authorize member of crew to break seal on end of switch machine and unlock with switch key.

663 (T). When eastward interlocking signal located on cantilever at M.P. 3.3, Kenton Line, displays Stop indication, permission must be obtained from operator at St. Johns Junction before proceeding.

663 (U). At Columbia River Bridge, M.P. 7.44, Yakima Branch, when a train is stopped by semi-automatic interlocking signal, a flagman must be sent to drawbridge to give proceed signal if derail and draw span are properly closed. Two long sounds of engine whistle must be sounded before proceeding, and movement must be made at restricted speed.

672 (R). At Yakima River Bridge, M.P. 89.35, Yakima Branch, trains and engines are governed by automatic interlocking signals and must approach gauntlet track at restricted speed. A train or engine stopped by an interlocking signal must comply with Operating Rule 672. If signal does not change its indication after one minute, flag protection must be provided for movement between home signals governing gauntlet track.

Actions While on Duty

701 (R). Employees must not sleep while on duty.

Passengers on Freight Trains

711 (R). The following passengers only may be carried on freight trains between stations at which the trains stop:

- Persons in charge of live stock or other freight when provided with proper transportation;
- Employees of Union Pacific Railroad with annual pass when traveling on company business requiring use of freight trains;
- Other persons with annual or trip pass only when endorsed "Good on Freight Trains";
- Passengers holding revenue tickets with permit issued by superintendent;

Agents and conductors must notify passengers, stockmen, messengers and caretakers that they must ride in the place provided for them, and must not get on or off caboose, drover cars or other cars while train is in motion, and that in all cases the train will be stopped at designated points for this purpose.

Exchanging Signals and Inspection of Train

713 (R). That portion of Rule 713 which specifies signals to be used to call attention of train crews to hot journals and brakes sticking is cancelled, and, instead of giving the signals outlined by the rule, stop signal will be given.

Close Clearances

714 (R). There are close clearances above and at the side of main tracks as follows, and in addition thereto, at platforms and other structures above and at the side of industry, stock and other tracks. (See Operating Rule M.)

Location	Structure or obstruction	Clearance of engine or car is close at—
At all stations	Mail cranes	Side.
First Subdivision		
M.P. 388.40	Bridge	Side.
M.P. 387.75	Bridge	Side.
M.P. 387.36	Bridge	Side.
M.P. 386.92	Bridge	Side.
M.P. 385.95	Bridge	Side.
M.P. 385.19	Bridge	Side.
M.P. 385.02	Bridge	Side.

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Location	Structure or obstruction	Clearance of engine or car is close at—
Lime	Overhead bridge	Side.
M.P. 384.42	Bridge	Side.
M.P. 383.27	Bridge	Side.
M.P. 383.02	Bridge	Side.
M.P. 381.90	Overhead bridge	Top.
M.P. 381.66	Bridge	Side.
M.P. 381.41	Bridge	Side.
M.P. 380.44	Bridge	Side.
M.P. 380.22	Bridge	Side.
M.P. 379.62	Bridge	Side.
M.P. 378.75	Bridge	Side.
M.P. 378.60	Tunnel No. 6	Side.
M.P. 378.19	Bridge	Side.
M.P. 377.15	Bridge	Side.
M.P. 376.84	Bridge	Side.
M.P. 376.11	Bridge	Side.
M.P. 375.62	Bridge	Side.
M.P. 374.80	Bridge	Side.
M.P. 374.52	Bridge	Side.
M.P. 373.90	Bridge	Side.
M.P. 373.76	Bridge	Side.
M.P. 373.00	Bridge	Side.
M.P. 372.91	Bridge	Side.
M.P. 372.00	Bridge	Side.
Durkee	Standpipe	Side.
Durkee	Water tank spout	Side.
M.P. 366.74	Bridge	Side.
Pleasant Valley	Water tank spout	Side.
M.P. 343.94	Bridge	Side.
North Powder	Two overhead bridges	Side and top.
North Powder	Water tank spout	Side.
Telocaset	Water tank spout	Side.
M.P. 312.07	Overhead bridge	Side.
Second Subdivision		
La Grande	Second Street viaduct	Top.
M.P. 288.02	Bridge	Side.
Hilgard	Water tank spout	Side.
Kamela	Water tank spout	Side.
M.P. 252.52	Bridge	Top.
M.P. 251.18	Bridge	Side.
Duncan	Water tank spout	Side.
M.P. 238.67	Bridge	Side.
Gibbon	Water tank spout	Side.
M.P. 230.57	Bridge	Side.
M.P. 226.86	Bridge	Side.
M.P. 214.42	Bridge	Side.
M.P. 206.21	Bridge	Side.
M.P. 205.84	Bridge	Side.
M.P. 204.91	Bridge	Side.
M.P. 204.15	Tunnel No. 3 1/4	Side.
M.P. 198.26	Bridge	Side.
Echo	Water tank spout	Side.
M.P. 187.2	Overhead bridge	Top and side.
Joseph Branch		
M.P. 2.48	Bridge	Side.
Elgin	Water tank spout	Side.
M.P. 32.58	Water tank spout	Side.
M.P. 48.97	Water tank spout	Side.
Third Subdivision		
Munley	Water tank spout	Side.
M.P. 10.74 (W. of Umatilla)	Bridge	Side.
M.P. 148.49	Bridge	Side.
Arlington	Water tank spout	Side.
Arlington	Standpipe	Side.
M.P. 114.3	Bridge	Side.
Fourth Subdivision		
The Dalles	Standpipes	Side.
M.P. 74.1	Tunnel No. 3	Side.
M.P. 71.4	Tunnel No. 2	Top and side.
M.P. 69.40	Bridge	Side.

Continued on opposite side.

Location	Structure or obstruction	Clearance of engine or car is close at—
M.P. 63.32	Bridge	Side.
M.P. 61.03	Bridge	Side.
Wyoth	Water tank spout	Side.
M.P. 39.90	Bridge	Side.
M.P. 32.15	Bridge	Side.
M.P. 31.85	Bridge	Side.
M.P. 29.65	Bridge	Side.
M.P. 26.01	Bridge	Side.
M.P. 15.82	Bridge	Side.
M.P. 15.4	Overhead bridge	Top.
M.P. 10.3	Underpass handrails	Side.
M.P. 8.5	Underpass handrails	Side.
M.P. 5.43	Overhead bridge (N.E. 82nd Ave.)	Top.
M.P. 5.01	Overhead bridge (N.E. 74th Ave.)	Top.
M.P. 4.65	Overhead bridge (N.E. Halsey)	Top.
M.P. 4.5	Tunnel (Penn. Jct.)	Top and side.
M.P. 4.14	Overhead bridge (N.E. 60th Ave.)	Top and side.
M.P. 3.8	Overhead bridge (N.E. 53rd Ave.)	Top and side.
M.P. 2.86	Overhead bridge (N.E. 37th Ave.)	Top.
M.P. 2.59	Overhead bridge (N.E. 33rd Ave.)	Top.
M.P. 0.43 (Willamette River)	Bridge	Side.
Portland	Depot umbrella shed	Top and side.
Fifth Subdivision		
Tacoma	N. P. overhead bridge to draw span.	Top and side.
Tacoma	Viaduct	Top and side.
M.P. 144.92	Bridge	Side.
M.P. 146.93	Bridge	Side.
M.P. 174.6	Bridge	Side.
Seattle (Albro Place)	Overhead bridge	Side.
Seattle (Eight Ave. So.)	Overhead bridge	Top.
Seattle (Dearborn Ave.)	Overhead bridge	Top and side.
Seattle	Depot umbrella shed	Top and side.
Seattle (Jackson St.)	Overhead bridge	Top.
Olympia Branch		
M.P. 5.2	Tunnel No. 25	Top and side.
M.P. 5.77	Tunnel No. 26	Top.
M.P. 6.7	Overhead bridge	Top and side.
Olympia	Water tank spout	Side.
Grays Harbor Branch		
M.P. 1.25	Bridge	Side.
M.P. 4.35	Bridge	Side.
Independence	Water tank spout	Side.
South Elma	Water tank spout	Side.
M.P. 43.53	Overhead bridge	Top and side.
M.P. 53.33	Bridge	Side.
Aberdeen	Depot umbrella shed	Side.
Montesano Branch		
M.P. 0.31	Bridge	Side.
St. Johns Branch		
M.P. 6.93	Overhead bridge	Top and side.
Grass Valley Branch		
Biggs	Water tank spout	Side.
Wasco	Water tank spout	Side.
Grass Valley	Water tank spout	Side.
Heppner Branch		
Ione	Water tank spout	Side.
Sixth Subdivision		
M.P. 199.93	Bridge	Side.
M.P. 210.11	Bridge	Side.
M.P. 229.5	Tunnel No. 7	Top and side.
M.P. 235.02	Tunnel No. 8	Top and side.
M.P. 242.4	Tunnel No. 9	Top and side.
M.P. 275.1	Tunnel No. 10	Top and side.
M.P. 275.5	Tunnel No. 11	Top and side.
M.P. 276.0	Tunnel No. 12	Top and side.
M.P. 276.3	Tunnel No. 13	Top and side.
M.P. 276.5	Tunnel No. 14	Top and side.
M.P. 278.36	Overhead bridge	Top and side.

