

**UNION PACIFIC RAILROAD COMPANY**  
**Northwestern District**

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**Oregon Division**

**Special Rules**  
**No. 3**

**Effective Saturday,**  
**April 1, 1939**

Superseding Special Rules No. 2

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

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**M. C. WILLIAMS, Superintendent**

**F. N. FINCH,**  
General Manager

**G. L. WHIPPLE,**  
General Supt. Transportation

2 (B). In addition to employes enumerated in Rule 2, following employes must use watches that have been examined and certified to by a designated inspector:

Division Engineers	Operators
Safety Agents	Assistant Yardmasters
Trainmasters	Assistant Roadmasters
Road Foremen of Engines	Construction Foremen
Station Agents	

Operators must set their clocks when Standard Time is transmitted.

At stations where there is not a standard clock, the watches of operators must be compared with the train dispatcher, before commencing each day's work.

Employes will be exempt from watch inspection and comparison when permanently assigned in offices where a standard clock is provided.

7 (B). At points where there are close clearances, trainmen will work on the opposite side of train from them; and, if necessary, the fireman will receive the signals and communicate them to the engineman.

7 (C). When practicable, all signals by hand must be given on the engineman's side; flag and lamp signals (when not by hand), fuseses and torpedoes must also be placed on that side, but they must be respected when received from or found on either side.

During stormy weather or when snow is on the ground torpedoes should be duplicated on opposite rail.

9 (R). Switch lights will not be used on following branch lines:

Joseph Branch;	Shaniko Branch;
Pilot Rock Branch;	Primo Branch;
Heppner Branch;	Tono Branch;
Condon Branch;	Olympia Branch;

Trains and engines must approach facing point switches on these branches prepared to stop if switch is not in normal position.

9 (S). Lights will not be kept burning at night in train order signals on branch lines when operators are not on duty.

10 (h). At night, a yellow light on a dwarf signal, on a "call-on" signal, or on a "short-arm" signal of an interlocking, indicates "proceed at restricted speed".

11 (B). A train finding a fusee burning yellow on or near its track must proceed at restricted speed.

11 (C). Referring to Rules 11 and 11(B). Restricted speed must be observed for at least one mile.

14 (x). Relative to Rules 14 and 14(l): The first of the long sounds will be started at such a point, depending on the speed of the train or engine, that the signal will be completed by ending the last sound immediately after passing the crossing. The last sound may be prolonged, if necessary, and there must not be too much space between sounding of the blasts. The duration of the complete signal must not be less than 10 seconds and not much more than 15 seconds.

The sounds of the whistle should be no louder than necessary to give adequate warning to traffic in vicinity of the crossing, thus avoiding unnecessary annoyance to residents.

14 (y). In case of necessity for transferring control of air from one engine to another, enginemen will be governed by Rule 1050(B) of "Operating Rules & Instructions Governing Air Brakes, Air Signals, Etc." effective December 1, 1925, sounding whistle signal as provided therein, viz., two short and one long sounds of the engine whistle.

15 (A). Referring to Rule 15. Restricted speed must be observed for at least one mile.

17 (B). During heavy snow or rain storms, the headlight will be displayed to the front of every train by day.

17 (C). When rules require headlight to be displayed, electric headlights on road engines must be dimmed under conditions outlined below, except in foggy or stormy weather or when other conditions make it inadvisable:

In yards where yard engines are employed and at stations where switching is being done;

At meeting points, until the train to be met is clear of the main track;

When standing;

On two or more tracks when approaching trains running in opposite direction.

These instructions do not supersede or modify those contained in Rule 17.

17 (R). Headlights on all engines must be kept burning while between St. Johns Jct. and Peninsula Jct. whether day or night.

19 (C). By night freight trains will, in addition to markers, display a light in cupola of the caboose, showing green to the front and red to the rear except when train is clear of the main track, when a green light must be displayed to the front and rear.

On arrival at terminals, cupola light must not be removed until train has been taken charge of by the yardmen or is clear of the main track.

19 (D). A train equipped with train indicators must not leave its initial station, except between Portland and Seattle, without the indication properly displayed. When the identity of a train is changed, the indicators must be changed to correspond. Before making such change, the safety of other trains must be fully considered.

#### Common Standard—Single Row—Indicator.

12 for Train No. 12.

1-12 for First 12.

X-162 for Extra 162.

On arrival at terminals, indicators must not be removed until the train has been taken charge of by the yardmen, or is clear of main track.

19 (E). When passenger trains are being switched, the markers must be removed to prevent obscuring the view of the enginemen, except that electric marker lamps need not be removed but at night their lights must be extinguished.

26 (A). Blue flag or blue light must in all cases be displayed on the same side of train at each end.

26 (B). When necessary to protect against the moving or coupling into, of certain bad order cars on repair tracks with other cars, some of which it may be necessary to move, a red flag by day and a red light by night must be displayed on such cars to indicate that they must not be moved or coupled into under any circumstances.

These instructions do not change or modify Rule 26 in any way.

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

31 (A). Enginemen must sound whistle signal as prescribed by Rule 14(l) when approaching a train which is stopped on opposite track on double track, and when approaching a train which is on a siding on single or double track. On double track special care must be taken to sound warning signals, and particularly when trains or engines are approaching highway crossings from opposite directions at the same time.

31 (R). Ordinance of the City of Pendleton makes it unlawful for any person operating a locomotive within the city limits to sound the whistle thereof except to prevent accident not otherwise avoidable or to signal an interlocking or communicate with flagman.

83 (C). Clearance Card, Form 2643, will be used in lieu of Clearance Form A as provided in Transportation Rules effective April 1, 1939.

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83 (R). Clearance card (Form 2643) must be received as follows:

At Pendleton, by all first class trains;

At Umatilla, by all trains;

At Black River, by all westward trains;

At Centralia, by all westward Grays Harbor Branch trains originating at Blakeslee Junction;

At Centralia, by all eastward Tono Branch trains originating at Wabash;

At Independence, by all westward C. M. St. P. & P. trains originating at Helsing Junction;

Northern Pacific clearance card A (Form 1357A) must be received as follows:

At Reservation, by all eastward second class and extra trains passing through Tacoma;

At Northern Pacific Fifteenth Street telegraph office, by all eastward second class and extra trains originating at Tacoma.

Trains are not required to receive clearance card (Form 2643) as per Rule 83(B) as follows:

At Joseph, all first and second class trains, when no operator on duty;

At East Olympia, all westward trains;

At Argo, all westward C. M. St. P. & P. passenger trains;

At Tono, all westward trains;

At Primo, all westward trains;

At Cosmopolis, all eastward trains Primo Branch.

83 (S). Trains must ascertain whether all superior trains due have left as follows:

At Northern Pacific Fifteenth Street telegraph office, Tacoma, all eastward second class and extra trains originating at Tacoma;

At Reservation, all eastward second class and extra trains passing through Tacoma.

Trains are not required to ascertain whether all trains due, which are superior, or of the same class, have arrived or left, as per Rule S-83 as follows:

At Peninsula Jct. all westward trains and engines, but may proceed Peninsula Jct. to St. Johns Jct. on clear interlocking signal indication.

At Argo, all westward C. M. St. P. & P. passenger trains, but may proceed Argo to Seattle on clear interlocking signal indication at Argo, running with current of traffic at restricted speed.

Trains must register by registering ticket (Form 2642) as follows:

At Rieth, all first class trains;

At Black River, all first and second class trains or manifest extras.

Train registering exceptions:

Unless otherwise instructed, first class trains and passenger extra trains must register at The Dalles passenger station; all other trains must register at The Dalles yard office;

At Albina, only trains which originate or terminate at that point will register;

At Argo, only trains which originate or terminate in U. P. yard at that point will register;

At Wabash, Tono Branch trains originating or terminating at that point must register in U. P. train register located in N. P. telegraph office, Centralia;

At Blakeslee Junction, Grays Harbor Branch trains originating or terminating at that point must register in U. P. train register located in N. P. telegraph office, Centralia;

At North Portland Jct. Fifth Subdivision trains originating or terminating at that point must register in U. P. train register located in S. P. & S. telegraph office, Vancouver.

83 (T). To enable compliance with Rule S-83 at end of double track, conductors and enginemen of trains moving between Nordeen and Ross must fully identify trains between these stations. Trains displaying signals between Nordeen and Ross must whistle as per Rule 14 (k).

To enable westward trains originating at The Dalles to comply with Rule S-83 when passing from double to single track at Crates, train register at The Dalles will also serve as train register for Crates, and conductors and enginemen must identify eastward trains which are superior or of the same class between The Dalles and Crates. Trains displaying signals between The Dalles and Crates must whistle as per Rule 14 (k).

To enable eastward trains originating at Seattle to comply with Rule S-83 when passing from double to single track at Argo, train register at Seattle will also serve as train register for Argo, and conductors and enginemen must identify westward trains which are superior or of the same class between Seattle and Argo. Trains displaying signals between Seattle and Argo must whistle as per Rule 14 (k).

83 (U). Movement of C. M. St. P. & P. and U. P. trains or engines between Helsing Junction and Independence is governed by automatic block signals. When these signals indicate proceed, trains and engines may proceed regardless of first class trains.

When signal at junction switch fails to indicate proceed for westward C. M. St. P. & P. trains after junction switch is opened, in addition to complying with Rule 509 (A), Grays Harbor Branch main track must not be occupied until protection in accordance with Rule 99 is afforded against westward trains on Grays Harbor Branch.

83 (V). Movement of trains and engines between junction switch Cosmopolis and Cosmopolis station is governed by automatic block signals. When these signals indicate proceed, trains and engines may proceed regardless of first class trains.

When signal at junction switch fails to indicate proceed for westward Primo Branch trains after junction switch is opened, in addition to complying with Rule 509 (A), Grays Harbor Branch main track must not be occupied until protection in accordance with Rule 99 is afforded against westward trains on Grays Harbor Branch.

84 (A). On freight trains approaching sidings, if everything is all right, the conductor will, if practicable, signal the engineman to proceed. This will be answered by 14 (b).

84 (B). Passenger conductors must get on the ground at all stops, including flag stops and blind sidings, and the conductor must give the proceed signal.

90 (R). Trains taking sidings to meet or let other trains pass at stations where two sidings are provided, must in all cases occupy the siding designated for trains moving in their direction, unless otherwise directed by train order.

Time-table shows stations where Eastward and Westward sidings are located. With the following exceptions Eastward siding is the one located farthest east, and Westward siding is the one located farthest west.

Exceptions:

Baker, Eastward siding is the one located farthest west, and Westward siding is the one located farthest east;

Meacham, Westward siding is the one located next to main track, known as No. 1 track, and Eastward siding is the second track from main track, known as No. 2 track;

Gibbon, Eastward siding is the one next to main track, known as No. 1 track, and Westward siding is second track from main track, known as No. 2 track.

When necessary to take siding at Hood River eastward passenger, mail and express trains will use cross-over from main track to siding.

93 (A). First class trains must move within yard limits at restricted speed.

