

# UNION PACIFIC RAILROAD COMPANY

## SOUTH-CENTRAL DISTRICT

### California Division

# Special Rules No. 12

## Effective Saturday, August 1, 1953

Superseding Special Rules No. 11

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

**A. D. HANSON,**  
General Manager

**D. F. WENGERT,**  
General Superintendent

**V. W. SMITH,**  
Superintendent

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### Railroad Watches

2 (R). Operating Rules 2, 2(A) and 2(B) are cancelled.

Employees listed below must, while on duty, have a reliable railroad grade watch\* which must not vary more than 30 seconds from correct time.

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

Safety Representatives	Flagmen
Trainmasters	Firemen
Assistant Trainmasters	Hostlers
Traveling Conductors	Outside Hostlers Helpers
Road Foremen of Engines	Yardmasters
Traveling Firemen	Assistant Yardmasters
†Station Agents	Engine Foremen
†Operators	Switchtenders
Conductors	Engine Herders
Engineers	Such other employes as
Brakemen	may be designated

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

2 (S). Officers and employes must not make solicitation in connection with the sale of watches.

2 (T). Employes must present their watches to officers and supervisors upon request.

### Signals

7 (R). Conductors and engineers of trains or engines which operate in territory where they are governed by the rules of another railroad must know that they have equipment necessary to enable them to fully comply with such rules.

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

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

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

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

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

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

### Reduce and Resume Speed Signs

10 (R). Operating Rule 10 (H) is changed to read:

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

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

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

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

10 (S). Operating Rule 10 (G) is changed as follows:

Yellow signals will be placed one and one-fourth miles instead of one mile from the beginning of the slow track.

### Engine Whistle Signals

14 (U). *Operating Rule 14 (a) and Air Brake Rule 1044 are changed as follows: When an emergency exists and it is necessary to use engine whistle to call for brakes to be applied on moving train or cars or when necessary to use engine whistle to signal some other movement to stop, a succession of short sounds must be used.*

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

14 (V). Where two main track operation is in effect, whistle signals 14(r) or 14(s) will be used by a westward train on No. 2 track and by an eastward train on No. 1 track to recall flagman.

### Headlights

17 (R). The following will govern use of oscillating red headlight:

When train becomes disabled or makes sudden stop due to unusual occurrence, or when an adjacent track is obstructed or there is possibility of it being obstructed, if red headlight is not set in motion automatically, engineer must immediately set it in motion by manual operation.

A train on adjacent track must stop before passing headlight and be governed by Operating Rule 102.

When head end protection is required, engineer will immediately display red headlight. When occupying main track in meeting an opposing train, except in CTC territory, red headlight will be displayed until opposing train dims its headlight in accordance with Operating Rule 17 (B), after which, if switch is lined to permit opposing train to enter siding, red headlight will be extinguished.

Engineer finding red headlight displayed by opposing train, must stop before passing headlight, ascertain the cause and be governed by conditions.

Display of red headlight does not relieve enginemen nor trainmen from protecting front of train in accordance with Operating Rule 99, when required.

If red headlight has been set in motion automatically and necessity no longer exists, engineer must extinguish it.

When standing at terminals and red headlight is not required, it must be extinguished.

17 (S). Operating Rule 17 (C) is cancelled.

First sentence of Operating Rule 17 is changed to read: "Headlight must be displayed, burning bright, to the front of every train by day and night."

17 (T). Operating Rule 17 (D) is changed to read:

"At night, when an engine is backing up without cars or backing up pulling cars, a white light must be displayed on rear of engine.

When a road engine without cars is standing or moving about yards at night under conditions not requiring the display of markers, a light must be displayed on rear of engine. A red light must be used when engine is so equipped."

17 (U). At night, oscillating white headlight must be set in motion passing through cities and towns and approaching and passing over public crossings at grade.

### Markers and Rear End Lights

19 (R). Oscillating red rear end light on passenger trains will be used as a night signal in accordance with Operating Rule 9 and must be displayed from sunset to sunrise and when day signals cannot be seen due to weather or other conditions. Also at any time train is moving under circumstances in which it may be overtaken by another train.

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

The displaying and extinguishing of red rear end light must be done by trainman.

Display of red rear end light does not relieve trainmen nor enginemen from complying with Operating Rule 99 nor any other rule.