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Location	Structure or obstruction	Clearance of engine or car is close at—
M.P. 281.3	Tunnel No. 15	Top and side.
M.P. 286.78	Overhead bridge	Top and side.
M.P. 292.1	Tunnel No. 16	Top and side.
M.P. 294.4	Tunnel No. 17	Top and side.
M.P. 305.62	Overhead bridge	Top and side.
Marengo	Oil tank spout	Top and side.
M.P. 325.70	Overhead bridge	Top and side.
M.P. 329.46	Overhead bridge	Top and side.
M.P. 337.20	Overhead bridge	Top and side.
M.P. 352.13	Bridge	Side.
M.P. 353.57	Overhead bridge	Top.
M.P. 353.94	Overhead bridge	Top.
M.P. 357.48	Overhead bridge	Top and side.
M.P. 357.95	Overhead bridge	Top and side.
M.P. 363.76	Overhead bridge	Side.
Spokane	Umbrella sheds	Side.
Yakima Branch		
M.P. 7.44	Bridge	Top and side.
M.P. 11.52	Bridge	Side.
M.P. 14.16	Overhead bridge	Top and side.
M.P. 16.06	Bridge	Side.
M.P. 24.35	Overhead bridge	Top.
M.P. 35.89	Bridge	Top and side.
M.P. 53.36	Bridge	Side.
M.P. 56.83	Bridge	Side.
M.P. 58.03	Bridge	Side.
M.P. 58.19	Bridge	Side.
M.P. 73.03	Bridge	Side.
M.P. 73.20	Bridge	Side.
M.P. 73.30	Bridge	Side.
M.P. 89.35	Bridge	Top and side.
Union Gap	Overhead bridge	Top.
Yakima, First Avenue and C Street	Traffic light	Top.
Tekoa-Ayer Branch		
M.P. 17.23	Bridge	Top and side.
M.P. 19.96	Bridge	Side.
M.P. 26.73	Bridge	Side.
M.P. 77.23	Bridge	Top and side.
M.P. 90.27	Bridge	Top and side.
M.P. 93.01	Bridge	Side.
M.P. 94.70	Overhead bridge	Top.
M.P. 98.03	Bridge	Side.
M.P. 112.97	Overhead bridge	Top.
M.P. 115.79	Bridge	Side.
M.P. 115.86	Overhead bridge	Top.
Spokane-Tekoa Branch		
M.P. 143.67	Overhead bridge	Side.
M.P. 163.56	Bridge	Side.
M.P. 164.06	Bridge	Top and side.
Spokane	Markot Street bridge	Top and side.
Spokane	Division Street bridge	Top.
Spokane	Tunnel, westward track	Top and side.
Spokane	Tunnel, eastward track	Top and side.
Moscow Branch		
M.P. 8.54	Bridge	Top and side.
M.P. 18.77	Bridge	Top.
M.P. 18.97	Bridge	Top and side.
M.P. 19.28	Overhead bridge	Top.
Wallace Branch		
M.P. 0.14	Bridge	Side.
M.P. 16.30	Bridge	Top and side.
M.P. 23.45	Bridge	Top and side.
M.P. 55.56	Bridge	Side.
M.P. 58.01	Bridge	Top and side.
M.P. 62.14	Bridge	Top and side.
M.P. 63.48	Bridge	Top and side.
M.P. 64.03	Bridge	Side.
M.P. 72.59	Bridge	Side.
M.P. 79.36	Bridge	Top and side.

Continued on opposite side.

Location	Structure or obstruction	Clearance of engine or car is close at—
Pleasant Valley Branch		
M.P. 1.51	Bridge	Top and side.
M.P. 41.21	Overhead bridge	Top.
Pendleton Branch		
M.P. 0.51	Bridge	Top.
M.P. 36.86	Bridge	Side.
M.P. 74.14	Overhead bridge	Top and side.
Wallula Branch		
M.P. 10.01	Overhead bridge	Top and side.
M.P. 14.32	Bridge	Side.
Connell Branch		
M.P. 15.13	Bridge	Side.
M.P. 15.71	Overhead bridge	Top and side.

714 (S). In moving cars on tracks under trolley wires, employees warned that overhead clearances to such wires and side clearances to supporting poles are close at locations shown below. Trolley wires must not be touched and careful lookout must be kept for low and broken wires.

Station	Location	
East Portland	S.E. Second Ave. and S.E. Hawthorne Blvd.	P. E. P.
Albina	N. Larrabee Ave.	P. E. P.
Albina	N. Interstate Ave.	P. E. P.
Black River		C. M. St. P. & P.
Argo-Seattle	Argo yard lead and between Argo and Seattle passenger station.	C. M. St. P. & P.

714 (T). At south end of Union Station, Portland, clearance is very close and will not clear a man on side of car between tracks 1 and 2, 3 and 4, 5 and 6, 7 and 8, 9 and 10, from interlocking signals to point 100 feet north of the crossing.

714 (U). On Grass Valley Branch, employees must not ride on the side of cars or engines while moving in trains, as there are a number of places on this branch where clearance is impaired by narrow cuts.

At Olympia, account insufficient clearance between N. P. connection scale track and main track, trains or engines must not attempt to pass on main track if trains or engines are moving on connection.

At Aberdeen, account insufficient clearance between coach track No. 1 just east of passenger station and main track at turnout, trains and engines must not attempt to pass on main track if trains or engines are moving on coach track No. 1.

At Pullman, when switching Sutherland spur, trainmen should work on north side between spur track and main track; when switching team track should work on south side between team track and main track.

714 (V). At La Grande, look out for close clearance on Tracks 4 and 5, which have less clearance than other tracks in yard.

High and Wide Cars

714 (X). Trains handling cars or loads of excess height or in excess of 12 feet in width must keep close lookout for close clearances and where overhead or side clearance is doubtful, movement must be stopped and adequate protection provided.

Cars of excess height, as per stencil or placard, must not be switched with except in placing them in and taking them out of trains. In switching movements such cars must not be cut off while in motion, but must be shoved to a stop with air brakes operative. No one will be permitted to ride on top of such cars.

Loads of excess width must not be stored on nor moved over yard tracks where clearance is insufficient, unless there is an intervening

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714 (X). Continued.

track between trains or cars containing loads of excess width. No one will be permitted to ride on the side of such cars.

Unless otherwise instructed, cars of excess width or height must be handled in head end of train.

Trains handling wide loads must obtain meeting or passing order with other trains handling wide loads at stations where they will have a track between them.

When a train, which is handling a wide load is notified by train order of another train handling a wide load, the train dispatcher must be notified so that meeting or passing point can be arranged.

Crews of trains receiving notice of wide load in other trains must inspect their train for open or swinging doors or anything projecting beyond normal clearance.

Handling of Explosives and Other Dangerous Articles

726 (R). Trainmen, enginemen, yardmen, agents and other employes who in any way handle or care for explosives and other dangerous articles must familiarize themselves with the regulations and instructions governing the handling of them.

Placards on Cars

BE 589 (b). A car requiring car certificates and "Explosives", "Dangerous", "Dangerous-Class D Poison", "Poison Gas", or "Caution-Residual Phosphorus" placards under the provisions of this part shall not be transported unless such freight car is at all times placarded and certificated as required by this part. Placards and car certificates lost in transit shall be replaced at next inspection point and those not required shall be removed.

BE 589 (b). (1) At points where trains are inspected, cars placarded "Explosives" and adjacent cars shall be inspected; such cars shall continue in movement only when inspection shows them to be in condition for safe transportation.

Switching Cars Containing Explosives or Poison Gas

BE 589 (c). A car placarded "Explosives" or placarded "Poison Gas" shall not be cut off while in motion. No car moving under its own momentum shall be allowed to strike any car placarded "Explosives" or placarded "Poison Gas." No freight car placarded "Explosives" or placarded "Poison Gas" shall be coupled into with more force than is necessary to complete the coupling.

BE 589 (c). (1) When transporting a car placarded "Explosives" in terminals, yards, side tracks, or sidings, such cars shall be separated from the engine by at least one non-placarded car.

BE 589 (c). (2) Closed cars placarded "Explosives" shall have doors closed before they are moved.

Switching of Cars Containing Dangerous Articles

BE 589 (d). In switching operations where use of hand brakes is necessary, a placarded loaded tank car, or a draft which includes a placarded loaded tank car shall not be cut off until the preceding car or cars clear the ladder track and the draft containing the placarded loaded tank car, or a placarded loaded tank car shall in turn clear the ladder before another car is allowed to follow.

BE 589 (d). (1) In switching operations where hand brakes are used, it shall be determined by trial that a car placarded "Dangerous" or that a car occupied by a rider in a draft containing a car placarded "Dangerous" has its hand brakes in proper working condition before it is cut off.

Placement of Freight Cars Containing Explosives, in Yards, on Sidings, or Sidetracks

BE 589 (e). Cars placarded "Explosives" shall be so placed that they will be safe from all probable danger of fire. Freight cars placarded "Explosives" shall not be placed under bridges or overhead highway crossings, nor in or alongside of passenger sheds or stations except for loading or unloading purposes.