93 (R). Yard limits are established, and defined by yard limit signs, at the following stations:

Huntington	The Dalles	Elgin	Biggs (Shaniko Branch only)
Durkee	Hood River	Pilot Rock	Aberdeen-
Encina	Albina (embracing territory from 200 feet east of east switch Graham to North		Cosmopolis
Baker	Portland Junction and to M. P. 10,		Montesano-South
Telocaset	Kenton Line, including East Portland,		Montesano
Union Jct.	Albina and Kenton).		South Elma
LaGrande	Troutdale (Kenton Line only)		Independence
Hilgard	Kamela	Heppner	Helsing Jct.
Kamela	Tacoma	Heppner Jet.	Olympia
Meacham	Argo	(Heppner)	East Olympia
Gibbon	Seattle	(Heppner only)	Wabash
Rieth-Pendleton	Joseph		Tono
Umatilla	Enterprise	Condon	
Arlington	Wallowa	Shaniko	

94 (A). When a train is delayed, trains following must be allowed to pass as promptly as possible, and the conductor and engineman of the delayed train will be held jointly responsible for delay resulting from failure to comply with these instructions.

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98 (B). Where a train is required to stop at a railroad crossing at grade not protected by interlocking or automatic crossing signals, and the view from either side is obstructed more than 200 feet, a member of the crew must precede the train and give proceed signal from the crossing, if safe to proceed, and the train must not proceed over the crossing until the proceed signal has been received.

98 (R). The Washington State Law governing movement of trains over railroad crossings at grade is as follows:

"Trains shall stop at railroad crossings:—All railroads and street railroads, operating in this State shall cause their trains and cars to come to a full stop at a distance not greater than five hundred (500) feet before crossing the tracks of another railroad crossing at grade, excepting at crossings where there are established signal towers and signal men, interlocking plants or gates."

After stop has been made for railroad crossings at grade engineer will sound proceed signal as per Rule 14 (b) before proceeding.

98 (S). JUNCTIONS AND RAILROAD CROSSINGS.

Location	Railroad Crossed, or, Junction With	Trains Which Have Precedence	How Governed
Pendleton.	Washington Division.		Westward movements from Washington Division between junction and depot is authorized by proceed indication of automatic block stop signal. When signal at junction switch indicates proceed trains and engines may proceed regardless of first-class trains. When signal at junction switch fails to indicate proceed for westward movement after junction switch is opened, in addition to complying with Rule 509(A), Oregon Division main track must not be occupied until protected in accordance with Rule 99 against westward Oregon Division trains.
Rieth.	Third Sub-division.		If a train is approaching on Third Subdivision main track, a train from Pilot Rock Branch will not open the switch to, nor obstruct, the Third Subdivision main track until the approaching train has stopped.
Umatilla. (M.P. 183.9)	Washington Division.		Oregon Division trains will stop clear of the junction switch connecting east leg of wye and Washington Division main track, until it has been ascertained whether all Washington Division trains due which are superior or of the same class have arrived or left. If a train is seen approach-

98 (S).—Continued.

Location	Railroad Crossed, or, Junction With	Trains Which Have Precedence	How Governed
Umatilla. (M.P. 183.9)	Washington Division.		ing in either direction on the Washington Division main track, switch must not be opened or Washington Division main track occupied until approaching train has stopped or passed.
Portland. (N.W. Front Ave.)	United Ry.	U. P. R. R.	All trains and engines must approach prepared to stop before passing over crossing, expecting to find crossing occupied.
East Portland.	S. P. and S. P. & S.		Interlocking.
East Portland. (S.E. Second Ave. and S. E. Hawthorne Blvd.)	P. E. P.	U. P. R. R.	All trains and engines stop before crossing.
East Portland. (S.E. Second Ave. between S.E. Salmon and S.E. Madison Sts.)	S. P. & S.	U. P. R. R.	All trains and engines stop before crossing.
East Portland. (S.E. Second Ave. and S.E. Morrison St.)	P. E. P.	U. P. R. R.	All trains and engines stop before crossing.
Albina. (N. Larrabee and N. Interstate Aves.)	P. E. P.	P. E. P.	All trains and engines stop before crossing.
Peninsula Jct.	Troutdale Line.		Interlocking.
North Portland Jct.	S. P. & S.		Interlocking.
Blakeslee Junction.	C.M.St.P.&P. -N. P.		Interlocking.
Helsing Junction.	C.M.St.P.&P.	U. P. R. R.	Automatic Block Signals.
Schafer Bros. Crossing.	Schafer Bros. Logging Ry.	U. P. R. R.	Cabin Interlocking.
South Aberdeen. (Donovan Mill)	N. P.	N. P.	All trains and engines stop before crossing.
Olympia. (Jefferson and 7th Sts.)	N. P.	U. P. R. R.	All trains and engines stop before crossing.
Tacoma. (11th St.)	City Ry.	U. P. R. R.	All trains and engines stop before crossing.
Tacoma. (St. Paul Ave.)	City Ry.	U. P. R. R.	All trains and engines stop before crossing.

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98 (S).—Continued.

Location	Railroad Crossed, or, Junction With	Trains Which Have Precedence	How Governed
Tacoma. (Fir Door Spur)	N. P.	N. P.	All trains and engines stop before crossing.
Tacoma. (Dempsey Mill Spur)	N. P.	N. P.	All trains and engines stop before crossing.
Tacoma Yard.	N. P.	N. P.	Cabin Interlocking.
Reservation.	N. P.		Interlocking.
Black River.	C.M.St.P.&P. -P. C.		Interlocking.
Argo.	N. P.-C. M. St. P. & P.-P. C.		Interlocking.
Seattle. (Spokane and 5th Aves.)	N. P.		All trains and engines stop before crossing.
Seattle. (East Marginal Way)	City Ry.		All trains and engines stop before crossing.
Seattle. (Spokane and Whatcom Aves.)	N. P.		All trains and engines stop before crossing.
Seattle. (Whatcom Ave. and Holgate St.)	N. P.		All trains and engines stop before crossing.
Seattle. (Whatcom Ave. and Massachusetts St.)	N. P.		All trains and engines stop before crossing.
Seattle. (Railroad Ave. and Atlantic St.)	N. P.		All trains and engines stop before crossing.

98 (T). All trains and engines must stop at stop boards and not proceed onto draw span of bridge between Montesano and South Montesano until they have called for, received and acknowledged proceed signal from bridge operator, and in addition must be governed by position of derail switch located 128 feet east and derail switch located 195 feet west of trestle leading to drawbridge. During certain hours each day drawbridge span will be left open for river traffic and derail switches will be set in derail position. If necessary for train or engine to use drawbridge during such hours, engineer will sound one long, one short and one long blasts of engine whistle to call bridge operator on duty, and if bridge operator does not respond promptly person in charge of train or engine will send a member of train or engine crew to bridge operator's house to notify him that bridge is to be used.

98 (U). All trains and engines must stop at stop boards and not proceed onto draw span of bridge at Tacoma until they have called for, received and acknowledged proceed signal from bridge tender.

99 (C). In complying with Rule 99, flagman unless sooner recalled must go back one mile from rear of his train, and when conditions require must go back sufficiently further to insure full protection. When flagman has reached a point one

rule or further from rear of his train, or when sooner recalled, he will place and leave two torpedoes on the rail and at night or when conditions require display lighted fuses in addition.

If recalled before reaching a point one-fourth mile from rear of his train, the flagman must day or night display a lighted red fusee, and when conditions require place and leave two torpedoes in addition.

If flagman sees or hears a train approaching, he must immediately place two torpedoes on the rail and go towards the approaching train, giving stop signals with red flag or red light, and at night or when weather conditions require, display a lighted red fusee in addition.

Flagman's Signals:

Day Signals —A red flag, not less than ten torpedoes, three red and three yellow fusees.

Night Signals—A red light, a white light, not less than ten torpedoes, three red and three yellow fusees.

99 (D). The duty of flagmen on passenger, freight and mixed trains is to enable prompt and immediate compliance with transportation rule 99, and other flagging rules. While train is in motion or is standing at points where flag protection is or may be required, this man must not be called upon to perform any other duties than the protection of his train in compliance with the rules unless specific arrangement is made in each instance with the conductor under which the conductor definitely states at that time that he or one of the brakemen will afford necessary protection of rear end of train. Within yard limits when unnecessary to protect or when clear of the main track on sidings, flagman may be called upon to perform duties the same as those of brakemen.

99 (R). When a train order is received reading, "All eastward (or westward) extra trains wait at..... until.....", the train addressed is relieved from protecting its rear end against following extra trains until the time named in the order.

On Oregon Division use of this train order is authorized only on all branch lines.

99 (S). Referring to Rules 99 and 99(A): Enginemen on passenger trains standing at passenger stations at Hood River and The Dalles will not whistle signal for flagman to protect rear of train, but when on the time of a following first-class train or otherwise required to flag, will call in flagman by whistle signal. When not on time of a following first-class train or otherwise not required to flag, passenger train conductors will recall flagmen by hand or lantern signal. These instructions do not in any way relieve conductors and flagmen of responsibility of protecting rear of train as required by Rules 93 and 99.

101 (C). Trains will be handled with caution where sand is blowing, when weather is foggy or stormy and at points where there is liability of track being obstructed, losing time if necessary to insure safety.

102 (B). If a train is parted or is doubling from any cause and the front portion passes any switch of a cross-over, siding or other route via which it would be possible for another train or engine to enter, it must not move against the current of traffic in returning to the rear portion, unless a flagman is protecting the return movement at any and all such switches, or unless the return movement has been authorized and protected by train dispatcher.

103 (B). Cars must not be handled ahead of engine between stations, except as follows:

When necessary to take cars to or from a spur;

On work trains.

When this is done, it must be for no greater distance than necessary and the movement must be at slow speed, with air brakes cut in and operative on cars ahead of the engine.

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 of engine in direction the engine is moving, on either yard or main tracks, except as follows:

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

Where the movement is over a crossing protected by a crossing watchman on duty. (See Rule 103(D).)

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103 (B).—Continued.

Where through movement is made:

- At La Grande, over Greenwood Street;
- Between Rieth and Pendleton;
- Between Albina and Northern Pacific Terminal Co., Portland;
- Between Albina and East Portland;
- Between Albina and North Portland or Kenton;
- Along Interstate Avenue to and from Larrabee Flats, Portland.

Employees are prohibited from riding on engines or cars as follows:

- On engine footboard between engine and cars when cars are being pushed or pulled, except when necessary to make out between engine and first car;
- On leading footboard while coupling engine to cars;
- On engine pilots;
- On deadwood, drawbars, brake beams, journal boxes, or brake wheels;
- On ends of cars containing loads which may shift.

103 (C). A trainman, when one available, must ride rear of tank of a road engine backing up without cars while switching at stations or moving in yard.

103 (D). When a road engine, with or without cars, is backing over a crossing at a station not protected by watchman or employe assigned as such, a member of the crew must precede the movement and act as crossing watchman and he must not get on rear of tank until it has passed over the crossing.

When a crossing watchman is on duty, trainman must not give signal for highway traffic to come ahead.

103 (R). At 15th St., Tacoma, all trains and engines must stop and a member of the crew must be sent ahead to act as crossing watchman.

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

104 (B). Spring switches are indicated by a letter "S" on switch target, and trains moving against the current of traffic must stop and examine switch points before passing over them.