19 (S). Operating Rule 19 (C) is cancelled.

When the rear car in a train is not equipped to display prescribed markers, a red flag by day and a red light by night must be displayed on rear end of rear car, except that when a red light is not available, a marker lamp displaying red light to rear must be wired or otherwise securely fastened to rear end of rear car.

19 (T). *Markers displaying yellow instead of green lights as prescribed in Operating Rule 19 (B) will be used except on S. P. trains between Whittier Jct. and Hillgrove.*

19 (U). Where two main track operation is in effect between Riverside Jct. and Riverside, and between M.P. 7.7 and Pasadena Jct., a train or engine need not stop for red markers or red light displayed on rear of a train on an adjacent track when it can be seen that the track to be used is clear.

### Displaying Signals

21 (R). Except between Yermo and Los Angeles, when a train is equipped with indicators, white flags will not be displayed by extra trains.

### Indicators

24 (R). Referring to Operating Rule 24: On subdivisions where Centralized Traffic Control operation is in effect, helper engines added to or cut off trains between terminals will display engine number instead of train number in indicators.

### Switch Lights

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

27 (S). Switch lights will not be used on branch lines, except San Pedro Branch, and trains and engines must approach facing point switches prepared to stop if switch is not in normal position.

### Stopping Trains at Stations

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

28 (S). When necessary to stop a train at a station for any cause other than for flag or conditional stop, a lighted red fusee must be used.

### Use of Engine Bell

30 (R). Within corporate limits of cities named below, engine bell must be rung continuously when engine is moving:

Riverside Pomona Ontario Los Angeles

### Use of Engine Whistle

32 (R). At Colton, city ordinance prohibits use of engine whistle within city limits unless absolutely necessary at the time as a danger signal to avoid an impending accident or other imminent danger.

### Stopping Trains 300 Feet from Fouling Point

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

### Train Registering Exceptions

83 (R). First-class trains are not required to register at East Yard.

### Clearances

83 (S). Information required by Operating Rules S-83 and D-83 need not be obtained by trains entering CTC territory.

### Starting Trains

84 (R). At East Los Angeles, passenger trains stopped at passenger station must not depart until green light is displayed on semaphore signal located on mast above ticket office.

### Yard Limits

93 (R). Yard limits include:

Crestmore —Tracks to Ormand and Bly quarries and to Bly;

Whittier Jct. —Whittier;

Paramount —Douglas Jct.;

Los Angeles —Glendale and Pasadena Branches and to M.P. 8.3 on San Pedro Branch.

93 (S). Westward passenger trains headed into freight lead east end Las Vegas yard must stop to clear cross-over at east end of freight depot, unless switches are properly lined and proceed signal is received from yardman. When a yardman is not in charge of switch, train dispatcher must be contacted by CTC telephone located at west switch of cross-over.

Freight trains moving into Las Vegas on freight lead must stop to clear east lead at yard office, unless proper proceed signal is received.