Notice to Crews of Cars Containing Explosives in Freight Trains or Mixed Trains

BE 589 (f). At all terminals or other places where trains are made up by crews other than road crew accompanying the outbound movement of cars, the railroad shall execute a consecutively numbered notice showing the location in the freight train or mixed train of every car placarded "Explosives." A copy of such notice shall be delivered

Continued on opposite side.

726 (R). Continued.

to the train and engine crew and a copy thereof showing delivery to the train and engine crew shall be kept on file by the railroad at each point where such notice is given. At points where train or engine crews are changed, the notice shall be transferred from crew to crew.

Position in Freight Train or Mixed Train of Cars Containing Explosives

BE 589 (g). In a freight train or a mixed train either standing or during transportation thereof, a car placarded "Explosives" shall, when length of train permits, be placed not nearer than the sixteenth car from both the engine or occupied caboose, except:

(1) When the length of freight train or mixed train will not permit it to be so placed, it shall be placed near the middle of the train.

(2) When transported in a freight train made up in "blocks" or classifications, a car placarded "Explosives" shall be placed near the middle of the "block" or classification in which moving, but not nearer than the sixth car from both the engine or occupied caboose.

(3) When transported in a freight train or a mixed train performing pickup and/or setoff service, it shall be placed not nearer than the second car from both the engine or occupied caboose, except as provided in paragraph (1) of this section.

Separating Cars Placarded "Explosives" From Other Cars in Train

BE 589 (h). In a freight train or a mixed train either standing or during transportation thereof, a car placarded "Explosives" must not be handled next to:

1. Occupied passenger car, except as provided in paragraph 1 of this section.
2. Occupied combination car, except as provided in paragraph 1 of this section.
3. Any car placarded "Dangerous" or "Dangerous-Class D Poison".
4. Engine.
5. Any car placarded "Poison Gas."
6. Wooden underframe car (except on narrow gauge railroads).
7. Loaded flat car, except that cars carrying trailers or containers placarded "EXPLOSIVES" as authorized by the regulation in this chapter may be coupled to each other. (Note: Flat cars equipped with permanently attached ends of rigid construction shall be considered as open-top cars. See subparagraph (3) of this paragraph.)
8. Open-top car when any of the lading extends or protrudes above or beyond the ends or sides thereof.
9. Car equipped with automatic refrigeration or any other apparatus utilizing an open-flame light or an internal combustion engine in its operation.
10. Car containing lighted heaters, stoves or lanterns.
11. Car loaded with live animals or fowl, occupied by an attendant.
12. Occupied caboose except as provided in paragraph (1) of this section.

Position in Train of Loaded Placarded Tank Car

BE 589 (i). In a freight train or a mixed train, except a train consisting entirely of placarded loaded tank cars and as provided in paragraph (j) of this section, a placarded loaded tank car shall when the length of the train permits, be not nearer than the sixth car from the engine, occupied caboose or passenger car.

BE 589 (i). (1) When the length of the freight train or mixed train will not permit it to be so placed, it shall be not nearer than the second car from the engine, occupied caboose or passenger car.

BE 589 (i). (2) When transported in a freight train engaged in "pickup" or "setoff" service, a placarded loaded tank car shall be not nearer than the second car from both engine or occupied caboose.

Separating Loaded Tank Cars Placarded "Dangerous" From Other Cars in Train

BE 589 (j). In a freight train or mixed train either standing or during transportation thereof, a placarded loaded tank car must not be handled next to:

1. Occupied passenger car, other than gas handlers accompanying shipment.
2. Occupied combination car, other than gas handlers accompanying shipment.

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726 (R). Continued.

3. Any car placarded "Explosives."
4. Engine (except when train consists only of placarded loaded tank cars).
5. Any car placarded "Poison Gas."
6. Wooden under-frame car (except on narrow gauge railroads).
7. Loaded flat cars. (Note: Flat cars equipped with permanently attached ends of rigid construction shall be considered as open-top cars. See subparagraph (8) of this paragraph.)
8. Open-top car when any of the lading extends or protrudes above or beyond the ends or sides thereof.
9. Car equipped with automatic refrigeration or any other apparatus utilizing an open-flame light or an internal combustion engine in its operation.
10. Car containing lighted heaters, stoves, or lanterns.
11. Car loaded with live animals or fowl, occupied by an attendant.
12. Occupied caboose (except when train consists only of placarded loaded cars).

Position in Freight Train or Mixed Train of Cars Placarded "Poison Gas" or Containing Poison Liquids Class A

BE 589 (k). In a freight train or mixed train either standing or during transportation thereof, a car placarded "Poison Gas" or containing poison liquids, Class A, shall not be next to other freight cars placarded "Explosives" or cars placarded "Dangerous."

Position in Freight Train or Mixed Train of Cars Placarded "Explosives" or "Poison Gas", or both, when Accompanied by Cars Carrying Gas Handling Crews

BE 589 (l). A car requiring "Explosives" or "Poison Gas" placards, or both, shall be next to and ahead of the car occupied by the guards or gas handling crews accompanying such car; except that when the car occupied by guards or gas handling crews is equipped with a lighted heater or stove it shall be the fourth car behind a car or cars requiring "Explosives" placards.

Cars Containing Explosives or Poison Gas and Tank Cars Placarded "Dangerous" in Passenger or Mixed Trains

BE 589 (m). Cars containing explosives, Class A, poison gases or liquids, Class A, and tank cars requiring "Dangerous" placards shall not be transported in a passenger train. Such cars may be transported in mixed trains but only at such times and between such points that freight train service is not in operation.

BE 589 (m). (1) Cars containing explosives, Class A, poison gases or liquids, Class A, and tank cars placarded "Dangerous" shall not be transported next to occupied cabooses or cars carrying passengers in mixed trains except as provided in paragraph (1) of this section.

BE 589 (m). (2) When a car containing explosives, Class B, or dangerous articles other than explosives requiring labels (not including Class A poison gases or liquids) is moved in a mixed train and such car is not occupied by an employe of the carrier, placards must be applied to the car as required by these regulations.

Position in Train of Cars Containing Class D Poisons

BE 589 (n). In a freight train or mixed train either standing or during transportation thereof, a car placarded "Dangerous-Class-D Poison" must not be handled next to cars placarded "Explosives" or next to carload shipments of undeveloped film.

Empty Tank Cars

Empty tank cars must not be moved from stations unless dome cover and all outlet caps have been replaced and wrenched tight, shipping tags and cards removed from car and "Dangerous" placards removed or replaced by "Dangerous-Empty" placards.

Open Flame Switch Heaters

726 (S). Cars loaded with explosives or flammable commodities must not be permitted to stand over open flame switch heater. If stop is made with such cars standing over open flame heater, flame must be extinguished.

Trains Stopped in Tunnels

733 (R). Dangerous gases present in exhausts from various types of locomotives, steam generators, or engines of the Waukesha type, may cause incapacitation or fatalities if in sufficient concentration as might result when a train is stopped in a tunnel.

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733 (R). Continued.

In the event a passenger train, regardless of the type of power being used, is stopped in a tunnel, cars within the tunnel must have air circulating systems, including air conditioning systems, ice machines and engine generators, shut off, fresh air intake shutters closed, and blower fans shut off.

Certain gases are not readily detected by odors and this action must be taken immediately and time not wasted in determining when train may be started. Take safe course and act at once.

Train dispatcher should be notified immediately so that proper arrangements can be made for protection of persons and equipment.

733 (S). When a diesel or turbine locomotive is stopped in a tunnel under conditions preventing prompt movement, engines must be promptly shut off.

Local conditions must be carefully considered, as there may be situations where the exhaust gases are being carried away from the train by air currents, or where proximity to tunnel opening would make it unnecessary to shut off these engines. Safety of passengers and members of the crew must be the first consideration.

Shutting Down Engines of Diesel Locomotives

733 (T). When diesel switch locomotive is to be idle in excess of 30 minutes, engine must be shut down. When diesel road locomotive is to be idle for one hour at initial or intermediate stations, engines must be shut down.

EXCEPTION: In such cases, engines must not be shut down when outside temperature is below 35 degrees.

When diesel engines are shut down at terminals when a heavy rain is falling, enginemen will call on mechanical forces for covers to be placed over exhaust stacks.

733 (U). When engines of diesel locomotive are shut down, or turbine and its auxiliary engine are shut down, air brakes must be fully applied and, in addition, front and rear of a traction wheel must be blocked, hand brake applied on each unit, and sufficient hand brakes must be applied throughout the train to prevent movement should air brakes leak off.

During freezing weather, when diesel engines are shut down, cooling water must be drained to winter level and, if necessary to prevent damage to engine, must be drained completely.

Power Transmission Wires

734 (R). Power transmission wires carrying 2300 volt circuit are located on top arms of signal pole lines and on top arms of joint telegraph and signal pole lines.

Diesel Locomotives

735 (R). Doors of high voltage cabinets must not be opened and adjustments must not be attempted nor made in high voltage cabinets of diesel locomotives until engine had first been isolated and stopped and units have come to a stop.