After a train or engine has started through a spring switch, the switch must be set by hand for tracks over which movement is being made before a reverse movement is made, or before backing to take up slack.

104 (C). Roadway machines, such as ditchers, pile drivers, rail loaders, bridge derricks and the like, must not be dropped, either alone or with other cars, but must be shoved to a stop.

Cars of any kind must not be "poled" or "staked" by yard or road crews when it can be avoided.

104 (D). Relative to Transportation Department Rule 104(A) and Maintenance of Way Department Rule 104(E), on all cross-overs between a main track and any other track, both switches must be equipped with switch locks and they must be locked while trains are passing over them and must be left locked after they have been used.

104 (E). If a switch lock is missing or found to be defective a new one must be supplied.

104 (F). If a rigid split switch is run through it is thereafter unsafe and must be protected.

If an engine or a car is run partially through a split switch, the entire movement must be continued; to reverse would result in derailment.

Split switches damaged in this way must be spiked unless the section foreman is on hand and takes charge.

104 (R). Switches will be set normally:

- At Nordeen, for westward trains (spring switch);
- At Ross, for eastward trains (spring switch);
- At Meacham, Casey Mill track switch for spur;

- At Hinkle, junction switch, for line via Munley;
- At Umatilla, wye switch connection with Oregon Division main track for wye;
- At Messner, junction switch, for line via Munley;
- At Crates, for eastward trains (spring switch);
- At Troutdale, junction switch, for line via Graham;
- At Tacoma Jct., junction switch, for C. M. St. P. & P. track;
- At Reservation, junction switch, for U. P. R. R. main track;
- At Joseph, main track switch east leg of wye, for wye;
- At Joseph, switch at stem of wye, for east leg of wye;
- At Enterprise, west switch of cross-over between main track and house track, for house track;
- At Moro, for house track, which will be used as main track;
- At Aberdeen, double track switch (250 feet east of depot), for eastward trains;
- At South Monteano, wye switch on Monteano Branch, for east leg of wye;
- At Helsing Jct., junction switch, for U. P. R. R. main track.

105 (R). THE SPEED SHOWN BELOW MUST NOT BE EXCEEDED:

(The speed shown under heading of "Psgr." includes mail and express trains, and under heading of "Frt." includes mixed trains and light engines with or without cabooses. Freight engines used in passenger service on branches, must not exceed the speed specified for those engines in freight service.)

Location	Maximum Speed Miles per Hour		Remarks
	Psgr.	Frt.	
At any point.	60	40	
At any point.	60	40	With Mikado class engines with 63-inch drivers.
At any point.	45	40	With Mikado class engines with 57-inch drivers.
At any point.	50	40	with 2-10-2 class engines.
At any point.	40	40	With Consolidation class engines.
At any point.	50	40	With Simple Mallet engines.
At any point.	60	40	Simple Mallet 3900 class engines.
At any point.	40	40	With Mallet engines.
At any point.	35	35	Light engines.
At any point.	20	20	Engines backing up.
At any point.	30	30	Moving against current of traffic.
At any point.		25	Trains handling locomotive cranes, pile drivers, steam shovels, rotary snow plows, ditchers and steam derricks.
At any point.	50		Motor M-98.
At any point.		20	Trains handling logs unless cars are staked and wired in accordance with A. R. A. rules.
At any point.	Main Line.	30	Trains handling scale test car.
	Branch Lines.	25	

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105 (R). Continued.

Location	Maximum Speed Miles per Hour		Remarks
	Psgr.	Frt.	
At any point.	35		With C. M. St. P. & P. Class L engines.
At any point.	35		With C. M. St. P. & P. Class K 1 engines, equipped with swing motion trucks.
At any point.	25		With C. M. St. P. & P. Class K 1 engines, equipped with rigid trucks.
At any point.	35		With C. M. St. P. & P. freight engines with single trucks when handling or helping passenger trains.
Within yard limits: Main Line.	40	25	Speed must be as much slower as conditions may require.
Branch Lines: Joseph Branch.	30	15	
Heppner Branch.	30	15	
Condon Branch.	25	15	
Shaniko Branch.	30	15	
Grays Harbor Branch. Olympia Branch.	30 30	25 15	
Through trns bridges.		6	Trains handling logs unless cars are staked and wired in accordance with A. R. A. rules.
Using cross-overs or turn-outs.	15	15	
On sidings.	15	15	
Interlocking.	15	15	
Railroad crossings at grade.	15	15	
On 4 degree curves.	50	40	
On 5 and 6 degree curves.	40	30	
On 7 and 8 degree curves.	35	25	
On curves of 7 degrees and over.	25	20	With 2-10-2 class engines.
On 9 and 10 degree curves.	30	20	
Over spring switches.	15	15	When using turnouts.
Over spring switches.	20	20	When not using turnouts, but where switch points will be caused to oscillate under such movement.
Over spring switches.	20	20	When not using turnout, but when movement is over facing point switch.
Through cross-overs and turn-outs.		6	9000 class engines.

105 (R). Continued.

Location	Maximum Speed Miles per Hour		Remarks
	Psgr.	Frt.	
On wyes.		5	9000 class engines.
<b>First Subdivision.</b>			
Lime, high line track and connections.		10	Descending grade.
Leonard to Durkee.		25	
Pleasant Valley to Leonard.	40	20	
Pleasant Valley to Leonard.		15	Trains with all ore, wheat or gravel descending grade.
Between Pleasant Valley and Quartz.	50	25	Descending grade.
Baker.	15	15	Over street crossings within city limits.
Telocaset to Union Jct.	45	25	Descending grade.
<b>Second Subdivision.</b>			
Between Hilgard and Huron.	40	20	Descending grade.
Between Hilgard and Huron.		15	
Huron to Duncan.		25	Trains with all ore, wheat or gravel, descending grades.
Pendleton.	12	12	When retaining valves in use.
Pendleton.	20	20	Over Thompson, Main and Aura Sts.
			Over other street crossings within city limits.
<b>Third Subdivision.</b>			
Echo.	30	30	Over first road crossing east and west of depot.
Echo, mill spur and wool warehouse.		6	With Mallet and 2-10-2 engines.
Hermiston.	15	15	
Hermiston, on house track west of McNaught warehouse.		6	With Mallet and 2-10-2 engines.
Umatilla, wye.	10	10	
Umatilla.	25		Track No. 7.
Between Dillon and Umatilla, and between Hinkle and Messner, except on curve at Heppner Jct. depot.	65		
The Dalles.	12	12	Over street crossings.
<b>Fourth Subdivision.</b>			
The Dalles.	12	12	Over street crossings.
Between Eagle Creek and Mile Post 42.5.	40	25	Nos. 12 and 18, to permit exchange of mail.
Troutdale.	30		
Between Kenton and Troutdale.	45	35	
Tunnel between Peninsula Jct. and St. Johns Jct.	40	25	With helper on rear of train.
East Portland Hill.	20		
East Portland.		8	Entering East Portland Interlocking from S. E. Second Ave., No. 10 lead, S. P. Yard or back track.
East Portland.	8	8	Over frogs and crossings east end of Willamette River Bridge with 7000 class engines.
Between East Portland and Albina.	8	8	Curve at Globe Mill.

Continued on page 8.

Location	Maximum Speed Miles per Hour		Remarks
	Psgr.	Frnt.	
Portland.	10	10	Over street crossings.
Over crossings between Willamette River Bridge and Albina (including Knott Street).	12	12	
<b>Fifth Subdivision.</b>			
Over Slip Switch, Lucile Ave., Seattle.	10	10	7800 class engines.
On curves at Dearborn Viaduct, Seattle.	8	8	7800 class engines.
<b>Joseph Branch.</b>			
Between LaGrande and M.P. 25.	35	30	
Between M.P. 25 and M.P. 55.	30	25	
Between M.P. 55 and M.P. 72.	35	30	
Between M.P. 72 and Joseph.	30	25	
<b>Pilot Rock Branch.</b>			
At any point.	15	15	
<b>Heppner Branch.</b>			
At any point.	30	25	
Between M.P. 23 and Heppner Jct.	35	35	
<b>Condon Branch.</b>			
At any point.	25	25	
Between Speece and Mikkalo.		15	On descending grades.
Between Barnett and Rock Creek.		15	On descending grades.
<b>Shaniko Branch.</b>			
At any point.	30	25	
Between Shaniko and M.P. 39.	30	20	
Between M.P. 33 and Moro.	30	20	On descending grade.
Between Hay Canyon and Sandon.	30	20	On descending grade.
Between Wasco and Thornberry.	30	20	On descending grade.
Between Thornberry and Biggs.	20	10	On descending grade.
<b>Grays Harbor Branch.</b>			
At any point.	40	35	
Aberdeen.	20	20	Within city limits.
Aberdeen.	10	10	Over street crossings.
Cosmopolis.	20	15	Within city limits.
Cosmopolis.		8	With logs within city limits.
Blue Slough.		6	On rollways.
<b>Primo Branch.</b>			
Between Cosmopolis and M.P. 12.	25	15	
Between M.P. 12 and Primo.	10	10	
<b>Tono Branch.</b>			
At any point.	25	15	
<b>Olympia Branch.</b>			
At any point.	35	25	

Note.—Figure on stake at beginning of curve indicates degree of curvature.

520. Enginemen finding an approach signal (Figure 501B) in restrictive position must immediately reduce speed and be prepared to stop before reaching the next signal.

521. If an automatic block signal fails to show its most restrictive indication when a block is entered, a member of the crew must be left at the signal; the train dispatcher must be notified from the first available point of communication and report must be sent to the superintendent by wire. The employee left at the signal must stop and notify all trains moving in the direction governed by that signal and must remain there until relieved by an employe of the Signal Department or by instructions from the proper officer.

521 (A). If an automatic block signal fails to show its most restrictive indication when a light engine, or a motor train with only one trainman, enters a block, the train dispatcher must be notified from the first available point of communication, and report must be sent to the superintendent by wire.

672 (R). Interlocking, Schafer Bros. Crossing: Signal will automatically change from "stop" to "proceed" upon approach of train provided crossing is not occupied. Should signal fail to so change and crossing is not occupied, a member of the crew must examine derails and if found in non-derailing position, and no one in interlocking station, train may proceed through interlocking under flag protection at restricted speed.

672 (S). Interlocking station controlling movements of trains and engines between St. Johns Jct. and Peninsula Jct. is located at St. Johns Jct.

Within limits of interlocking before handling hand operated switches or electrically controlled switch at junction of Troutdale and North Portland lines, trainmen or enginemen must secure authority and instructions from operator at St. Johns Jct. by telephone. After using electrically controlled switch it must be restored to position in which it was found and operator at St. Johns Jct. so advised by telephone.

When, after calling for a route, an interlocking signal fails to indicate proceed and it is necessary for train or engine to stop, operator at St. Johns Jct. must be immediately notified by telephone; if he is then unable to clear signal due to interlocking failure or other cause, he must communicate with dispatcher who may authorize train or engine to proceed under flag protection through that portion of interlocking known to be obstructed or out of order. When such authority to flag has been secured train or engine must not enter such portion of interlocking until flagman has passed through same and has notified operator at St. Johns Jct. that there is no visible obstruction to prevent movement of trains or engines. Operator at St. Johns Jct. may then authorize train or engine to proceed at restricted speed. Flagman before reporting track apparently clear for use by train or engine must examine all switches and derails within limits of portion of interlocking through which it is necessary to flag.