### Railroad Crossings and Junctions

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

Location	Railroad Crossed, or Junction With	Trains Which Have Precedence	How Governed
Ontario (M.P. 38.1)	S.P.		Automatic Interlocking and C.T.C. See Special Rule 98(U).
M.P. 33.0	S.P.		C.T.C. Signals.
Redondo Jct.	A.T.&S.F.		Interlocking.
Violet Alley, Los Angeles (100 ft. east of Santa Fe Ave.)	A.T.&S.F.	U.P.	Flagman must protect when crossing U.P. old main track.
Violet Alley, Los Angeles (North leg of wye)	A.T.&S.F.	A.T.&S.F.	Flagman must protect when crossing Santa Fe lead track.
Santa Fe Ave., Los Angeles	L.A.Ry.	U.P.	L.A. Ry. cars stop and flagman protect crossing.
Santa Fe Ave., Los Angeles	A.T.&S.F.	A.T.&S.F.	U.P. trains and engines stop. Flagman protect two crossings unless proceed signal received from switchtender.
15th St. Los Angeles	A.T.&S.F.		Stop signs.
<b>SAN PEDRO BRANCH:</b>			
M.P. 3.6	L.A. Jct. Ry.	U.P.	Semi-automatic interlocking. Operating Rule 618.
M.P. 4.6-C M.P. 4.8-C			L.A. Jct. Ry. engines stop and flagman protect crossings.
South Industry Joint U.P.-P.E. Lead	Bethlehem Steel	U.P.-P.E.	Stop sign. U.P.-P.E. engines stop and if crossing is clear and derails on Bethlehem track are in place, movement may be made over crossing. Bethlehem engines stop and flagman protect crossing.
Douglas Jct.	U.P.		Stop sign.
Anaheim Team Tracks 85 and 87 (M.P. 22.66-C)	A.T.&S.F.	A.T.&S.F.	U.P. engines stop at Stop sign. Flagman protect crossing.
Henry Ford Boulevard (M.P. 23.2)	Drawbridge		Interlocking. Westward home signal located on south side of track.
Permanente Co. Spur (M.P. 23.52)	U.P.		Stop sign. Flagman protect crossing.
Columbia Construction Co. Spur (M.P. 23.52)	U.P.		Engines stop. Flagman protect crossing.
<b>PASEDNA BRANCH:</b>			
Main St. (M.P. 1.4) Ave. 20 (M.P. 2.1)	L.A.Ry.	U.P.	L.A. Ry. cars stop and flagman protect crossing.
Ave. 33 (M.P. 2.7) Highland Park (M.P. 5.4)	A.T.&S.F.	A.T.&S.F.	U.P. trains and engines stop, throw target and wait three minutes before moving over crossing.
<b>ANAHEIM BRANCH:</b>			
M.P. 6.9	P.E.	U.P.	P.E. trains stop and flagman protect crossing. U.P. trains and engines approach prepared to stop unless crossing is clear.
M.P. 10.5	P.E.	P.E.	U.P. trains and engines stop and flagman protect crossing.
Sunny Hills Spur (M.P. 13.8)	A.T.&S.F. P.E.	A.T.&S.F. P.E.	U.P. trains and engines stop and flagman protect crossing.
Anaheim Sugar Spur (M.P. 19.0)	A.T.&S.F.	U.P.	A.T.&S.F. trains and engines stop and flagman protect crossing. U.P. trains and engines approach prepared to stop unless crossing is clear.

98 (S). At Glendale Jct., trainmen of trains moving from Pasadena Branch must communicate with signalman at Mission Tower, who will release electric lock on switch.

Trainmen of engines entering or leaving spur track at North Main Street, Los Angeles, must communicate with signalman at Mission Tower, who will release electric lock on derail.

98 (T). For movement of U.P. trains and engines to and from Glendale Branch at Arroyo Jct., S.P. switchtender must be notified to handle switch.

98 (U). For movement over S.P. Crossing, M.P. 38.1, the following will govern:

When an eastward train or engine is stopped by semi-automatic interlocking signal, Operating Rule 613 will govern.

When a westward train or engine is stopped at CTC signal located 1550 feet east of crossing, in addition to receiving clearance Form C, Operating Rule 613 will govern.

#### Flag Protection

99 (R). Flagman, in placing torpedoes as required by Operating Rule 99, must place second set of torpedoes one and one-half miles instead of one and one-fourth miles from rear of train.

Last paragraph of Operating Rule 99 is changed to read:

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

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

99 (S). Operating, M. of W. and Signal Rule 99 (F) is changed as follows:

Employe alone, who finds track or bridge unsafe for trains at normal speed, in placing torpedoes as required by Rule 99 (F), must place second set of torpedoes one and one-half miles instead of one and one-fourth miles from red flag or red light.

99 (U). On Boulder City and Anaheim Branches, between 7 A.M. and 5 P.M. daily except Sunday, a speed of 10 MPH must not be exceeded by all trains approaching and moving on curves and where view is obscured, looking out carefully at all points for track cars and men working on track without flag protection. Speed on curves must be such as to be able to stop within one-half the distance track is seen to be clear, and whistle signal 14 (1) must be sounded frequently.

99 (V). *Between Ninth Street Jct. and Pasadena Jct., when stop is made on main track 1 or 2, flagman must take position on ground at rear of train or engine, prepared to provide protection if protection becomes necessary.*

#### Cars or Train Left Behind

102 (R). In complying with Operating Rule 102 (B), if no light is available to be placed on front end of cars left behind, a trainman must remain at front end of such cars to signal engineer when returning.