735 (S). When a diesel locomotive consisting of two "A" units operated rear end to rear end, with or without "B" unit or units, is to be moved in yards or around enginehouses, locomotive must be operated from lead "A" unit according to direction in which movement is to be made, except when movement is protected by a trainman or yardman.

735 (T). When diesel units are operating with less than full complement of motors or when it is necessary to cut out one or more of the motors at any time enroute, train dispatcher must be notified at first stop or first open telegraph office.

735 (U). When necessary to break seals on equipment and control lockers on diesel road units, notation must be made on engineer's work report with explanation of necessity for breaking seals.

735 (V). On diesel and turbine locomotives in road service, not more than five men may ride in control cab.

Unauthorized persons, including deadhead train and engine men must not occupy cab of trailing unit of diesel locomotive on any train.

735 (W). On diesel locomotives, side and end doors of engine rooms must be kept closed while the locomotives are moving.

735 (X). Care must be exercised to avoid excessive use of emergency electric heaters in cabs of diesel units so equipped. These electric heaters are provided to temporarily keep cabs warm in event of engine shutdown or failure, but their use will completely deplete the batteries in a matter of two hours or less, which would result in failure of all units. Enginemen should bear this in mind and not use these electric heaters excessively and deplete the batteries.

735 (Y). Under no circumstances shall a derailed diesel-electric power unit or units be pulled back on the rails by its own power as serious damage to the equipment may result if this is attempted.

735 (Z). Applications of a device identified as Paxton-Mitchell Engine Protector are being progressively made to Fairbanks-Morse passenger units and EMD freight and passenger units, including all units of the GP-9 type. The purpose of this device is to automatically shut down the engine in the event of abnormal crankcase pressure being built up should some defective condition develop in pistons or liners. Should this occur, the alarm bell in the cab will sound, low oil light will burn, and red light located on the engine protector will light up.

Whenever an engine stops and the cause is not definitely known, engine-men must not attempt to start the engine without observing the pressure detector to know that the red light is not burning. If the red light on the pressure detector is burning, the engine isolation switch must be placed in "OFF" position without attempting to start the engine and report made at terminal for mechanical inspection and repair.

On EMD locomotives, the detector is located at the front end of the engine directly under layshaft hand throttle arm. On P.M. passenger units the detector is located on the back corner of the engine opposite vertical drive shaft.

Dead Engines

740 (R). When handling dead or disabled steam locomotive in train, when length of train will permit, it must be placed 12 cars behind road locomotive; when two or more dead or disabled steam locomotives are in train, they must be separated from road locomotive and each other by at least 12 cars.

Shay, Climax, Heisler and similar type engines, when not in gear, may be handled at speed permitted for freight trains unless waybill specifies a lower speed, or attendant makes written request for a lower speed.

Helper Engines

741 (R). Helper locomotive on passenger train must be coupled ahead of train locomotive, and will not be placed on rear of passenger trains except in case of emergency or unusual circumstances, then only for such distance as it is safe.

On freight train, when not used on head end, helper locomotive must be cut in on rear as close ahead of cabooses as conditions permit but always ahead of cars listed in Special Instruction 802 (R).

741 (S). Locomotive in helper service equipped with pilot plow requiring extension coupler must be placed at head end of train.

741 (T). When not used on head end of train, helper units, consisting of not more than five units, must be cut in on rear of train as close ahead of cabooses as conditions will permit, but always ahead of cars listed in Special Instructions 802 (R).

If necessary to use more than five diesel helper units, the others must be cut in ahead of the tonnage of the helper on the rear of the train.

Flangers on Snow Plows, etc.

800 (R). Flangers on snow plows, spreaders and locomotives must be raised when passing over bridges, highway crossings, railroad crossings, frogs and switches and through interlocking limits.

Position of Cars in Trains

802 (R). Cars designated below must be handled in rear of train, and next to caboose in the order named:

- Drover cars, occupied or unoccupied;
- Wooden underframe cars;
- Scale test cars;
- Any car unsafe to be handled in head end of train;
- Cars with emergency couplers;
- Cars tagged "Handle Only at Rear End of Train";
- Outfit cars.

Rotary snow plows handled in freight trains must be next to the caboose with rotary wheel to the rear.

When passenger express refrigerator cars are handled in trains consisting of 75 cars or more, such cars must be handled in rear of train not more than 15 cars from caboose.

Livestock must be handled in head end of train when practicable. Except as indicated below, all empty flat cars will be handled on rear end of freight trains just ahead of caboose or ahead of rear-enders. Where helper engines are used, the helpers will be cut in ahead of the empty flat cars.

It will be permissible to handle empty flat cars on head end of trains when picked up at points between main line terminals and on local freight trains when to be set out between terminals.

802 (S). Open top or flat cars loaded with pipe, lumber, poles or other lading which has tendency to shift, must not be handled in train next to locomotive or caboose.

Cars on Sidings

804 (R). On Sixth Subdivision, cars may be placed for loading and storage on all industrial tracks, and all sidings equipped with derails when authorized by chief dispatcher.

Cars Partly Loaded or Unloaded

805 (R). All persons are prohibited from riding in cars while being switched, which are in the process of being loaded or unloaded. Part loads will not be switched unless properly broken down or properly braced to prevent contents falling and being damaged. Before switching with or moving cars which are in the process of loading or unloading, persons working in or about the cars must be notified and trainmen and yardmen must see that cars are not switched with until cars are vacated. When such cars are moved, they must be returned to their former location unless otherwise directed.

Chaining Cars to Rail

806 (R). Between Huntington and Pendleton, when cars are set out on sidings on grade where there are no derails, in addition to setting hand brakes and blocking wheels, cars must be chained to rail. When cars are picked up, crew must take chain to terminal.

Cars with Bad Order Couplers

811 (R). Freight cars with bad order couplers may be handled behind caboose to destination or to first terminal, provided the good coupler can be coupled to caboose and, in addition, has air brakes and hand brakes operative.

If air brakes are not operative, the good coupler must be coupled to caboose and in addition must be secured by chain. When so handled, a trainman must ride car on ascending grade.

If coupler is pulled out, draft gear housing must be removed if possible. When this cannot be done, conductor must know that housing is securely fastened.

Hot Boxes

812 (R). When a hot box is detected on a train between stations, in addition to Operating Rule 812, the following will govern:

As quickly as hot box is detected train must be stopped, hot box inspected and no attempt made to run to next station until it has been ascertained it is safe to do so.

When a car is set out account hot box, packing must be removed and fire extinguished. In addition, conductor must ascertain that there is no fire on car body and that dust guard is not burning nor smoldering, taking whatever action necessary to preclude possibility of fire before car is left.

Inspection of Trains

812 (S). On steam locomotive, tender or freight car wheels, flat spots two and one-half inches or longer, or if there are two or more adjoining spots each two inches or longer, on passenger cars one inch or longer, and on turbine or diesel locomotives two inches or longer, are condemnable and when discovered in train, conductor or engineer must immediately report to train dispatcher and be governed by his instructions.

812 (T). When stop is made by a passenger train due to some condition affecting the equipment of that train, a thorough inspection of the train must be made before proceeding.

812 (U). Leaving designated inspection points, a trainman must be at head end of train and make careful inspection of train as it pulls by, giving particular attention to brake equipment.

In addition to a thorough inspection of freight train at all designated inspection points, such walking and roll-by inspection as time will permit must be made at all stops. Walking inspection will continue until entire train is inspected or until movement starts.

812 (V). When a train is stopped to be met or passed by another train, crew of standing train must make thorough inspection of passing train. When safe to do so, head brakeman must cross track and inspect passing train from the farther side and rear trainman or conductor must inspect the passing train from side nearest his own train. Crew on passing train must be in position to receive signals and take immediate action when necessary.

812 (X). In addition to inspection required by other rules, stream-line trains must be given close running inspection by rear trainmen and enginemen on the following curves:

First Subdivision—

M.P. 363 and M.P. 364.5 —single curve;
M.P. 326.5 and M.P. 327.5 —single curve;
M. P. 302.4 and M.P. 303 —single curve.

Second Subdivision—

M.P. 231.5 and M.P. 232 —single curve;
M.P. 257.2 and M.P. 257.8 —single curve.
Nolin M.P. 197.8 to M.P. 198.6 —reverse curves;
Echo M.P. 191.6 —single curve;

Third Subdivision—

Westland M.P. 180.1 —single curve;
Castle-Peters M.P. 159.5 to M.P. 161.4 —reverse curves;
Arlington M.P. 138.2 —single curve;
Blalock M.P. 129.4 to M.P. 130.0 —reverse curves;

Fourth Subdivision—

Mosier M.P. 68.8 to M.P. 69.2 —reverse curves;
Wyeth M.P. 49.3 to M.P. 49.7 —reverse curves;
Troutdale M.P. 14.9 to M.P. 15.9 —reverse curves.

After rear trainman has completed inspection on the above curves, if everything is all right, he must give engine crew hand signal to proceed; this signal must be acknowledged by two long sounds of engine whistle.

If anything unusual is detected, train must be stopped and walking inspection of train must be made before proceeding.