673 (R). To indicate the route to be used through interlockings, the following engine and motor whistle signals will be used: (The signals prescribed are illustrated by "o" for short sounds; "—" for long sounds.)

- At East Portland:
  - For Portland..... ———
  - For Albina..... ——— o
  - For Graham..... ——— o
  - 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 and engines approach and pass whistling posts and microphones located approximately one-half mile in advance of home interlocking signals on North Portland Jct. line and Troutdale line, enginemen will sound whistle signals as follows:

D-151 (R). Within yard limits at Kamela trains and engines must keep to the right, except that they may move against the current of traffic, without being preceded by a flagman, when not on the time of a first-class train.

Within yard limits at The Dalles, trains and engines must keep to the right, except that they may move against the current of traffic between tie plant switch at east end of yard and Signal 838 approximately 300 feet west of cross-over west of passenger station, without being preceded by a flagman, when not on the time of a first-class train.

On parallel tracks between Portland and East Portland or Harding St., trains and engines must keep to the right, except that yard engines may move against the current of traffic without being preceded by a flagman, when not on the time of a first-class train.

Within yard limits at Argo-Seattle, trains and engines must keep to the right.

201 (R). Unless otherwise directed, between Troutdale and Portland or Albina all freight trains will run via Kenton and all passenger and mixed trains will run via Graham.

204 (B). The rear trainman must be provided with copies of train orders and clearance cards.

208 (B). When a train's superiority is restricted at the point it is to receive the order, it will not be made complete to either train until the operator has placed two torpedoes on the rail not less than 500 feet from the train order signal in the direction of the approaching train and dispatcher has assurance that this has been done. In addition, as train approaches operator will go toward it, giving stop signals with red flag or red light.

209 (B). Operators receiving train orders are not permitted to typewrite them.

509AA. Rule 509 (A) is modified by elimination of requirement that when a train is stopped by Stop-signal (Figure 501A) train must secure authority to proceed from the dispatcher; instead, flagman will be sent ahead immediately, train wait five minutes and then proceed following flagman to next signal displaying proceed indication.

509 (D). When a train is stopped by a stop-and-proceed block signal (Figure 501AA,) two long sounds of the engine whistle signal 14(b) must be given before the train proceeds.

509 (E). On single track, when a light engine, or a motor train with only one trainman, is stopped by a block signal under conditions making it necessary to send a flagman ahead to comply with Rules 509(A) and 509AA, after placing two torpedoes immediately at the rear of train, it may proceed at restricted speed, without sending a flagman ahead.

509 (F). When a train is stopped by a block signal at a meeting or passing point on single track under conditions making it necessary to send a flagman ahead to comply with Rules 509(A) and 509AA if the engineman of the train which is stopped is verbally informed by a trainman of the train on the siding that his train has more cars than the siding will hold, the train which is to use the main track may proceed at restricted speed, without sending flagman ahead.

509 (G). Where a train has been stopped by a stop-and-proceed signal and is proceeding at restricted speed, train and enginemen in addition to looking out for obstruction, train in the block, etc., should watch rock protection fence and if plug is found pulled with no obstruction on the track, should if possible replace the plug and make report at the first open telegraph office.

509 (R). Junction switch at Troutdale is electrically controlled from the depot by the operator. Upper arm of Stop Signal located just east of junction switch governs westward movement on The Dalles-Portland line and lower arm governs westward movement from The Dalles-Portland line to Kenton line. Clear indication of Stop Signal located just west of junction switch will authorize eastward trains from Kenton line to proceed to telegraph office without protecting against first and second class and extra trains.

Sanders on engines must be kept closed while passing over this switch.

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673 (R).—Continued.

- 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

701 (A). Each employe governed by Hours of Service Law must notify superior officer of the time the law requires him to be off duty early enough that he may be relieved, if necessary, before exceeding the hours of service permitted by law.

701 (R). Allowance for empty and underloaded cars as indicated below must be reported as required by Instruction 24 on Form 1216, "Conductor's Car and Tonnage Report".

	For each empty or loaded car weighing less than 40,000 pounds (including light weight of car)	For each empty or loaded car weighing between 40,000 and 50,000 pounds (including light weight of car)
Huntington and Rieth	3000 lbs.	
Umatilla to Hinkle	3000 "	
Bonneville to Cascade Locks	3000 "	
East Portland to Graham	3000 "	
Vader to Napavine	3000 "	
Centralia to Napavine	3000 "	
Rondowa to Joseph	3000 "	
Rondowa to Elgin	3000 "	
Rieth and Pilot Rock	3000 "	
Arlington to Condon	3000 "	
Biggs to Shaniko	3000 "	
Primo to Cosmopolis	3000 "	
Hoquiam to Cosmopolis	3000 "	
All other	6000 "	3000 lbs.

711 (R). Passengers may be carried on freight trains between stations at which the trains stop, as follows:

- Persons in charge of live stock or other freight when provided with proper transportation.
- Employes with trip passes when traveling on company business.
- Passengers with revenue tickets when presented for passage on:

Trains Between Stations  
313-314 Bend Branch.

Passengers must not be loaded on freight trains until work is completed and train is ready to leave.

Agents and conductors must notify passengers that local freight or mixed trains will stop with caboose opposite platform for them to get on or off.

**728 (A).** Transportation Rule 728 is modified as follows: The red flag by day, and in addition the red light at night, will be placed twenty (20) rail lengths distant from the point of obstruction instead of fifty (50) rail lengths. The flagman will be located with the yellow signals, one mile distant beyond the red signals. On the approach of a train the flagman will display the yellow signals, which must be acknowledged by the engineman in accordance with Rule 14(g). In territory prescribed by the superintendent, the yellow signals will be placed as prescribed and the flagman will not be required except during fog, storms or otherwise bad weather.

**801 (A).** Jordan spreaders, or other spreaders of that class, when handled in freight trains, must be headed in the direction train is moving. When handled in work train service, the wings must be thoroughly secured.  
Work trains unloading ballast in double track, must stop when a train is passing on the opposite track.

**801 (B).** Employes must inform themselves as to the location of all structures or obstructions where clearances are close, and must exercise care to avoid injury therefrom to themselves or others.

**801 (R).** Employes must look out for overhead trolley wires with close clearance at the following points:

Station	Location	
Portland.	N.W. Front Ave.	United Railways.
East Portland.	S.E. Second Ave. and S.E. Morrison St.	P. E. P. Co.
East Portland.	S.E. Second Ave. and S.E. Hawthorne Blvd.	P. E. P. Co.
Albina.	N. Larrabee Ave.	P. E. P. Co.
Albina.	N. Interstate Ave.	P. E. P. Co.
Albina.	N. Greeley Ave.	P. E. P. Co.
Tacoma.	Lead to U. P. R. R. Dock.	Tacoma Ry. & Power Co.
Tacoma.	End of Lincoln Ave., at connection between U. P., N. P. and Municipal Ry.	Tacoma Ry. & Power Co.
Black River Jct.		C. M. St. P. & P. R. R.
Argo.	Lucile St. overhead bridge.	C. M. St. P. & P. R. R.
Argo.	Argo yard lead.	C. M. St. P. & P. R. R.
Argo.	East Marginal Way.	C. M. St. P. & P. R. R.
Seattle.	Seattle Boulevard overhead bridge just east of Seattle passenger station.	C. M. St. P. & P. R. R.
Seattle.	Jackson St. overhead bridge just west of Seattle passenger station.	C. M. St. P. & P. R. R.

**801 (S).** Trainmen must not ride on the side of cars or engines while moving in trains on Shaniko Branch as there are a number of places on this branch where clearance is impaired by narrow cuts.

**801 (T).** At Olympia there is insufficient clearance between Northern Pacific connection scale track and main track. Therefore trains or engines should not attempt to pass on main track if trains or engines are moving on connection.

**801 (U).** At Aberdeen there is insufficient clearance between coach track No. 1 just east of passenger station and main track at turnout. Therefore trains and engines should not attempt to pass on main track if trains or engines are moving on coach track No. 1.

**802 (A).** Cars must not be left on, nor foul of, what are known as "Lead Tracks" in the various yards when it can be avoided. When it is necessary to do so, the yardmaster, agent, or operator, must be immediately advised and he will notify trains entering or leaving the yard. This does not relieve trainmen, yardmen, or

enginemen, from proper observance of yard rules, and they will be held strictly accountable for yard accidents on lead tracks, as well as on any other track in yard, whether such notice is received or not.

**802 (R).** When storing cars at stations or on sidings, all cars except flat cars and cars of all steel construction, must be separated into cuts of 10 cars each 100 feet apart and must not be placed alongside of warehouses or other wooden buildings when it can be avoided.

Cars spotted on tracks other than warehouse tracks must clear street line of public crossings not less than 100 feet. If possible when a train is parted to clear a public crossing or is standing near such crossing, a clear space of 100 feet will be left on each side of crossing.

At following points cars on house tracks must be left to clear crossings not less than 100 feet:

Lime  
Mission  
Nolin  
Stanfield  
Cosmopolis

**805 (A).** Snow plows must not be operated through drifts when trains are seen approaching or are passing on an adjacent track. Flangers must be raised when passing over bridges, highway crossings, railroad crossings, frogs and switches, and through interlocking limits.

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

**805 (B).** Dead engines, disabled engines, or engines with one or more rods taken down must not be hauled in fast freight trains when it is possible to avoid it. With side rods or main rods down a speed of fifteen miles an hour must not be exceeded.

With side rods and main rods in place, the maximum speed may be increased to twenty-five miles an hour, unless otherwise restricted.

Geared engines of the Shay, Climax, Heisler and similar types, when not in gear, may be handled at whatever speed is permitted for freight trains over the district upon which being handled, unless waybill specifies a lower speed, or attendant in charge requests in writing a lower speed.

**805 (C).** Conductors must notify enginemen of the presence and location in the train of cars containing explosives and of loaded placarded tank cars before leaving the initial station or station where such cars are picked up.

Between points where separate trains are operated for freight service only, cars containing explosives must not be handled in a train that carries passengers. (BE 676.)

Between points where only mixed train service is operated, or where passengers are carried in the caboose of a freight train, a car containing a freight shipment of explosives, or a tank car placarded "Inflammable" may (unless otherwise instructed) be hauled, but such car must not be placed next to a car carrying passengers. (BE 676.)

Cars placarded "Explosives" must be placed in through freight trains near the middle of the train and must be not nearer than the 16th car from the engine, electric locomotive, or motor car, nor the 11th car from the caboose, or other cars carrying passengers, if the length of the train will permit. (BE 677-a.)

Cars placarded "Explosives" may be placed in local freight, local pick-up, and local set-out trains not nearer than the second car from the engine, electric locomotive, motor car, caboose or other cars carrying passengers, when placing them near the middle of the train would require additional switching at way stations. (BE 677-b.)