#### Riding Ends of Engines and Cars

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

103 (S). Where reference is made in rules to rear of tender of engines, this requirement will also apply to rear end of Diesel-electric locomotives.

103 (T). A yardman or trainman need not ride on leading footboard of engine, as follows:

At Los Angeles, on main tracks between Downey Road and Glendale Jct.;

On main track, San Pedro Branch, between Hobart Tower and Firestone Blvd.;

At Mead Transfer, from east yard limit sign to west leg of wye at Terminal Island;

Over Anaheim team tracks and running lead to Pier A, Wilmington.

Yardmen are prohibited from riding in cabs of engines except between above mentioned locations.

103 (U). A yardman must take a conspicuous position on rear car of movements between locations named and by night a red light must be displayed on rear car:

East Yard and Dayton Tower; East Yard and East Los Angeles;  
East Yard and Alameda San Pedro Branch between Freight Terminal; East Yard and Southgate.

#### Public Crossings

103 (V). At public crossing protected by crossing watchman and crossing gates, yard crews must know gates are down and crossing protected before making movement over the crossing with engine or car; otherwise crossing must be protected by member of crew.

103 (W). *At highway grade crossings protected by any automatic crossing protection, signals, bells or gates, every effort must be made to avoid unnecessarily occupying controlling circuits or leaving switches open within the controlling circuits. See Operating Rule 103 (A).*

*When a train, engine, or yard movement has been delayed or stopped within 1500 feet of such crossing, any further movement toward the crossing must be made at restricted speed until it is determined that the crossing signals are operating to stop highway traffic.*

*When a train, engine or yard movement has passed over such crossing and a reverse movement onto or over the crossing is then to be made, or, when a switching, engine or train movement is to be made against the current of traffic over such crossing, the crossing must be protected by a member of the crew as provided in Operating Rule 103 (B) or 103 (C), except when a crossing watchman is on duty.*

103 (X). All trains and engines must stop and be preceded by a flagman over the following public crossings:

Blue Diamond Spur—Main highway, when shoving cars over highway;  
Manuel Hold Yard—Sepulveda Boulevard;  
Pasadena—Lincoln Avenue;  
—Colorado Boulevard;  
—All crossings north of Colorado Blvd.

103 (Y). At Ontario, when an eastward train stops west of Euclid Avenue, it must be preceded by a flagman over crossing.

At Los Angeles, all trains and engines must approach and pass over Santa Fe Avenue very carefully, keeping a sharp lookout for street traffic.

On Anaheim Branch, all trains and engines must be prepared to stop at South Spadra Road near Fullerton, M.P. 17.3.

On Glendale Branch, when movements are to be made over Fletcher Drive or San Fernando Road, a trainman must ride on leading end of locomotive. When shoving cars, movement must be preceded by member of crew.

*On Pasadena Branch, all trains and engines approaching Avenue 64 must be governed by highway traffic signal indications. Enginemen must exercise judgment approaching signals and enter intersection when signal changes to green and avoid entering as signal is about to turn red, as these signals are actuated by timing device and not connected to track circuits.*

#### No. 14 Turnouts

104 (R). No. 14 turnouts are installed at all power operated switches in CTC territory.

#### Derails

104 (S). On Boulder City Branch, eastward trains must stop at Stop sign, M.P. 21.76, and line spring point derail before proceeding. After being used derail must be restored to derailling position.

#### Normal Position of Switches

104 (T). *At Yermo, switch at west end No. 1 extension track must be left lined and locked for the lead.*

*At Kelso, switches at east and west end of track 5 must be left lined and locked for track 4 when not in use.*

### Sidings

105 (R). At M.P. 36.6, trains and engines moving from Ontario siding to Sunsweet siding must obtain permission from train dispatcher. Normal position of switch at this point is lined for movement to Sunsweet siding.

At Bly and Mira Loma, trains and engines must receive permission from train dispatcher before moving from yard tracks to siding.

### Brakemen and Firemen Stopping Trains

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

### Speed Restrictions

152 (R). That part of last paragraph of Operating Rule 93 reading, "(See Special Rule 152-R)" is changed to read, "See speed restrictions in time-table."