812 (Y). In complying with the last paragraph of Rule 812 in Consolidated Code of Operating Rules and General Instructions, when starting from initial station and intermediate stops, freight trains must not exceed a speed of 6 MPH for the first train length or until proceed signal is received from trainman.

N. P. Air Brake Rules

814 (R). On tracks operated by Northern Pacific Railway, Northern Pacific air brake rules will apply.

Switching Cars With Air Brakes Cut In

815 (R). Air must be cut in and automatic brake used when switching passenger train cars and occupied outfit cars; however, independent or straight air brake may be used when making couplings. Engineman must exercise care to avoid rough handling.

Passenger Trains Backing Up

817 (R) On passenger trains backing up between Portland and East Portland, a trainman must be stationed on rear of train ready to apply brakes in emergency. Air whistle must be sounded when approaching Front Street, Portland, and at other points where conditions require.

Movements on Leads and Yard Tracks

820 (R). At Huntington, La Grande, Pendleton, Hinkle, The Dalles, Kenton, Albina, Argo, Ayer, Walla Walla, Wallula, Yakima, Tekoa and Spokane, road engines and trains and yard movements approaching leads, must stop before fouling lead unless it is known that switches are properly lined and lead is clear.

Before a train starts out of yard track, brakeman will precede the movement to a point where it is known route is clear.

Before a light engine starts out of yard track, the engineer and fireman must know that switches are properly lined and that route is clear.

Track Scales

821 (R). Locomotives must not be moved over live rails of track scales and when moved over dead rails of track scales, a speed of 5 MPH must not be exceeded.

Sanders or injectors must not be used over track scales and locomotives or cars must not stand on dead rail over scale deck or platform of track scales.

Cars to be weighed must be stopped on scales and uncoupled at both ends while being weighed, except on scales equipped with automatic weighing device.

Cars must not be violently stopped by impact, sudden application of brakes or by blocking wheels. After cars are weighed, they must not be moved over live rails if possible to avoid it. When making impact with cars on scales, speed must not exceed 2 MPH and 4 MPH must not be exceeded over scales in any case.

Cars on live rail must not be moved by other cars or engines moving on dead rail, or vice versa. Cars must not be moved over scale with one truck on live rail and other truck on dead rail.

Caboose Tracks

822 (R). At Huntington, La Grande, Hinkle, The Dalles, Albina, Argo, Ayer, Walla Walla, Yakima, Tekoa and Spokane, caboose track switches must be kept lined and locked for running lead. Before coupling to caboose on such tracks, caboose supply employes on or about cabooses must be warned before couplings are made.

Drover Cars

823 (R). Trains handling drover cars must not be pushed by an engine at the rear. If it becomes necessary, in an emergency, to clear main track by use of an engine at rear of train, the drover cars must first be vacated. Switching must not be done with drover cars, except in handling to or from trains.

Coupling Passenger Cars

824 (R). When coupling an engine or cars to passenger equipment, coupling must be tested by stretching slack after coupling is made.

After coupling to cars standing on grade, slack must be stretched and it must be known that air brakes are fully charged before releasing hand brakes.

After coupling a tight lock coupler to any coupler, it must be seen that knuckle is securely locked in closed position.

When coupling other type coupler to tight lock coupler, knuckle on tight lock coupler must be closed and knuckle on other coupler must be open, to be closed by impact of car.

After cars are coupled, tight lock couplers must be inspected to see that tell-tale hole is visible just below bottom of coupler head and that knuckle is locked.

Position of Brakemen on Trains

854 (R). On freight trains, the head brakeman must ride in control cab of locomotive at front of train except while performing duties requiring him to be elsewhere as specifically provided by rules.

On diesel or turbine locomotive, when necessary for head brakeman to ride elsewhere than in control cab, he will immediately return to control cab on signal from engineer. When fireman is patrolling engine rooms when train is in motion, head brakeman must remain in control cab during fireman's absence and must observe signals and other conditions prescribed by Rule 812.

When necessary for trainmen to ride in cab of trailing diesel unit, they must not occupy engineer's seat and must not tamper with nor manipulate any of the switches or valves nor place feet on dashboard or windshield.

854 (S). On trains moving over Willamette River Bridge, trainman must be on rear car.

Closing Doors on Freight Cars

900 (R). Referring to Operating Rule 900: Conductors will be held responsible for knowing that doors on cars in their train are properly closed. When necessary to close doors found open, hasps and locking mechanisms must be operated to keep secured. When doors of cars in train, or on cars to be picked up, cannot be closed by trainmen the car must be considered as bad order and car set out. Wire report of such occurrence must be made to superintendent, chief dispatcher and car foreman.

Engine Supplies

920 (R). On portions of the division where there is no joint operation of trains with another company, red light in cab of engine will not be required.

Movements Around Fueling Tracks, Etc.

920 (S). Before moving an engine and during movement of an engine in the vicinity of fueling and servicing tracks, engineers and hostlers must sound whistle to warn men working about such tracks.

Fireman Handling Locomotive

923 (R). Referring to Operating Rule 923: Engineers must not permit any unauthorized person to handle the locomotive. The fireman, when competent, may handle the locomotive when in road freight and yard service under the supervision of the engineer, the engineer being responsible. The fireman must not be permitted to handle the locomotive when in road passenger service, except in emergency.

Leaving Locomotives Unattended

923 (S). Locomotive must not be left without a man in charge, except at designated places and under authorized conditions. Locomotives must not be left standing so they will block or foul adjacent tracks.

When locomotive coupled to cars is left unattended, hand brakes must be set on not less than ten cars, or on all cars in case locomotive is coupled to only ten cars or less.

When a diesel or turbine locomotive is left unattended, reverse handle must be placed in neutral position and handle removed, independent brake set in full application position, generator field switch pulled and hand brake set on each unit, and it must be known that there is the required brake cylinder pressure.

Speedometers

928 (R). On locomotive equipped with speedometer, engineer must verify accuracy of speedometer not less than twice during each trip, by using watch to make time check between mile posts.

First check will be made at first opportunity after departure from point where engineer takes charge of locomotive. Care should be exercised to make check while speed is constant between mile posts, and, when possible, speed should be 30 MPH or over.

When check indicates speedometer is not registering correctly, wire report must be made to train dispatcher, master mechanic, and assistant superintendent in charge of district promptly as possible, giving miles per hour that speedometer is slow or fast.

Inspecting Locomotives

928 (S). When standing at inspection points, and when stopped in yards and at points between terminals where time will permit, Engineers must get on ground and inspect both sides of their locomotive. This applies to both passenger and freight trains, and to any type of locomotive.

Patrolling Diesel Engine Rooms

932 (R). On diesel locomotives in road service, fireman must patrol engine rooms and make inspection of engine, temperatures, steam heat facilities and other parts, and give such attention as may be required. Any unusual condition or irregularity detected must be reported to engineer, and fireman must be governed by engineer's instructions.

When patrolling engine rooms in diesel locomotives, firemen will check battery charging rate as indicated by Amp meter or Volt meter.

Patrol of engine rooms must be made at initial stations and at other stops, but when time between stops is 30 minutes or more, and at such other times as may be directed by engineer, fireman must patrol engine rooms while train is in motion.

Exception: Fireman must remain in control cab at all times while the train is in motion, and his patrol of engine rooms must be made at initial stations and at other stops when time will permit, as follows:

On diesel road-switch or switch locomotives in road service.

934 (R). Passenger type diesel locomotives number 900 to 999, inclusive, are not permitted to operate on any Branches except:

- Walla Branch
- Pendleton Branch—between Walla Walla and Pendleton
- Tekoa-Ayer Branch
- Pleasant Valley Branch
- Connell Branch—between Hooper Jet. and La Crosse
- Spokane-Tekoa Branch
- Wallace Branch
- Moscow Branch

Diesel locomotives 1100 to 1153 and 1180 to 1190 are not permitted to operate through Spokane Union Station.

Diesel locomotives 100 to 244, inclusive, must not operate on following tracks:

Location	Name of Track
Pendleton.....	Harris Mill Log Dump Track
The Dalles.....	East Ship Way Spur
East Portland.....	Canada Dry Spur—44th St.
East Portland.....	Doernbecher's Spur No. 1
Kenton.....	Smithwick Spur
Kenton.....	Sunshine Biscuit Spur
Albina.....	Swan Island
Seattle.....	Various Spurs along 5th Ave.
Seattle.....	Various Spurs along East Marginal Way
Seattle.....	Various Spurs on 11th Ave. S. W.

Continued on opposite side.

934 (R). Continued.

Location	Name of Track
Seattle.....	Various Spurs on Alaskan Way
Walla.....	Both legs of wye
St. Johns Branch.....	Willamette Tug & Barge Spurs on River Side
St. Johns Branch.....	Western Cooperage Spur
Terminal No. 4.....	Various Spurs and Crossovers
Oregon Ship Yard.....	Various Spurs and Crossovers
Electro Metallurgical Co.	Various Spurs and Crossovers
Aberdeen.....	Various Front St. Spurs
Hoquiam.....	Grays Harbor Chair Spur
Olympia.....	Olympia Brewery Spurs
Walla Walla.....	Pacific Fruit Spur
Walla Walla.....	Walla Walla Gardeners Spur
Walla Walla.....	Pacific Supply Co-op.
Walla Walla.....	Walla Walla Cannery
Walla Walla.....	Jefferson St. Connection Libhys.
Walla Walla.....	Mill Spur.