Cars placarded "Explosives" must have hand and air brakes in service and must not be placed next to cars placarded "Inflammable" or "Corrosive Liquid", nor next to empty or loaded tank cars, wooden frame flat or gondola cars, nor next to carloads of pipe, lumber, poles, iron, steel, or similar articles liable to shift and break through end of placarded car; nor next to cars containing lighted heaters, stoves or lanterns, or occupied by attendants. (BE 676-677c-677d.)

Placarded tank cars must not be placed in trains next to cars placarded "Explosives" nor next to cars containing lighted heaters, stoves or lanterns, nor next to gondola or flat cars with lading such as logs, lumber, rails or pipe that is likely to shift, and when practicable must be placed not nearer than the sixth car from

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Continued on page 11

**805 (C).**—Continued.

the engine, electric locomotive, motor car, caboose, or other cars carrying passengers. (BE 677-e.)

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 "Inflammable" placards removed or replaced by "Dangerous Empty" placards.

When placards become detached in transit, conductor must see that they are replaced upon arrival at the next terminal, if in through trains, or at first station stop if in local freight trains. (BE 675.)

BE numbers shown above refer to correspondingly numbered regulations of the Bureau of Explosives, Interstate Commerce Commission.

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

- Drover cars, occupied or unoccupied;
- Scale test cars;
- Cars with emergency drawbars;
- Outfit cars;
- Emigrant movables (except steel underframe cars may be placed near head end when so requested by attendant in charge);
- All wooden underframe cars;
- Any car tagged with Form 4725 reading, "Handle only at rear end of train".

Trains containing 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.

When a helper engine is used it must be cut in ahead of drover cars. (See Special Rules, 805-E, 805-R, 805-S.)

Switching must not be done with drover cars, except in handling to or from trains.

Live stock must be hauled in head end of train when practicable, and stock cars loaded with scrap, boards, engine wood, long rods, bolts, or any commodity which might work out of openings in sides or ends of car, must not be moved until these openings are properly slatted.

Freight cars with bad order draw bars may be handled in trains under the following conditions:

- (a) When not containing live stock or perishable, may be chained up in train and handled to first available side track where must be set out to be repaired;
- (b) When containing live stock or perishables, may be chained up in train and handled to first repair point;
- (c) When containing any commodity or empty, may be handled behind the caboose to destination or to first terminal, provided the good draw bar can be coupled to the caboose and in addition is secured by chain, and has air and hand brakes operative. On ascending grades a trainman must ride the car.

**805 (E).** When not used on head end of train, helper engine must be cut in ahead of caboose, and when there are wooden underframe cars or drover cars on the rear end, the helper engine must be cut in ahead of them.

**805 (R).** Helper engine on passenger train will be coupled ahead of train engine. Handling helper engines on freight trains, two Mikado or one 2-10-2 class engine will be handled as one Mallet; and one Consolidation class engine the same as one Mikado engine.

Helper engine on freight train between Duncan and La Grande, Durkee and Baker and Union Jet, and North Powder must be cut in on rear of train as close ahead of caboose as conditions permit but always ahead of outfit cars and cars carded "Handle on Rear", except that from North Powder to Telocaset helper engine may be placed ahead of engine or cut into head end of train.

Cars picked up on road which conductor considers weak must be handled the same as though carded "Handle on Rear."

Whenever three engines are used on freight train, the second Mallet must be cut in just ahead of tonnage rating of third engine, and third engine placed ahead of caboose or ahead of outfit car or cars carded "Handle on Rear," except that when one of the three engines is a Mikado class engine, it must be used as rear engine.

**805 (S).** Engines equipped with pilot plow which requires extension of draw bar, must not be used as helpers unless placed at head end of train.

**806 (A).** Before occupied outfit cars or drover cars are coupled into, the occupants must be notified.

**811 (A).** The use of alcohol or oil lamps or other heating devices not a part of car equipment, by passengers or employes in passenger train cars, is strictly prohibited under all circumstances.

**812 (A).** When a break-in-two occurs, after the train is again together and ready to move, trainmen must make inspection as the train pulls by them, looking for possible draft rigging and coupler defects and at first stop they should carefully inspect entire train.

**812 (B).** Trains setting out cars account hot box will remove packing from box which was running hot. Brasses and oil soaked waste removed from cars on road must be retained and exchanged for new, leaving old waste in bucket, and brasses on caboose platform.

**812 (C).** When necessary to remove keys from brake heads, or when working on brake rigging, cut-out cock in branch pipe must be closed and reservoirs bled. Where cut-out cock is located in cylinder pipe, the latter only need be closed. All keys must be replaced before brakes are cut in, to avoid personal injury.

**812 (D).** Conductors must report by wire to superintendent and trainmaster, from first open telegraph office where train stops, cases of brakes sticking, giving car numbers and initials.

**812 (E).** White bands painted on telegraph or signal line poles indicate car length distance from switch of siding as follows: One band, 45 cars; two bands, 60 cars; three bands, 75 cars; four bands, 100 cars.

**812 (R).** In addition to making inspection of train as often as practicable as per Transportation Rule 812 and Air Brake Rule 1059(A), all freight trains must stop and be given walking inspection by train crews at the following points:

Wyeth, Farley, Cascade Locks or Bonneville—Eastward and Westward;  
Arlington —Eastward and Westward;  
Castle Rock —Eastward;  
Rocky Point —Westward.

Inspection of eastbound trains may be made at Dodson when train stops there for some other purpose.

**818 (A).** Enginemen on passenger and freight trains, when making maximum speed, must make application of air brakes approaching curves and on heavy curves keep brakes applied sufficient length of time around curve to steady train.

This is modified to the extent that on passenger trains, in order to avoid surging or rough riding of cars on curves, where operating conditions will permit, speed of train will be controlled so that brakes will be released while train is passing around curves, and where conditions will permit, the train should be pulled around curves with brakes released.

**853 (A).** Stockmen must be given an opportunity to board cabooses and drover cars without necessity of doing so while trains are in motion.

**854 (A).** In freight train service, head brakeman is not permitted to ride in caboose regardless of number of cars in train. This does not apply to mixed trains.

**854 (B).** Train and engine men must not wash up or change clothes while on duty going into terminals. They must be ready to handle any emergency which might arise, and washing up and changing clothes must not be started until after the train has been tied up or they are relieved from duty.

**854 (R).** On trains moving over Willamette River bridge, between Portland and East Portland, trainmen should be on rear platform of rear car of train.

On trains 17 and 18 flagman must always be stationed on rear car next ahead of observation car while in motion, and he will get on and off rear end of such car when practicable.

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873 (A). Trainmen must use every effort to keep unauthorized persons off their trains, and when unable to do so peaceably, chief dispatcher must be notified by wire so that officers may be called to assist.

881 (A). When passenger train cannot be properly heated, wire report thereof must be made to superintendent.

During snow storm or extremely cold weather, engine must not be detached from passenger train if it can be avoided; if it becomes necessary to do so, or if train is separated for any reason, trainmen and enginemen must exercise care, drain steam line and disconnect steam hose between cars, if necessary, to prevent freezing.

Engine or detached portions of train must be recoupled and steam line again connected as quickly as possible to avoid discomfort to passengers.

882 (A). Gate at front end of first coach next to baggage or mail cars must be closed at all times in order to prevent possibility of personal injury to passengers, account buffers between these two cars not being protected by curtains.

When occupied passenger equipment is standing uncoupled, open ends of cars must be protected by closed gates. Also, rear gate must be closed on moving trains.

The vestibule curtains must be drawn across the diaphragms on deadhead and active passenger equipment while being handled in passenger, mail and express trains.

882 (B). As a precaution against personal injuries to passengers, trainmen will use the words "Please Watch Your Step", when passengers are boarding or alighting from train.

920 (A). Enginemen must see that engine is supplied with 12 torpedoes and not less than 3 red fuses.

922 (A). Employes must not go out on exterior of cab of, nor hang out from gangway or steps of, a moving engine for any purpose. When this is necessary, the engine must be stopped.

923 (A). Due to the extremely high temperature developed in cylinders, superheated engines cannot be drifted with tightly closed throttle without serious damage to lubrication, cylinder packing, rod packing, building up carbon deposits, and seriously injuring the service of the engine. It is therefore necessary to keep a certain amount of steam in the cylinders of superheated engines while they are moving.

The following rules must be observed on all superheated engines:  
On all drifting grades the main throttle of all engines must be partly opened or cracked a sufficient amount to prevent a vacuum in the cylinders. Mallet engines when descending heavy grades may be drifted with closed throttle after moving a sufficient distance with the drifting throttle to permit cylinders to cool below the flash point of the oil.

In approaching a stop, a small amount of steam should also be worked through the cylinders. The throttle should never be entirely closed but the pressure gradually reduced with the throttle until freight engines are down to approximately 4 miles an hour when throttle should be closed. On engines in passenger train service, the throttle may be closed approximately one train length before the stop when this is necessary in order to make a satisfactory stop. However, it is permissible when conditions are favorable, such as working slowly to a stop up heavy grades, to work steam to an entire stop.

While drifting, the reverse lever should be in the highest cut-off consistent with proper cushioning of the moving parts.

On engines approaching or stopping at passenger stations and working a light throttle, the reverse lever should be moved towards the corner sufficiently so that the engine will drift smoothly and without pounding in the rods and boxes; the drifting pressure can be controlled in this way with the reverse lever as well as with throttle. These rules do not apply to emergency stops.

Mallet engines must not be cut into simple except to assist in starting train.

929 (A). Enginemen on freight engines which are equipped with smoke deflectors, must test deflectors before entering tunnels and if it is found they are inoperative by air pressure, train must be stopped, and deflectors raised by hand. Such cases of inoperative deflectors must be reported to superintendent and master mechanic by wire from first open telegraph office at which stop is made, and in addition thereto, must be reported on arrival at terminal.

929 (R). Respirators are furnished for use of engine men and trainmen in passing through tunnels on the Fourth and Fifth Subdivisions. They must know that respirators are in good order. They will be held responsible for proper care and use of respirators and must report to proper officer any that are not in good order.

932 (R). 700 class and heavier engines must not go on the following tracks:

Baker —Sand spur;  
Elgin —Reed Lbr. Co. runaround track;  
Graham —Poole & McGonigle easterly track;  
Montavilla Ice & Coal Co. track;  
Near M.P. 4 —Wet Wash Laundry Co. spur;  
Bruun —Doernbecher Mfg. Co. middle spur, rear end;  
Kenton —Schlesser Bros. spur.

At Biggs, 700 class engines turning on wye will use switch on Shaniko Branch line and east leg of wye as trailing point and must not head in through this switch.

1743 class and heavier engines must not go on the following tracks:  
Meacham —Casey Mill spur west of loading platform;  
Pendleton —Collins spur;  
Walters spur;  
Mill spur.