### Centralized Traffic Control

266 (R). In CTC territory, at points where hand operated switches not equipped with electric lock are installed, a train or engine must not move to nor foul main track or controlled siding until authority to occupy such track has been obtained from dispatcher or operator.

266 (S). CTC Stop signals, located as follows, are designated as "starting signals":

*Las Vegas*—Eastward dwarf signal at east end of passenger station platform and high signals on main track and drill track just west of Bonanza underpass; Westward dwarf signal at west end of passenger station platform and high signal just west of west passing track switch;

*Kelso* —Signal located on cantilever bridge east and west of passenger station.

When a train or engine is stopped by one of these signals, member of crew must communicate with train dispatcher for instructions. If movement is verbally authorized by train dispatcher, flagman must be sent ahead to next signal and movement made at restricted speed without receipt of clearance Form C.

At Yermo, when dwarf signal at east or west end of passenger siding displays Stop indication, stop must be made, and after stopping, flagman must be sent ahead to next signal and movement made at restricted speed without receipt of clearance Form C.

266 (T). Clearance Form B will not be required by trains entering CTC territory from Boulder City Branch, Blue Diamond Spur, Sloan Quarry tracks, Crestmore Branch or Anaheim Branch, but trains will be governed by signal indication and instructions from train dispatcher.

Exception: When crew of a train in turn-around service leaves CTC territory and ties up, they must receive CTC clearance before re-entering CTC territory.

266 (U). Clearance Form B received at East Yard or Los Angeles by eastward trains is authority to enter CTC territory at either Los Angeles or East Yard and at Daggett.

Westward trains must receive Clearance Form B at Yermo, this clearance to authorize movement into CTC territory at Yermo, and at east switch for two main tracks at Riverside.

Clearance Form B received by westward train at Yermo which is to turn at Barstow, will be authority to enter CTC territory at Daggett on eastward trip.

Westward trains originating at San Bernardino after tying up at San Bernardino must receive Clearance Form B at Riverside.

266 (V). Anaheim Branch and Boulder City Branch trains need not receive Clearance Form B at East Yard or Las Vegas as required by Operating Rule 266.

Clearance Form 2643 received by Anaheim Branch trains at East Yard and by Boulder City Branch trains at Las Vegas confers authority to enter CTC territory at East Yard and at Las Vegas, and confers the same authority on Anaheim Branch or Boulder City Branch as when received at Whittier Junction or Boulder Junction.

267 (R). Eastward freight trains leaving Las Vegas will, unless otherwise directed, use drill track and leave yard at extreme east switch, being governed by signal indication at that point.

267 (S). At Kelso, trains and engines moving from siding to main track through east or west cross-overs must receive permission from train dispatcher before occupying main track.

Exception: When a train which is to pick up a helper engine has come to a stop, helper engine may move from siding to main track without permission from train dispatcher and without waiting three minutes after switch has been opened.

### 375 (R). AT&SF AUTOMATIC TRAIN STOP SYSTEM.

#### Definitions

*Wayside Inductor*.—A magnetic inductive device, controlled by elements of the block signal system, which actuates the receiver on the locomotive.

*Intermittent Inductive Receiver*.—An electro-magnetic device which operates the locomotive train stop apparatus.

*Type E Train Stop Engine Relay*.—A quick acting electric relay which responds to the receiver impulse and controls the timing magnet valve.

*Timing Magnet Valve*.—An electro-pneumatic device which vents application pipe 10 causing the brake application valve to function.

*Automatic Brake Application Valve*.—A pneumatic valve which automatically initiates a full service brake pipe reduction.

*Acknowledging Valve*.—A two-position manually operated pneumatic valve, which when moved from forward to rear position forestalls an automatic application of the brakes.

*Acknowledging Check Bell*.—A single stroke bell which sounds when acknowledgment is made.

#### Description of Operating Parts

*Wayside Inductor* is approximately 7 inches wide and 4 feet long. It is mounted on end of ties parallel to right hand rail about 80 feet in advance of the wayside block signal.

*Inductive Receiver* is mounted on the journal box of the diesel unit and suspended so that it passes directly over the wayside inductor.

*Acknowledging Valve* with handle in forward "C" position charges the acknowledging reservoir. With handle in rear "A" position, air from the reservoir operates a pressure switch to forestall electrically, an automatic application of the brakes for approximately 15 to 30 seconds. The air pressure is blown down through a choke to atmosphere at end of this time.