934 (S). Steam Derrick 03041 can be used only on main line and the following Branches:
Joseph Branch
Umatilla Branch

934 (T). Cars weighing in excess of 200,000 pounds not permitted between Dayton and Turner on Dayton Branch, between Hooper Jet. and Connell on Connell Branch.

Cars weighing in excess of 210,000 pounds not permitted on Stuck River Bridge, Fleischman Yeast Co. spur at Sumner.

Cars weighing in excess of 240,000 pounds not permitted on Condon Branch, Heppner Branch and on Bridge 3.S0S at Waitsburg, Dayton Branch.

Exception: Pile driver 0321 weighing 222,200 pounds, may be handled on all branch lines except between Hooper Jet. and Connell on Connell Branch.

When handling pile driver 0321, or a car weighing 200,000 pounds gross over Bridge 17.23 at Riparia, there must be at least four cars between such car or pile driver and engine or between such car or pile driver and any car weighing more than 160,000 pounds gross.

When handling derrick 0310 there must be at least five cars between derrick and locomotive, or between derrick and any car weighing more than 240,000 pounds gross.

Rules for Hostlers

935 (R).

(1) Hostlers must comply with rules for engineers and all other employes that relate in any way to their own duties or to the safety of operation.

(2) Hostlers are in charge of their helpers and attendants and must know they are familiar with and perform their duties; instruct them if necessary and caution them as to risks; inefficiency or insubordination must be reported to the proper officer.

(3) Hostler must not move an engine or any part of its machinery unless he knows it can be done without injury to anyone.

(4) Hostler must not permit any unauthorized person to handle an engine.

(5) Before moving an engine from coal chute, fuel oil or water standpipe, hostler must know that chute or spout has been removed from engine tank and securely fastened in proper position.

(6) While switching or moving an engine on roundhouse tracks, hostler must be able to see his helper or attendant at all times.

(7) Hostler must know that track to be used is not restricted for class of engine being handled.

(8) Engine must be stopped immediately before moving on to turntable and receive signal from helper or turntable attendant located at receiving end of table to move on to table. At night, signals must be given with white light.

(9) Hostlers handling diesel units and locomotives must know air brake equipment is functioning and adequate air pressure is maintained on units before any movement is made. A set-up and release of independent brakes and brake cylinder pressure must be noted on gauge.

Continued on Page 17.

935 (R). Continued.

(10) In moving units at terminals for servicing, stop must be made before going onto turntable on both incoming and outgoing movements, also before entering enginehouse or diesel servicing buildings and facilities where elevated tracks or pits are used.

(11) At terminals where units are cut in and out of locomotive sets, hostlers will check to know air brake hoses are coupled and air cut in with air brakes functioning on all units before any movement is made.

(12) At terminals where hostlers handle units to and from stations, relieving inbound engine crews, brakes must be tested with independent brake valve immediately after units detached from train to insure brakes operating properly and provide proper retardation of units.

(13) In handling units around enginehouses and diesel servicing and maintenance facilities, movements must be made not to exceed 5 miles per hour under any circumstances.

(14) Hostlers and hostler attendants, outside hostlers and outside hostler helpers, must observe brake piston travel to know that brakes apply when independent brake valve is placed in application position, before movement of diesel unit or units is made on roundhouse, shop, or other tracks. Inspection must be made, and they will also know, that hand brakes are released on all units before attempting to move them, to avoid possibility of slid flat spots on wheels.

(15) Immediately after units have started to move, brakes must be applied with independent brake valve and observe if brakes are operating properly and effective.

Station Bulletin Boards

957 (R). Last sentence of Operating Rule 957 is changed to read as follows:

"Train bulletin boards must bear such information regarding trains as is required by law or by instructions."

Air Brake Rules

1005 (R). Engines in freight or mixed train service will carry 90 pounds brake pipe pressure on the First, Second, Third and Fourth Subdivisions, Sierra Nevada Spur, between Wallace and Burke and on descending grades between Crest and Colfax, Alto and Bolles, Weston and Barrett, Lovell and Chatcolet, Relief and Starbuck, and on Grass Valley and Condon branches and in mixed train service on Bend Branch.

1030 (R). Where Sperry rail-detector car is working when temperature is below freezing, trains, engines and track cars must be operated at a safe speed, using sand where necessary to overcome slippery condition caused by use of calcium chloride solution by rail car.

1035 (R). Running test as prescribed in Air Brake Rules 1035, 1035 (A), 1035 (B) and 1035 (C) must be made before descending grades as follows:

- Encina —westward and eastward;
- Telocaset —westward and eastward;
- Kamela —westward and eastward;
- Fourth Subdivision —westward trains at M.P. 6 east of Graham;
- Condon Branch —westward trains at Speece, Mikkalo and Shutler;
- Grass Valley Branch —westward trains at Kent, M.P. 34, Klondike and Wasco;
- Grass Valley Branch —eastward trains at Sandon and M.P. 35;
- Bend Branch —westward trains at M.P. 100;
- Spokane-Tekoa Branch —eastward trains at Darknell and Freeman;
- Tekoa-Ayer Branch —westward trains at Jerita; —eastward trains at Crest;
- Pendleton Branch —eastward trains at Weston; —westward trains at Alto;
- Wallace Branch —eastward trains at Burke.

1035 (S). At Spokane Union Station, passenger trains will make running air test only after leaving the elevated structure.

1043 (R). Before descending grade Jerita to Hay, and Mica to Chester, after stop has been made, brakes must be fully applied and before proceeding it must be known that brake pipe pressure is restored as indicated by caboose gauge, and that rear brakes are released. In the absence of caboose gauge, application and release test of brake on rear car must be made as prescribed in Air Brake Rule 1043 (B).

1044 (R). Brake pipe test as prescribed in Air Brake Rule 1044 must be made on all freight and mixed trains before descending grade on Condon Branch between Barnett and Rock Creek and on Grass Valley Branch between Biggs and Klondike, and this test must also be made at intermediate points on these grades either ascending or descending, whenever engine is changed, cars picked up or set out, air hose parted, angle cock turned or when train has been standing for 30 minutes or more.

Brake pipe test, as prescribed in Air Brake Rule 1044, must be made on all freight trains before descending grade Weston to Barrett, Relief to Starbuck, Alto to Menoken, Crest to Colfax, Plummer to Chatcolet, Burke to Wallace, Sierra Nevada Branch end of track to Bradley, Encina eastward and westward, Kamela, eastward and westward except Trains 125 and 126 when handling 30 cars or less. Trains 125 and 126 when length of train does not exceed 30 cars, will make running air test as prescribed by Air Brake Rule 1035 before descending grades at Kamela and Encina.

Conductors and trainmen must know that standard brake pipe pressure is maintained as indicated by the caboose gauge after running air brake test is made.

1045 (R). Retaining valves must be used on descending grades as follows:

Condon Branch, all trains, M.P. 35 to Arlington, all retaining valves must be used.

Grass Valley Branch, on passenger trains Thornberry to Biggs, and on freight or mixed trains M.P. 33 to Moro, Klondike to Biggs and Sandon to Hay Canyon, all retaining valves must be used.

On Bend Branch, freight and mixed trains on descending grades between M.P. 100 and South Jet., trains averaging not to exceed 50 gross tons per car may be handled without use of retaining valves. On trains averaging in excess of 50 gross tons per car, one-half of the retaining valves will be used consecutively from the head end of the train.

On freight trains descending grades Mica to Chester and Darknell to Rockford and on freight and mixed trains Jerita to Hay, Alto to Menoken, Turner to Dayton, trains averaging not to exceed fifty gross tons per car, may be handled without the use of retaining valves. On trains averaging to exceed fifty gross tons per car, one-half of all retaining valves must be used. Retaining valves must be used consecutively from head end of train.

On all trains Crest to Colfax, Relief to Starbuck, Weston to Barrett, Burke to Wallace and Sierra Nevada Branch end of track to Bradley, all retaining valves must be used.

On freight trains, trainmen must patrol top of train where retaining valves are used.

1045 (S). When retaining valves are used, freight and mixed trains will use five minutes moving first mile after turning up retaining valves, 4 minutes moving second mile and 3 minutes moving each mile thereafter, except where slower speed is otherwise prescribed.

1045 (T). On the following branches, gross weight of train, exclusive of engine, must not exceed an average of sixty-five tons per effective brake:

- Tekoa-Ayer Branch—between Crest and Colfax;
- Pendleton Branch —between Weston and Barrett;
- Tucannon Branch —between Relief and Starbuck.

1045 (U). Retaining valves must be used on trains handled with diesel locomotives with dynamic brake not in operation or when not equipped with brake valve modified for pressure maintaining when descending grades, as follows:

All retaining valves must be used on passenger, mail and express trains descending grade between Hilgard and Huron.