2100 class and heavier engines must not go on the following tracks:

Baker —Davis Lbr. Co. spur;  
La Grande —Bowman Hicks Lbr. Co. mill pond track;  
Hermiston —Standard Oil spur;  
Union Oil spur;  
Biggs —Wye track;  
Celilo —Taft spur;  
Dillon —Spur;  
The Dalles —Track No. 9;  
Crossover between spurs at freight house;  
Crossover between lead and laundry spur;  
Old roundhouse spur;

East Portland —Both wye tracks;  
Curve on back track;  
Lead to S.E. Second Avenue;  
Globe Mill tracks;  
Albina —Coach tracks 5 and 6, west turnouts;  
Store lead;  
Old Rip track 2 east of track crossing;  
Old Rip tracks 3, 4, 5, 6, 7 and 8;  
Edlefsen Fuel Co. tracks;  
N. River Ave. track;  
Montgomery Dock track;  
Pacific Coast Elevator track;  
Portland Flouring Mills spurs 1, 2, 3 and Jocko;  
Gravel pit spur;

St. Johns —All sidings and spurs;  
Kenton —All spurs;  
West end of team track;

North Portland —All sidings and spurs;  
Tacoma —All tracks west from main line past gas plant toward Carstens Packing Plant and Glacier Dock, except that 2100 class engine may be used to handle stock to and from Carstens Stock Yards;  
Argo —South end of No. 1 pocket track;  
South end lower No. 11 track;  
Tracks 12 and 13;  
Crossover between No. 6 lead and outbound lead;  
Loop track;  
Coach yard tracks;  
Rip tracks;  
101 track;

Joseph Branch —All tracks;  
Heppner Branch —All tracks, except 2100-5400 and Mallet class engines may go on all tracks within yard limits on Heppner Branch at Heppner Jet.;

Condon Branch —All tracks, except 2100 and 5400 class engines may go to coal chute at Arlington but will not put engines over switch to coal track;

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Continued on page 13.

932 (R).—Continued.

Shaniko Branch —All tracks;  
Cosmopolis —Wye tracks;  
Anderson & Middleton log rollway;  
Bay City Mill tracks;  
South Aberdeen Belt Line;  
Primo Branch —All tracks;  
Montesano —Schafer Bros. mill tracks;  
Ballast —Pit tracks;  
Tono —From road crossing at station east;  
Olympia Branch —All tracks;  
Pilot Rock Branch —All tracks.

5400 class and heavier engines must not go on following tracks:

Baker —Sand spur;  
Texaco Oil spur;  
W. H. Ellis spur;  
Bakery Grocery spur;  
La Grande —Mt. Emily Lbr. Co. two mill spurs;  
Wye track, except in emergency when movement must be very slow over east leg of wye, account sharp curvature;  
Duncan —Wye track;  
Pendleton —All side tracks except Nos. 1, 2, 4, 6, house track and short coach track;  
Umatilla —Gravel pit spur west of main line tracks running into Jones-Scott spur;  
Castle —Stock track;  
Willows —House track;  
Arlington —Standard Oil spur;  
Hook —House track;  
The Dalles —Runaround track at turntable;  
Turnout to track leading to roundhouse stall No. 1;

Grays Harbor Branch —All tracks;  
Tono Branch —All tracks.

7000 class engines must not go on the following tracks:

Huntington —Wye;  
Lime —High line;  
Durkee —House track;  
Pleasant Valley —Coal track; wye;  
Haines —West end of stock track;  
Telocaset —Wye;  
La Grande —400 feet of west end engine track No. 3;  
Freight house track;  
Kamela —Ash pit tracks;  
Meacham —Casey Mill spur;  
Duncan —Wye; house tracks 1 and 2;  
Pendleton —All side tracks except Nos. 1, 2, 4 and 6; house track and short coach track;  
Umatilla —Jones-Scott spur; Sand and Gravel spur;  
Arlington —Coal dock;  
Biggs —Wye;  
Celilo —Spur;  
Dillon —Spur;  
The Dalles —Runaround track . . . turn table;  
Roundhouse track leading to Stall 1;  
Libby-McNeil Dryfresh tracks;  
Crossover at freight house;

Hood River —Quarry spur;  
Bridal Veil —East Portland to Clarnie;  
All spurs —Albina except main leads and main yard tracks and engine house leads;  
All tracks —At Kenton and St. Johns.

When 7800 class engines are used in passenger service out of Portland, they must be headed east out of Albina and backed into Portland from East Portland. On movement from Portland to Albina, these engines will back up to East Portland and towards Sullivans Gulch, then head to Albina. These engines must not be put around north leg of wye at East Portland.

9000 class engines must not go on the following tracks, and when necessary to switch on these tracks with this class of engine, sufficient number of cars should be handled next to engine so that engine will not move over turnout to these tracks.

932 (R).—Continued.

Huntington —Track No. 217 (crossover between old and new yard);  
Track No. 213 (caboose lead track);  
Track No. 11 (main engine lead to turntable);  
Wye and stock tracks;  
Tracks No. 2—generally called No. 9 track through yard can be used but engine must not exceed speed of 5 miles per hour.

#### AIR BRAKES.

1014 (R). Engines in freight or mixed train service will carry 90 pounds brake pipe pressure on descending grades between Rieth and La Grande and between Encina and Huntington.

Passenger, freight and mixed trains will carry 90 pounds brake pipe pressure on Shaniko and Condon Branches and passenger and mixed trains will carry 90 pounds brake pipe pressure on Bend Branch.

1044 (R). Road train brake test as prescribed in Rule 1044(A) of Operating Rules governing Air Brakes effective December 1, 1925, must be made on all freight trains before descending grade between Encina and Leonard, Encina and Baker, Telocaset and Lun, Telocaset and Union Jet., Kamela and Hilgard, and between Kamela and Duncan, and this test will also be made at intermediate points on these grades by single engine trains ascending the grade and by all trains descending grade, whenever engine is changed, cars picked up or set out, air hose parted, angle cock turned, or train has been standing for 30 minutes or more.

This test will also be made on all freight and mixed trains before descending grade on Condon Branch between Barnett and Rock Creek and on Shaniko Branch between Biggs and Klondike, and this test will 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 train has been standing for 30 minutes or more.

1048 (B). On freight and passenger trains when undesired quick or emergency action of brakes has occurred on service reduction, thereafter, before starting service reductions, enginemen will place brake valves in release position for two seconds then in running position for one second then in service position for the reduction. This to insure all triple valves being in release position at the time service reduction starts thereby tending to avoid quick action of the brakes when making service reduction.

1050 (G). Locomotive and tender brakes on engines helping or pushing trains will be operated in conjunction with the train brake.

1051 (R). Running test as prescribed in Rules 1051 and 1051(A) of Operating Rules governing Air Brakes effective December 1, 1925, will be made before descending grades as follows:

First Subdivision, eastward and westward trains at Encina and Telocaset;  
Second Subdivision, eastward and westward trains at Kamela;  
Fourth Subdivision, westward trains at Mile Post 6 east of Graham;  
Condon Branch, westward trains at Speece, Mikkalo and Shutler;  
Shaniko Branch, westward trains at Kent, Mile Post 34, Klondike and Wasco, and eastward trains at Sandon and Mile Post 35;  
Bend Branch, westward trains at Mile Post 100.

1057 (R). A trainman must be stationed on rear of train with hand on air valve of tail hose ready to apply emergency brake if it becomes necessary at the following points:

Between Montesano and South Montesano—on passenger trains backing up.  
Between Portland and East Portland—on passenger trains backing up.

1059 (R). Westward freight and mixed trains must stop and trainmen will inspect and adjust piston travel at Barnett, Grass Valley, Thornberry and Madras.

1060 (B). Trainmen must know condition of hand brakes on freight cars that have air brakes cut out.

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1063 (B). That portion of Rule 1063(A) of "Operating Rules and Instructions Governing Air Brakes", reading as follows:

"If the train has not more than 8 cars, release brakes so they will be about off when the stop is completed, this being called 'pre-release'. With longer trains hold the brakes applied until stopped."

is modified as follows:

"If the train has not more than 12 cars and stop is being made except on a downward grade of 1% or more, the brakes should be released so that they will be about off when the stop is completed, this being called 'pre-release'. With longer trains hold the brakes applied until stopped."

1064 (B). Rule 1064(A) of "Operating Rules and Instructions Governing Air Brakes" is amended as follows:

"After release of brakes, do not try to start train until ample time has been allowed for all brakes to release.

"Keep engine at very slow and uniform speed for three car lengths, as less distance may not have started entire train; except in starting on heavy descending grades move engine forward one or two feet and then by use of engine brakes stop the engine a sufficient length of time for slack to run gently and start entire train. If first movement fails to run slack sufficiently to start entire train, repeat this movement until entire train is started."

1066 (B). Freight trains consisting of more than twenty-five cars will cut off engine to take fuel, water or sand when stop must be made on descending grade, or where there is more than one engine on the train. Trains under similar conditions will also cut off way cars before making spot.

1077 (R). Retaining valves will be used on descending grades as follows:

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

Freight trains descending grades between Encina and Leonard, 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 engine-man finds it difficult to hold 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 Junction, 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. Responsibility for the use of retaining valves rests primarily with the engineman and he will direct as to their use. However, retaining valves must be used if in the judgment of conductor their use is necessary. 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 will be used.

Retaining valves used shall be consecutively from head end of train.

At Union Jct. and Hilgard freight trains must reduce speed, and stop if necessary, to enable trainmen to handle retaining valves.

Condon Branch, on all trains Mile Post 35 to Mikkalo, Barnett to Rock Creek and Mile Post 2 to Arlington, all retaining valves to be used.

Shaniko Branch, on passenger trains Thornberry to Biggs, and on freight or mixed trains Mile Post 33 to Moro, Klondike to Biggs and Sandon to Hay Canyon, all retaining valves to be used.

On Bend Branch, freight and mixed trains on descending grades between M.P. 100 and South Jct. trains averaging not to exceed 50 gross tons per car may be handled without use of retaining valves. Responsibility for use of retaining valves rests primarily with engineman and he will direct as to their use. However, retaining valves must be used, if in the judgment of the conductor, their use is necessary. 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, trainmen will patrol top of train where retainers are used.

1079 (R). In addition to making inspection of train as often as practicable as per Rule 812, freight trains must stop and remain standing ten minutes to allow wheels to cool at the following points:

Hindman—Eastward;  
Leonard—Eastward;  
Glover—Eastward;  
Meacham—Westward;  
Huron—Westward.

302 (J). Trains entering automatic train control territory at Troutdale failing to receive green or red indication after passing off of cut-in circuit will pull down on the cut-out switch for thirty seconds and observe if black hand on duplex gauge starts downward. If cab indicator does not show a red indication or black hand on duplex gauge does not start downward when cut-out switch is down, automatic train control equipment on engine is inoperative and should be cut out. Train control must not be cut out until after consulting with train dispatcher.

302 (K). An engineman of a train entering a block as provided for by these rules, will be held responsible in case of accident caused by overtaking a preceding train. This does not relieve enginemen and trainmen from protecting their trains as required by the rules.

302 (L). When engines are double-headed in train control territory between The Dalles, Portland and Albina, non-train control engine must be placed behind the train control engine.

302 (M). If the cab indicator does not show a red indication upon passing the "B" point of an automatic block stop signal displaying "stop" or upon passing a stop or approach block signal displaying a restrictive indication, engineman must promptly report the fact to the train dispatcher from the first point of communication giving signal and engine number.