*Automatic Brake Application Valve* is the safety control brake application valve, except that no suppression feature is provided in the intermittent train stop equipment.

*Application*: If acknowledgment is not made properly, an automatic brake application occurs immediately on passing a restrictive indicator, initiating a full service brake pipe reduction and operating PC switch.

*Release*: Approximately 60 seconds is required to obtain a release of the brakes. When automatic brake application occurs, engineman should place automatic brake valve handle in "Lap" position, holding safety control foot pedal or handle of brake valve down at same time.

When application pipe gage pressure builds up to within 20 pounds of main reservoir pressure, brake application valve will restore to release position, indicated by blow of air and slight flip of gage hand.

Handle of acknowledging valve should then be moved from charging to acknowledging position to pick up engine relay and restore electrical circuits to normal, after which brakes may be released in the usual manner and handle of acknowledging valve returned to charging position.

Forestalling Application of Brakes is accomplished by moving handle of acknowledging valve from "C" to "A" position not to exceed 15 seconds before receiver passes over an inductor approaching a restrictive signal indication other than "Clear", and leaving handle in this position until after receiver has passed inductor.

AT&SF Equipped Territory will begin at Daggett and end at Oro Grande westbound. Eastbound, equipped territory will begin at Lugo and end at Daggett.

Continued on Page 7.

**375 (R). Continued.**

Intermittent train stop equipment will be cut in and tested at Las Vegas westbound and at Los Angeles eastbound. It will be cut out at Las Vegas eastbound.

**Cutting In Intermittent Train Stop**

1. Close motor-generator and intermittent main switch.
2. Move acknowledging valve handle from charging to acknowledging position to pick up engine relay. Bell sounds.
3. Open intermittent train stop cut-out cock in application pipe No. 10 to the intermittent timing magnet valve.
4. Seal handle of cut-out cock in "open" position.

**Cutting Out Intermittent Train Stop**

1. Close cut-out cock in application pipe No. 10 to timing magnet valve.
2. Seal handle of cut-out cock in "closed" position.
3. Open main switch.

Procedure for cutting in and cutting out must be in sequence given to avoid unintentional automatic brake application.

When necessary for any reason to cut out ATS enroute, train dispatcher must be notified from first point of communication.

**Block Signals**

509 (R). Home block signal located at M.P. 21.5 and approach signal at M.P. 20.7 govern westward trains on San Pedro Branch to interlocking signal at Thenard crossing. Member of crew of train stopped by this home signal must communicate with operator at Thenard by telephone located at signal. If signal indication is not then changed to permit train to proceed, Rule 509 will govern.

**Power Operated Derails**

526 (R). At east end of Las Vegas yard, power operated derail on drill track operates in conjunction with main track switch. When necessary to hand-operate main track switch or place selector lever in hand position, as provided in Rule 529, derail switch and selector lever on derail switch must also be hand-operated.

**Interlocking**

605 (R). The following whistle signals will be used to indicate route:

**Riverside Jct.:**

- From A. T. & S. F. westward main track to U. P. eastward main track ..... 0
- From U. P. westward main track to A. T. & S. F. eastward main track ..... 0
- From U. P. westward main track to A. T. & S. F. westward main track ..... 0 0 0 0
- To transfer track ..... 0 0 0

**Hobart:**

- For siding ..... 0
- For east wye ..... 0
- From San Pedro main track to A. T. & S. F. siding ..... 0
- From A. T. & S. F. siding to San Pedro main track ..... 0
- From U. P. transfer to A. T. & S. F. siding ..... 0 0 0
- From A. T. & S. F. siding to U. P. transfer ..... 0 0 0

At Los Angeles, microphone is installed on signal bridge at Fourth Street for westward movements on both main tracks and on Stop signal on yard lead at First Street for movements leaving Seventh Street yard.

Following whistle signals will be used to indicate route:

- For Union Station ..... 0
- To and from Glendale Jct. ....
- For Alhambra S. P. coach yard or to turn equipment or engine ..... 0 0
- For S. P. coach yard ..... 0 0 0 0

At Mission Tower, one long sound of towerman's emergency whistle is a signal for all movements within interlocking limits to stop at once and not move until proper signal or definite information is received from signalman.