Freight trains descending grades between Encina and Durkee and between Hilgard and Huron must use one operative retaining valve for each fifty tons of train but in no case less than one-half of all retaining valves in train. If engineer finds it difficult to control train or to recharge train, he will request train crew to turn up additional retaining valves necessary to insure safe control of train, stopping train if necessary.

Between Telocaset and Union Jet., and between Huron and Duncan, trains averaging not to exceed fifty gross tons per car may be handled without the use of retaining valves when handled by engines equipped with two air compressors which are operative. On trains averaging to exceed fifty gross tons per car, or trains handled by engines having one air compressor, one-half of all retaining valves must be used.

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RATING OF DIESEL LOCOMOTIVES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS

Total weight of train exclusive of locomotive, which the different classes of locomotives will haul in each direction between stations named, under favorable weather conditions. A deduction of ten per cent may be made for time freight trains.

TYPE OF LOCOMOTIVE	NUMBERS (Inclusive)	THIRD SUBDIVISION																		
		CONDON BRANCH										GRASS VALLEY BRANCH								
		Condon to Clem	Clem to Mikkaio	Mikkaio to Shutter	Shutter to Arlington	Arlington to Rock Creek	Rock Creek to Barnett	Barnett to Mikkaio	Mikkaio to Gwendalyn	Gwendalyn to Condon	Biggs to Thornberry	Thornberry to Klondike	Klondike to Hay Canyon	Hay Canyon to Moro	Moro to Grass Valley	Grass Valley to Kent	Kent to Erskine	Erskine to Hay Canyon	Hay Canyon to Sandon	Sandon to Biggs
EMD-GP9	130 to 244	3500	850	1750	3500	850	600	850	600	1200	525	875	1400	850	900	1400	1200	3000	1000	3000
EMD	1000 to 1095	3000	600	1500	3000	600	450	600	450	1100	325	450	1100	425	650	800	850	3000	650	3000
ALCO	1100 to 1153										325	450	1100	425	650	800	850	3000	650	3000
ALCO	1180 to 1195	3000	875	2350	3000	800	650	800	650	1500	525	875	1400	850	900	1400	1200	3000	1000	3000
FM	1300 to 1304										325	450	1100	425	650	800	850	3000	650	3000
EMD	1400 to 1496	3500	715	2385	3500	885	700	785	710	1550	475	800	1000	750	775	1200	1100	3500	850	3000
EMD	1500 to 1563	3500	875	2385	3500	935	785	935	785	3500	525	875	1400	850	900	1400	1200	3000	1000	3000
EMD	1800 to 1824	3200	700	1700	3200	650	500	650	500	1200	375	500	1200	500	700	1000	1050	3200	750	3200

TYPE OF LOCOMOTIVE	NUMBERS (Inclusive)	THIRD SUBDIVISION						FIFTH SUBDIVISION								
		BEND BRANCH						GRAYS HARBOR BRANCH				TONO BRANCH		OLYMPIA BRANCH		
		● T. Jet. to North Jet.	North Jet. to South Jet.	South Jet. to Madras	Madras to Bend	Bend to O. T. Jet.		Hoquiam to Cosmopolis	Cosmopolis to Centralia	Centralia to Cosmopolis	Cosmopolis to Hoquiam	Centralia to Tono	Tono to Centralia	Olympia to East Olympia	East Olympia to Olympia	
EMD-GP9	130 to 244	2350	2600	1250	2350	3000	EMD-GP9	130 to 244	1700	4500	5000	2150	3000	3500	1800	3500
EMD	1000 to 1095	1500	1700	950	1400	1700	EMD	1000 to 1095	1200	3200	3800	1500	2500	3500	1400	3500
ALCO	1100 to 1153	1500	1700	950	1400	1700	ALCO	1100 to 1153	1700	4500	5000	2150	3000	3500	1800	3500
ALCO	1180 to 1195	2000	2350	1200	2000	2350	FM	1300 to 1304	1425	4000	4400	1900	2750	3500	1650	3500
FM	1300 to 1304	1500	1700	950	1400	1700	EMD-F7	1400 to 1496	1650	4200	5000	2100	3000	3500	1750	3500
EMD	1400 to 1496	1900	2100	1100	1900	2250	EMD-F3	1500 to 1563	1700	4500	5000	2150	3000	3500	1800	3500
EMD	1500 to 1563	2000	2350	1200	2000	2350	EMD	1800 to 1824	1400	3400	4000	1700	2700	3700	1500	2700
EMD	1800 to 1824	1650	1850	1050	1550	1850										

Rating shown is for single unit. If more than one unit, rating of combined units will govern.

RATING OF DIESEL LOCOMOTIVES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS

Total weight of train exclusive of locomotive, which the different classes of locomotives will haul in each direction between stations named, under favorable weather conditions. A deduction of ten per cent may be made for time freight trains.

TYPE OF LOCOMOTIVE	NUMBERS (Inclusive)	FOURTH SUBDIVISION							FIFTH SUBDIVISION					
		The Dalles to Dodson	Dodson to Albina via Kenton	Troutdale to Portland via Granbam	Portland to Troutdale via Granbam	Albina to Hood River via Kenton	Hood River to The Dalles	Albina to Vaner	Vader to Nappavine	Nappavine to Argo	Argo to Centralia	Centralia to Nappavine	Nappavine to Albina	
EMD-GP7	100 to 129	3500	4550	3140	1730	4150	3930	432	1990	4320	4000	1560	5240	
EMD-GP9	130 to 244	4000	5260	3200	1900	4300	4000	6000	2200	4500	4750	1900	6000	
EMD	1000 to 1095	3000	4000	3000	1250	3000	3000	3500	1800	3500	3500	1650	3500	
ALCO	1100 to 1153	2700	4400	3500	1350	3500	3500	4400	2250	4400	4400	2150	4400	
ALCO	1180 to 1189	2900	4840	2840	1570	3760	3560	3910	1500	3910	3620	1410	5500	
FM	1300 to 1304	3000	4000	3000	1250	3000	3000	4200	2100	4250	4200	2000	4250	
FM	1325 to 1329	2990	5190	3040	1680	4020	3800	4180	1920	4180	3870	1510	5900	
FM	1340 to 1342	3410	5900	3460	1920	4580	4330	4750	2190	4750	4410	1730	6710	
FM	1360 to 1370	2950	5070	2990	1660	3940	3740	4100	1900	4100	3800	1490	5740	
EMD-F7	1400 to 1496	3500	4550	3140	1730	4150	3930	4320	1990	4320	4000	1560	5240	
EMD-F3	1500 to 1563	4000	5260	3200	1900	4300	4000	4500	2100	4500	4400	1800	5500	
EMD	1800 to 1824	3200	4300	3200	1350	3200	3200	3700	1900	3700	3700	1750	3700	
EMD-C&C	1870 to 1877	5330	8180	5410	2970	7170	6780	7450	3410	7450	6910	2670	9290	

TYPE OF LOCOMOTIVE	NUMBERS (Inclusive)	SIXTH SUBDIVISION											SPOKANE-TEKOA BRANCH					
		Spokane to Geib	Geib to Page	Page to Hummerist	Hummerist to Wallula	Wallula to Juniper	Juniper to Linkle	Linkle to Wallula	Wallula to Hummerist	Hummerist to Ayer	Ayer to Geib	Geib to Spokane	Spokane to Chester	Chester to Fairfield	Fairfield to Latah	Latah to Tekoa	Tekoa to Freeman	Freeman to Spokane
EMD-GP7	100 to 129	2300	5970	3670	5970	4320	2600	4780	3090	4320	2300	Car limit	1750	1130	1650	2200	1435	4000
EMD-GP9	130 to 244	2670	6900	4250	6900	4250	2670	4700	3050	4250	2670	Car limit	1720	1100	1600	2100	1400	4000
EMD	1000 to 1095	1900	3500	3200	3500	3300	1900	2900	1900	3500	1900	Car limit	1175	750	1042	2000	964	3500
ALCO	1100 to 1153	2550	5600	3750	5600	3750	2250	4000	2700	4600	2730	Car limit	1875	1220	1750	2350	1565	4000
ALCO	1180 to 1189	2450	6350	3910	6350	3910	2450	4330	2800	3910	2450	Car limit	1875	1220	1750	2350	1565	4000
FM	1300 to 1304	1900	3500	3200	3500	3300	1900	2900	1900	3500	1900	Car limit	1175	750	1050	2000	950	3500
FM	1325 to 1329	2620	6820	4180	6820	4180	2620	4630	2990	4180	2620	Car limit	1750	1190	1580	2250	1390	4000
FM	1340 to 1342	2980	7760	4750	7760	4750	2980	5270	3410	4750	2980	Car limit	2000	1360	1810	2550	1560	4000
FM	1360 to 1370	2580	6620	4100	6620	4100	2580	4530	2950	4100	2580	Car limit	1700	1180	1570	2170	1350	4000
EMD-F7	1400 to 1496	2300	5970	3670	5970	4320	2600	4780	3090	4320	2300	Car limit	1750	1130	1650	2200	1435	4000
EMD-F3	1500 to 1563	2470	6450	3950	6450	4400	2690	4960	3200	4470	2470	Car limit	1875	1220	1750	2350	1565	4000
EMD	1800 to 1824	2150	3700	3400	3700	3500	2100	3100	2200	3700	2100	Car limit	1275	825	1140	2150	1050	3700
EMD-C&C	1870 to 1877	4120	10730	6590	10730	7450	4290	8260	5330	7450	4120	Car limit						

Rating shown is for single unit. If more than one unit, rating of combined units will govern.