302 (N). Automatic train control equipment on an engine is locked or sealed in cut-in position. In case train control equipment of the engine fails, or track circuits become inoperative, pneumatic portion may be cut out. This will not be done until advising with train dispatcher.

At the first available telephone booth or telegraph office, engineman will consult with dispatcher to ascertain if dispatcher has knowledge as to trouble with train control circuit or track being blocked and if dispatcher has no knowledge as to track being blocked train may continue from that point at normal speed, being governed by automatic block signals.

If after proceeding, cab indicator for a distance of five miles displays green indication continuously, engineman will cut in pneumatic equipment.

302 (O). When train dispatcher has knowledge that train control power has failed he will so advise train and enginemen by train order; engineman will then cut out train control pneumatically. When cab indicator shows green, indicating that power is restored, engineman will then cut in train control pneumatically, and notify trainmen at first opportunity.

302 (P). Station baggagemen at The Dalles Passenger Depot on engines run through The Dalles will unlock and cut out pneumatic portion of automatic train control equipment on eastward engines, and will cut in and lock pneumatic portion of automatic train control equipment on westward engines. After the equipment has been cut in, engineman will pull down on cut-out switch in cab, and allow an automatic brake application. Enginemen will be held responsible for proper cutting in and cutting out of train control equipment at all times.

## AUTOMATIC TRAIN CONTROL RULES COVERING AUTOMATIC TRAIN CONTROL OPERATION BETWEEN PORTLAND AND THE DALLES VIA GRAHAM

### Automatic Train Control Rules Definition

302. AUTOMATIC TRAIN CONTROL: A method of mechanically controlling train movements, independent of the engineman, should it become necessary.

302 (A). CAB INDICATOR:

Green indicates proceed.  
Red indicates stop or reduce speed.

### Enginemen and Trainmen

302 (B). Automatic train control cab indicators supplement automatic block signals in governing the use of blocks, and do not supersede the superiority of trains, nor dispense with the observance of rules governing the use of automatic block or interlocking signals or other signals whenever and wherever they may be required, except to the extent specifically authorized in Special Rules 302(G) and 302(H).

302 (C). Double heading cocks on engines equipped with automatic train control will be sealed in cut-in position and enginemen will inspect seal before departure to determine that it is unbroken.

Double heading cut-out cock on engines equipped with automatic train control must not be manipulated in order to forestall an automatic train control application.

When necessary to break seal to use double heading cock for any reason, enginemen will make report on ATC Report, Form 7483, stating why seal was broken. At end of trip broken seal must be delivered to roundhouse foreman together with suitable written report.

302 (D). The normal indication of automatic train control cab indicator is "Proceed."

302 (E). When the cab indicator shows red, engineman will acknowledge with acknowledging valve, and if speed is in excess of twenty (20) miles an hour, must immediately reduce speed to less than twenty (20) miles an hour.

302 (F). When cab indicator changes from green to red after having passed automatic block stop signal in "proceed" position, engineman must immediately reduce to restricted speed and not exceed that speed to the next signal in advance.

302 (G). If cab indicator changes from green to red when within view of an approach block signal in advance, or after passing an approach block signal indicating "proceed", engineman will proceed at such speed below twenty (20) miles an hour as will enable him to stop before reaching the next automatic block stop signal in advance.

302 (H). When the speed of a train is restricted by automatic train control, or train is proceeding after having been stopped by automatic block stop signal or automatic train control, if the cab indicator changes from red to green, the train may resume normal speed after engine has moved one train length beyond the point where the cab indicator changed from red to green.

302 (I). Within automatic train control territory, when moving over a track which is not equipped with automatic train control circuits, the train or engine must be kept below a speed of twenty (20) miles an hour.

When an engine is running backward, or is pushing cars, it must proceed at a speed less than twenty (20) miles an hour, to avoid automatic brake application.

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302 (Q). Departure test must be made by enginemen on departure from initial terminal or before entering equipped territory to insure that the device is in service and functioning properly.

If engineman takes charge of locomotive enroute he must know the device is in service.

### GENERAL TRAIN CONTROL RULES

302 (R). The 2300-volt ATC feeder circuit extending normally from M. P. 5.5 to Bridal Veil from P. G. E. Co. service, and from Bridal Veil to The Dalles from P. P. & L. Co. service, is located on the top cross-arm of block signal pole line and contact with these wires would be fatal.

The main switches from the P. G. E. Co. service are located at 82nd Street, Portland, near M. P. 5.5 and those of the P. P. & L. Co. at Hood River. Station to station sectionalizing switches are located at each siding.

In an emergency the entire portion energized by the P. G. E. Co. can be "killed" at 82nd Street upon request to the signalman or Power Co. employes, and the entire line energized by the P. P. & L. Co. can be "killed" at Hood River in similar manner.

For ordinary routine maintenance operation, the sectionalizing switches will be opened by signalman confining the dead section to actual working limits. See Rules 302(S) and 302(T).

### De-energizing Line

302 (S). When employes are to perform any work where they are liable to come in contact with wires, or when necessary to perform work around or near train control wires with any machinery or appliances, which are liable to come in contact with them, train dispatcher must be notified. Train dispatcher will then notify signal maintainer and before such work is started, signal maintainer must de-energize the portion of the line where work is to be performed. Person in charge must not start such work until he has received written instructions from the signal maintainer that he has de-energized the line.

### Re-energizing Line

302 (T). The signal maintainer, after de-energizing line as above, must not re-energize the line until he has received written statement from the person in charge of the work that no more work will be performed where employes, machinery or appliances are liable to come in contact with train control wires. Signal maintainer, after re-energizing the line, will so advise train dispatcher.

### Trouble on Wires

302 (U). All employes are to report to the train dispatcher, as soon as possible, any unusual appearances or conditions of any of the wires or their supports, including collection of sleet on wires, so that any needed attention may be given without delay.

In case high voltage train control wires come in contact with, or are liable to come in contact with, cars or structures, have line de-energized by communicating with train dispatcher or any operator and a signal maintainer, pull wires clear of cars or structures, with poles or any other non-conductor device, and use Pyrene extinguisher if available to extinguish fire.

Employes are reminded that any wire or wires may become crossed with the high voltage wires and great care must be exercised to avoid coming in contact with any wires whatsoever which might cause a hazard.

**RATING OF ENGINES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS**

Total weight of train exclusive of engine and tender, which the different classes of engines 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. Between stations for which no rating is shown maximum will apply.

TYPE OF ENGINE	NUMBERS (Inclusive)	HUNTINGTON-LA GRANDE										
		WESTWARD					EASTWARD					
		Huntington to Durkee	Durkee to Encina	Encina to Lun	Lun to Telocaset	Telocaset to La Grande	La Grande to Union Jct.	Union Jct. to Telocaset	Telocaset to Baker	Baker to Encina	Encina to Huntington	
MS 59	$\frac{23-23}{30}$ 472	3500 to 3564 3705 3803 to 3805	2835	1470	6000	2835	6000	6000	2200	6000	2200	6000
MS 69	$\frac{22-22}{32}$ 403	3934 to 3937	2765	1385	6000	2765	6000	6000	2050	6000	2050	6000
MC 57	$\frac{26-41}{32}$ 464	3601 to 3613	3200	1600	6000	3200	6000	6000	2300	6000	2300	6000
TTT 63	$\frac{29\frac{1}{2}}{30}$ 292	5400 to 5414	2350	1045	3900	2350	5000	5000	1485	5000	1485	5000
MT 73	$\frac{29}{28}$ 230	7861 to 7869	1700	700	3500	1700	3500	3500	1000	2900	1000	3500
MK 63	$\frac{26}{28}$ 214	2500 to 2531	1825	725	3500	1825	3500	3500	1100	3300	1100	3500
MK 63	$\frac{26}{28}$ 211	2166 to 2171	1825	725	3500	1825	3500	3500	1100	3300	1100	3500
MK 57	$\frac{23\frac{3}{4}}{30}$ 207	2100 to 2165	1725	700	3500	1725	3500	3300	1000	2900	1000	3500
C 57	$\frac{22}{30}$ 179	725 to 729										
C 57	$\frac{22}{30}$ 190	730 to 768	1265	560	3000	1265	3000	3000	815	2200	815	3000
P 77	$\frac{25}{28}$ 167	3218 to 3225	1190	525	2570	1190	2700	2700	760	2200	760	2700
P 77	$\frac{25}{28}$ 178	3226 to 3227										
T 63	$\frac{22}{28}$ 162	1755 to 1760	1070	475	2460	1070	2700	2700	690	2000	690	2700
T 69	$\frac{22}{28}$ 161	1742 to 1754	980	440	2240	980	2700	2700	640	2000	640	2700
P 77	$\frac{22}{28}$ 149	3201 to 3217	960	440	2250	960	2700	2700	640	2000	640	2700

**EXPLANATION**

"P"..... Pacific  
 "T"..... Ten Wheel  
 "C"..... Consolidation  
 "MK"..... Mikado  
 "MC"..... Mallet Compound  
 "MS"..... Mallet Simple  
 "TTT"..... Two-Ten-Two  
 "MT"..... Mountain

EXAMPLE: Consolidation engine having 57 inch drivers, cylinders 22 inch diameter and 30 inch stroke, and weighing 187,000 pounds on drivers:

C 57  $\frac{22}{30}$  187

**RATING OF ENGINES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS**

Total weight of train exclusive of engine and tender, which the different classes of engines 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. Between stations for which no rating is shown maximum will apply.

TYPE OF ENGINE	NUMBERS (Inclusive)	LA GRANDE-UMATILLA-MESSNER									
		WESTWARD					EASTWARD				
		La Grande to Hilgard	Hilgard to Kamela	Kamela to Umatilla Messner	Umatilla to Hinkle	Messner to Rieth	Rieth to North Fork	North Fork to Kamela	Kamela to La Grande		
MS 59	$\frac{23-23}{30}$ 472	3500 to 3564 3705 3803 to 3805	2930	1430	6000	3560	6000	3115	1430	6000	
MS 69	$\frac{22-22}{32}$ 403	3934 to 3937	2860	1405	6000	3475	6000	3040	1405	6000	
MC 57	$\frac{26-41}{32}$ 464	3601 to 3613	3200	1600	6000	3750	6000	3200	1600	6000	
TTT 63	$\frac{29\frac{1}{2}}{30}$ 292	5400 to 5414	2350	1045	5000	2420	4000	2350	1045	5000	
MT 73	$\frac{29}{28}$ 230	7861 to 7869	1700	700	3500	1700	2750	1510	700	3500	
MK 63	$\frac{26}{28}$ 214	2500 to 2531 2166 to 2171	1825	725	3600	1825	2850	1585	725	3600	
MK 57	$\frac{23\frac{3}{4}}{30}$ 207	2100 to 2165	1700	700	3500	1700	2750	1510	700	3500	
C 57	$\frac{22}{30}$ 179	725 to 729									
C 57	$\frac{22}{30}$ 190	730 to 768	1265	560	3000	1265	2200	1195	560	3000	
P 77	$\frac{25}{28}$ 167	3218 to 3225	1190	525	2700	1190	2200	1090	525	2700	
P 77	$\frac{25}{28}$ 178	3226 to 3227									
T 63	$\frac{22}{28}$ 162	1755 to 1760	1070	475	2700	1070	2000	920	475	2700	
T 69	$\frac{22}{28}$ 161	1742 to 1754	980	440	2700	980	2000	850	440	2700	
P 77	$\frac{22}{28}$ 149	3201 to 3217	975	400	2700	975	2000	850	440	2700	