609 (R). At Cota and Thenard, when a train or engine is stopped by an interlocking signal displaying Stop indication, a member of crew must communicate with signalman and be governed by instructions posted in box.

609 (S). When a train or engine is stopped by a Stop indication of an interlocking signal at Signal Bridges 3, 4, or 6, and signal does not change to Proceed indication, a member of the crew must communicate with the signalman at Dayton Avenue or Mission Tower.

609 (T). At Bell, in performing switching between the home and approach signals, cars must not be left standing on clearance section of track located between 350 feet west of the eastward home signal and 330 feet east of the westward home signal. Switching movements may be made between these points and the approach signals without interfering with operation of the P.E. Ry.

At Bell, when making movements from siding or Bethlehem Steel Corporation spur to main track, trainmen must be governed by switch indicator. If switch indicator displays Main Track Clear indication, switch may be thrown and when dwarf signal displays Proceed indication, movement will be made at restricted speed. When performing switching at those points, flag protection must be provided for cars left on main track between the home signals.

When making movements to and from Bethlehem Steel Corporation spur to siding, the switch nearest train must be lined first to make contact for the governing signal.

609 (U). Home signal at east end Los Angeles River bridge governs westward movements over A. T. & S. F. spur track crossing at west end of bridge.

Color light dwarf signal at west end of Los Angeles River bridge governs westward movements over A. T. & S. F. main track crossing at Redondo Tower.

**Trainmen Exchanging Signals**

713 (R). A trainman must be stationed on rear of train in position to give or receive signals, when passing depot at the following stations:

Arden	Kelso	Pomona
Sloan	Riverside	Hillgrove
Jean	Mira Loma	Pico
Nipton	Ontario	

At these locations, and at locations provided for in Operating Rule 713 (A), trainman on freight train must be on rear platform of caboose; on passenger trains, including streamline trains, trainman must be on rear platform or in rear door, or if rear car is a business, dining or observation car, must be on front platform of rear car or rear platform of car next ahead, and vestibule door must be open.

**Outfit Cars**

720 (R). That part of Operating Rule 720 (C) and M. of W. and Signal Rule 1521 requiring authority from superintendent to permit women and children to remain in outfit cars during movement of such cars is cancelled.

**Carbon Monoxide Fumes**

733 (R). There is hazard of carbon monoxide fumes from exhaust of Diesel or gasoline engines and precautions must be taken to avoid possibility of accident therefrom.

Exhaust from such engines must not be located in close proximity of fresh air intake of passenger cars and care must be exercised at all time to see that there is sufficient ventilation where such engines are operated.

**Trains Stopped in Tunnels**

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

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

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

When a Diesel-electric locomotive is stopped in a tunnel under conditions preventing prompt movement, Diesel engines must be promptly shut down.

### Shutting off Diesel Propulsion Engines

733 (T). When Diesel propulsion engines are shut off, air brakes must be fully applied and, in addition, front and rear of traction wheel must be blocked and sufficient hand brakes must be applied throughout the train to prevent movement should air brakes leak off.

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

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

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

### Power Transmission Wires

734 (R). Power transmission wires carrying 2300 volts are located on top cross-arm of signal pole line.

### Diesel-Electric Locomotives

735 (R). Adjustments must not be attempted nor made in high voltage cabinets of Diesel-electric locomotives until engine has first been isolated and stopped and units have come to a stop.

736 (R). When Diesel-electric switch locomotive is to be idle in excess of 30 minutes, main engine must be stopped.

When Diesel-electric road locomotive is to be idle for one hour at initial or intermediate stations, main engines must be stopped.

**Exception:** In such cases, engines must not be stopped when outside temperature is below 35 degrees.

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

When Diesel engines are stopped, hand brakes must be applied.

### Radio

737 (R). Following governs use of radio on engines and cabooses:

*On yard engines, at start of shift engine foreman must make test of the radio equipment from engine to tower to determine if it is functioning properly. Yardmaster at tower must keep a record of such tests and must make prompt report to the terminal superintendent of any instances where radios fail during yard shifts.*

On road engines equipped with radio, equipment must be tested by engine crew before leaving Los Angeles Terminal. Chief dispatcher must keep record of such tests and must report instances where radio fails to the wire chief.