RATING OF DIESEL LOCOMOTIVES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS

Total weight of train exclusive of locomotive, which the different classes of locomotives will haul in each direction between stations named, under favorable weather conditions. A deduction of ten per cent may be made for time freight trains.

TYPE OF LOCOMOTIVE	NUMBERS (Inclusive)	SIXTH SUBDIVISION																		
		TEKOA-AYER BRANCH														PLEASANT VALLEY BRANCH				
		Tekoa to Garfield	Garfield to Colfax	Colfax to Crest	Crest to Winona	Winona to Jorda	Jerita to Ayer	Ayer to Itiparia	Itiparia to Hay	Hay to Jerita	Jerita to Winona	Winona to Mockomema	Mockomema to Crest	Crest to Elberton	Elberton to Tekoa	Splice to Willuda	Willuda to Winona	Winona to St. John	St. John to Okesdale	Okesdale to Esitree
EMD-GP7	100 to 129	1700	4000	625	4000	1900	5000	4000	1400	1000	1850	1750	1350	2300	1450	1780	3500	1575	1400	2350
EMD-GP9	130 to 244	1700	4000	600	4000	1900	5000	4000	1350	1000	1800	1750	1350	2300	1400	1750	3500	1550	1400	2350
EMD	1000 to 1095	1200	3500	400	3500	1500	4000	3200	1150	700	1500	1400	1000	2000	1150	1400	3000	1150	950	1900
ALCO	1100 to 1153	1600	3500	675	3500	1850	5000	3500	1450	1050	1900	1800	1400	2350	1500	1850	3500	1575	1400	2350
FM	1300 to 1304	1450	3500	525	3500	1700	5000	3500	1300	900	1750	1650	1250	2250	1350	1600	3000	1410	1130	2200
FM	1325 to 1329	1700	4000	750	4000	1900	5000	4000	1350	1000	1950	1850	1350	2300	1400	1700	3000	1550	1400	2350
FM	1340 to 1342	1900	4000	850	4000	2100	5000	4000	1450	1200	2100	2000	1450	2600	1600	1900	3500	1750	1600	2500
FM	1360 to 1370	1700	4000	750	4000	1900	5000	4000	1350	1000	1950	1850	1350	2300	1400	1700	3000	1550	1400	2350
EMD-F7	1400 to 1496	1700	4000	750	4000	1900	5000	4000	1350	1000	1950	1850	1350	2300	1400	1750	3250	1650	1500	2500
EMD-F3	1500 to 1563	1600	3500	675	3500	1850	5000	3500	1450	1050	1900	1800	1400	2350	1500	1850	3500	1575	1400	2350
EMD	1800 to 1824	1300	3700	450	3700	1650	5000	3400	1250	750	1650	1550	1100	2200	1250	1550	3200	1250	1025	2100

TYPE OF LOCOMOTIVE	NUMBERS (Inclusive)	SIXTH SUBDIVISION												
		WALLACE BRANCH										CONNELL BRANCH		
		Tekoa to Watt	Watt to Emaville	Emaville to Kellogg	Kellogg to Wallace	Wallace to Gem	Gem to Burke	Burke to Wallace	Wallace to Chickalet	Chickalet to Watt	Watt to Tekoa	La Cross to Hooper Jet	Hooper Jet to Connell	Connell to La Cross
EMD-GP7	100 to 129	1700	2250	1900	1900	500	450	900	3000	800	3500	3700	1200	1300
EMD-GP9	130 to 244	1700	2250	1850	1850	475	425	870	3000	790	3500	3700	1200	1300
EMD	1000 to 1095	800	1700	1200	1200	275	225	750	2500	550	2500	3500	1100	1200
ALCO	1100 to 1153	1100	2250	1750	1500	450	400	750	3000	825	3500	3500	1500	1500
FM	1300 to 1304	1000	2000	1500	1400	375	350	750	2500	775	2500	3500	1350	1400
FM	1325 to 1329	1700	2200	1850	1850	475	425	870	3000	790	3500	3500	1200	1300
FM	1340 to 1342	1900	2500	2100	2100	525	475	950	3000	900	3500	3700	1350	1400
FM	1360 to 1370	1700	2200	1850	1850	475	425	800	3000	870	3500	3500	1200	1300
EMD-F7	1400 to 1496	1780	2500	2100	2100	500	450	900	3000	800	3500	3500	1200	1300
EMD-F3	1500 to 1563	1800	2500	2200	2200	500	450	900	3000	800	3500	3500	1200	1300
EMD	1800 to 1824	850	1850	1300	1300	300	275	750	2700	600	2750	3700	1200	1300

Rating shown is for single unit. If more than one unit, rating of combined units will govern.

RATING OF DIESEL LOCOMOTIVES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS

Total weight of train exclusive of locomotive, which the different classes of locomotives will haul in each direction between stations named, under favorable weather conditions. A deduction of ten per cent may be made for time freight trains.

TYPE OF LOCOMOTIVE	NUMBERS (Inclusive)	SIXTH SUBDIVISION									
		DAYTON BRANCH				POMEROY BRANCH				MOSCOW BRANCH	
		Bolles to Dayton	Dayton to Turner	Turner to Dayton	Dayton to Bolles	Tucannon to Pomero	Pomero to Tucannon	Relief to Starbuck	Starbuck to Relief	Colfax to Moscow	Moscow to Colfax
EMD-GP7	100 to 129	1600	800	1500	2000	1500	2500	1000	400		
EMD-GP9	130 to 244	1650	850	1550	2100	1550	2550	1100	400		
EMD	1000 to 1095	1600	875	875	3000	1200	3500	3500	300	1200	3500
ALCO	1100 to 1153	1600	875	875	3000	1500	3500	3500	625	1700	3500
ALCO	1180 to 1189	1675	1150	1150	3000	1500	3500	3500	675	1750	3500
FM	1300 to 1304	1600	875	875	3000	1350	3500	3500	490	1700	3500
FM	1325 to 1329	2000	1150	1150	3350	1400	3500	3500	600	2200	3500
FM	1340 to 1342	2200	1350	1350	3500	1600	3500	3500	750	2400	3500
FM	1360 to 1370	2000	1150	1150	3350	1400	3500	3500	600	2200	3500
EMD-F7	1400 to 1496	1675	1000	1000	3000	1400	3500	3500	600	2400	3500
EMD-F3	1500 to 1563	1750	1150	1150	3000	1500	3500	3500	625	1700	3500
EMD	1800 to 1824	1750	950	950	3200	1300	3700	3700	350	1300	3700

TYPE OF LOCOMOTIVE	NUMBERS (Inclusive)	SIXTH SUBDIVISION													
		Y. AKIMABRANCH						WALLULA BRANCH		PENDLETON BRANCH					
		Wallula to Villard	Villard to Richland Jet.	Richland Jet. to Yakima	Yakima to Richland Jet.	Richland Jet. to Wallula	Wallula to Wallula	Wallula to Wallula	Pendleton to Weston	Weston to Wallula	Wallula to Bolles	Bolles to Alto	Alto to Milton	Milton to Weston	Weston to Pendleton
EMD-GP7	100 to 129	4000	3500	3500	3500	4000	1700	3000	1500	1350	1200	950	1500	750	3700
EMD-GP9	130 to 244	4000	3500	3500	3500	4000	1700	3000	1500	1350	1200	950	1500	750	3500
EMD	1000 to 1095	3300	3300	3300	3300	3300	1450	2850	1400	1150	1050	750	1400	775	3500
ALCO	1100 to 1153	4000	3500	3500	3500	4000	1450	2750	1750	1600	1400	1000	1700	925	3500
ALCO	1180 to 1189	4000	3500	3500	3500	4000	1600	2750	1750	1600	1400	1000	1700	925	3500
FM	1300 to 1304	3500	3000	3000	3000	3500	1450	2800	1600	1425	1250	975	1550	800	3500
FM	1325 to 1329	4000	3500	3500	3500	4000	1400	3000	1700	1550	1350	950	1650	875	3500
FM	1340 to 1342	4200	3700	3700	3700	4200	1400	3000	1900	1750	1550	1150	1850	1000	3500
FM	1360 to 1370	4000	3500	3500	3500	4000	1600	3000	1700	1550	1350	950	1650	875	3500
EMD-F7	1400 to 1496	4000	3500	3500	3500	4000	1450	3000	1800	1650	1450	1050	1750	975	3500
EMD-F3	1500 to 1563	4000	3500	3500	3500	4000	1600	3000	1750	1600	1400	1000	1700	925	3500
EMD	1800 to 1824	3200	3200	3200	3200	3200	1550	3000	1400	1250	1125	800	1350	850	3750

Rating shown is for single unit. If more than one unit, rating of combined units will govern.