**EXPLANATION**

"P"..... Pacific  
 "T"..... Ten Wheel  
 "C"..... Consolidation  
 "MK"..... Mikado  
 "MC"..... Mallet Compound  
 "MS"..... Mallet Simple  
 "TTT"..... Two-Ten-Two  
 "MT"..... Mountain

EXAMPLE: Consolidation engine having 57 inch drivers, cylinders 22 inch diameter and 30 inch stroke, and weighing 187,000 pounds on drivers:

C 57  $\frac{22}{30}$  187

TYPE OF ENGINE	NUMBERS (Inclusive)	RIETH AND PILOT ROCK		JOSEPH AND LA GRANDE						
		WESTWARD	EASTWARD	WESTWARD			EASTWARD			
		Rieth to Pilot Rock	Pilot Rock to Rieth	Joseph to Rondowa	Rondowa to Gulling	Gulling to La Grande	La Grande to Rondowa	Rondowa to Enterprise	Enterprise to Joseph	
T 63	$\frac{20}{24}$ 113	1715 to 1726	625	625	1365	685	1365	1120	625	445
T 57	$\frac{20}{26}$ 119	1733 to 1736	700	700	1530	770	1530	1255	700	500
T 69	$\frac{22}{28}$ 159	1742 to 1754	700	700	2000	1500	2000	2000	1500	700
T 63	$\frac{22}{28}$ 162	1755 to 1760	800	800	2000	1600	2000	2000	1600	800
P 77	$\frac{25}{28}$ 167	3218 to 3225	800	800	1840	1000	1840	1840	1000	700
P 77	$\frac{22}{28}$ 149	3200 to 3217	800	800	1740	875	1740	1425	800	555
T 57	$\frac{20}{26}$ 126	1737 to 1741								
C 57	$\frac{22}{30}$ 190	730 to 768	1150	1150	2515	1925	2515	2330	1800	1015

**RATING OF ENGINES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS**

Total weight of train exclusive of engine and tender, which the different classes of engines 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. Between stations for which no rating is shown maximum will apply.

TYPE OF ENGINE	NUMBERS (Inclusive)	PORTLAND AND THE DALLES				THE DALLES AND UMATILLA			
		EASTWARD		WESTWARD		EASTWARD		WESTWARD	
		Albina to Hood River	Hood River to The Dalles	The Dalles to Dodson	Dodson to Albina via Kenton	The Dalles to Seufert	Seufert to Umatilla	Umatilla to Arlington	Arlington to The Dalles
MS 59 $\frac{23-23}{30}$ 472	3500 to 3564 3705 3803 to 3805								
MS 69 $\frac{22-22}{32}$ 403	3934 to 3937	7000	8000	7000	8000	6000	8000	8000	8000
MC 57 $\frac{26-41}{32}$ 464	3601 to 3613								
TTT 63 $\frac{29\frac{1}{2}}{30}$ 292	5400 to 5414	5190	5680	5190	8000	4940	6485	6485	8000
MT 73 $\frac{29}{28}$ 230	7861 to 7869	3040	3655	3500	4570	3430	3920	4220	4990
MK 63 $\frac{26}{28}$ 214 211	2500 to 2531 2166 to 2171	3265	4080	3470	5480	3110	4080	4080	5100
MK 57 $\frac{23\frac{3}{4}}{30}$ 207	2100 to 2165	3200	4000	3400	5375	3050	4000	4000	5000
C 57 $\frac{22}{30}$ 179	725 to 729								
C 57 $\frac{22}{30}$ 190	730 to 768	2600	2940	2600	4610	2650	3030	3200	3900
P 77 $\frac{25}{28}$ 167	3218 to 3225								
P 77 $\frac{25}{28}$ 178	3226 to 3227	2100	2625	2100	3185	2320	2700	2850	3275
T 63 $\frac{22}{28}$ 162	1755 to 1760	2000	2475	2000	3895	2200	2555	2690	3285
T 69 $\frac{22}{28}$ 161	1742 to 1754	2000	2265	2000	3555	2010	2330	2460	3035
P 77 $\frac{22}{28}$ 149	3201 to 3217	1800	2040	1800	3185	1730	1200	2220	2700

**EXPLANATION**  
 "P"..... Pacific  
 "T"..... Ten Wheel  
 "C"..... Consolidation  
 "MK"..... Mikado  
 "MC"..... Mallet Compound  
 "MS"..... Mallet Simple  
 "TTT"..... Two-Ten-Two  
 "MT"..... Mountain  
 EXAMPLE: Consolidation engine having 57 inch drivers, cylinders 22 inch diameter and 30 inch stroke, and weighing 187,000 pounds on drivers:  
 C 57  $\frac{22}{30}$  187

TYPE OF ENGINE	NUMBERS (Inclusive)	OREGON TRUNK JCT. AND BEND					BIGGS AND SHANIKO							ARLINGTON AND CONDON			HEPPNER JCT. AND HEPPNER			
		EASTWARD			WESTWARD		EASTWARD				WESTWARD			EASTWARD		WESTWARD	EASTWARD			
		O. T. Jct. to North Jct.	North Jct. to South Jct.	South Jct. to Madras	Madras to Bend	Bend to O. T. Jct.	Biggs to Thornberry	Thornberry to Sandon	Sandon to Grass Valley	Grass Valley to Shaniko	Shaniko to Grass Valley	Grass Valley to Hay Canyon	Hay Canyon to Sandon	Arlington to Rock Creek	Rock Creek to Condon	Condon to Rock Creek	Rock Creek to Arlington	Heppner Jct. to Ione	Ione to Lexington	Lexington to Heppner
MK 63 $\frac{26}{28}$ 214 211	2500 to 2531 2166 to 2171	1850	2100	1190	1830	3505														
MK 57 $\frac{23\frac{3}{4}}{30}$ 207	2100 to 2165	1815	2060	1165	1815	3435														
C 57 $\frac{22}{30}$ 179	725 to 729																			
C 57 $\frac{22}{30}$ 190	730 to 768	1500	1730	1000	1500	3000	345	550	700	790	1450	960	700	600	340	1820	1700	1500	1150	1125
T 63 $\frac{22}{28}$ 162	1755 to 1760	1160	1465	825	1200	2555	290	465	600	670	1120	810	595	510	285	1465	1430	1200	1000	950
T 69 $\frac{22}{28}$ 161	1742 to 1754	1075	1335	760	1100	2330	265	425	545	610	1175	740	540	465	260	1550	1310	1100	900	870
T 57 $\frac{20}{26}$ 125	1737 to 1741	890	1180	720	970	2060	230	375	480	540	1030	650	480	420	240	1250	1155	1015	785	770
T 64 $\frac{22}{26}$ 145	1730 to 1731	830	1070	655	880	1870	210	340	435	490	855	590	435	370	210	1200	1045	900	710	695
T 57 $\frac{20}{26}$ 119	1733 to 1736	740	1120	685	920	1955	220	355	455	510	960	615	455	390	220	1210	1090	965	740	725
T 63 $\frac{20}{24}$ 113	1715 to 1726	690	985	555	745	1580	180	290	415	370	815	500	370	315	180	980	890	810	625	590

**RATING OF ENGINES IN FREIGHT SERVICE IN TONS OF 2000 POUNDS**

Total weight of train exclusive of engine and tender, which the different classes of engines 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. Between stations for which no rating is shown maximum will apply.

TYPE OF ENGINE	NUMBERS (Inclusive)	PORTLAND AND SEATTLE								
		WESTWARD					EASTWARD			
		Albina to Vader	Vader to Winlock	Winlock to Napavine	Napavine to Centralia	Centralia to Argo	Argo to Centralia	Centralia to Napavine	Napavine to Albina	
MT 73 $\frac{29}{28}$ 230	7861 to 7869	3920	2290	1960	4980	3920	3920	1610	4985	
MK 63 $\frac{26}{28}$ 214 211	2500 to 2531 2166 to 2171	3785	2220	2005	4590	3655	3655	1685	5060	
MK 57 $\frac{23\frac{3}{4}}{30}$ 207	2100 to 2165	3710	2175	1965	4500	3585	3585	1650	4950	
C 57 $\frac{22}{30}$ 190	730 to 768	3185	1860	1500	3850	3080	3080	1265	3850	
P 77 $\frac{25}{28}$ 178 167	3226 to 3227 3218 to 3225	2845	1550	1340	3440	2745	2745	1130	3440	
T 63 $\frac{22}{28}$ 162	1755 to 1760	2690	1560	1265	3255	2600	2600	1070	3255	
T 69 $\frac{22}{28}$ 161	1742 to 1754	2460	1480	1155	2970	2375	2375	975	2970	
P 77 $\frac{22}{28}$ 149	3200 to 3217	2200	1190	1035	2665	2125	2125	875	2665	

**EXPLANATION**  
 "P"..... Pacific  
 "T"..... Ten Wheel  
 "C"..... Consolidation  
 "MK"..... Mikado  
 "MT"..... Mountain  
 EXAMPLE: Consolidation engine having 57 inch drivers, cylinders 22 inch diameter and 30 inch stroke, and weighing 187,000 pounds on drivers:  
 C 57  $\frac{22}{30}$  187

TYPE OF ENGINE	NUMBERS (Inclusive)	CENTRALIA AND HOQUIAM				CENTRALIA AND TONO	COSMOPOLIS AND PRIMO	EAST OLYMPIA AND OLYMPIA
		EASTWARD		WESTWARD				
		Hoquiam to Cosmopolis	Cosmopolis to Centralia	Centralia to Cosmopolis	Cosmopolis to Hoquiam			
MK 57 $\frac{23\frac{3}{4}}{30}$ 207	2100 to 2165	1515	4490	4980	1960		1455	
C 57 $\frac{22}{30}$ 190 179	730 to 768 725 to 729	1325	3880	4290	1700	2520	1275 1515	
C 57 $\frac{20\frac{1}{2}}{30}$ 172 167	719 to 723 710 to 724	1490	2875	3355	1490	2200	985 1175	
T 63 $\frac{22}{28}$ 162	1755 to 1760	1120	3110	3625	1650	1975	1060 1280	
T 69 $\frac{22}{28}$ 161	1742 to 1754	1020	2840	3310	1570	1865	970 1170	
P 77 $\frac{22}{28}$ 149	3200 to 3217	710	2505	2920	905	1720	855 980	
T 64 $\frac{22}{26}$ 145	1730 to 1731	710	2275	2560	820	1590	775 885	
T 57 $\frac{20}{26}$ 125	1737 to 1741	710	2505	2920	905	1720	855 980	
T 57 $\frac{20}{26}$ 119	1733 to 1736	740	2375	2765	855	1630	810 980	
T 63 $\frac{20}{24}$ 113	1715 to 1726	625	1930	2245	695	1340	660 800	