Engineers must show on work report at completion of trip if radio equipment is inoperative.

### Cars Partly Loaded or Unloaded

802 (R). All persons are prohibited from riding in cars while being switched, which are in the process of loading or unloading. Part loads will not be switched unless properly broken down or properly braced to prevent contents falling and being damaged. Before switching with or moving cars which are in the process of loading or unloading, persons working in the car must be notified and trainmen and yardmen should see that cars are not switched with until cars are vacated.

### Handling of Explosives and Inflammables

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

#### Placards on Cars

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

Continued Opposite Side.

### 802 (S). Continued.

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

#### Switching Cars Containing Explosives or Poison Gas

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

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

#### Switching of Cars Containing Dangerous Articles

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

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

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

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

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

BE 589 (f). At all terminals or other places where trains are made up by crews other than road crews accompanying the outbound movement of cars, the railroad shall execute a consecutively numbered notice showing the location in the freight train or mixed train of every car placarded "Explosives." A copy of such notice shall be delivered to the train and engine crew and a copy thereof showing delivery to the train and engine crew shall be kept on file by the railroad at each point where such notice is given. At points other than terminals where train or engine crews are changed, the notice shall be transferred from crew to crew.

#### Position in Freight Train or Mixed Train of Cars Containing Explosives

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

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

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

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

#### Separating Cars Placarded "Explosives" from Other Cars in Train

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

1. Occupied passenger car, other than car occupied by gas handlers or military personnel accompanying shipments.

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802 (S). Continued.

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

**Position in Train of Loaded Placarded Tank Car**

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

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

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

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

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

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

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

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

**Position in Freight Train or Mixed Train of Cars Placarded "Explosives" and "Poison Gas" or Containing Poison Liquids when Accompanied by Cars Carrying Gas Handling Crews**

BE 589 (l). A car placarded "Poison Gas" or containing poison liquids Class A in drums, tanks or bombs, or a car placarded

Continued Opposite Side.

802 (S). Continued.

both "Explosives" and "Poison Gas" shall at all times be next to and ahead of the car occupied by gas handling crews, when accompanying such car.

BE 589 (l). (1) A car or cars placarded "Explosives" shall be next to and ahead of a car occupied by guards accompanying such car, except that when the car occupied by guards is equipped with a heater it shall be the fourth car behind the car or cars placarded "Explosives."

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

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

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

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

**Position in Train of Cars Containing Class D Poison**

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

**Empty Tank Cars**

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

**Track Scales**

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

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

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

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

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

**Cars with Roller Bearings**

804 (R). Cars equipped with roller bearings will start with much less effort than those otherwise equipped. When such cars are set out, either in yards or on line, hand brakes must be set if there is any possibility of their moving.

**Switching Cars with Air Brakes Cut In**

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

804 (T). At Las Vegas, when switching on east lead, not over 15 cars consisting of ore, coal, sand, fuel oil or other heavy commodities may be pulled out of yard tracks to be switched.

When handling over 15 cars containing commodities mentioned above, air brakes must be cut in and operative on the 10 cars next to the engine.

## Hand Brakes

804 (U). At Kelso, if a train is left unattended on any track it must be secured with at least 10 hand brakes, regardless of whether engine is attached to train.

804 (V). *Sufficient hand brakes, but not less than six, must be set on east end of all freight trains arriving Yermo and East Yard. Engine foreman working on east lead Yermo and in east end of "A," and "C" yards, East Yard, will be responsible for knowing that sufficient hand brakes are set on east end of cars on all tracks in these yards.*

When outgoing crew is on duty and takes charge of train on arrival, it will not be necessary to set hand brakes on the east end of trains arriving Yermo, providing there is an understanding between the two crews. The outgoing crew will be held responsible to set brakes in case the engine is later detached.

804 (W). At East Yard coach yard, one hand brake must be set on east end of cut of cars left standing on any track. Engine foremen placing cars in coach yard will be held responsible for seeing that cut is properly secured with hand brake, and wheels blocked in addition.

## Pushing Streamline Trains

805 (R). Operating Rule 805 is cancelled.

## Position of Cars in Trains

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

807 (S). Stock cars containing horses may be handled next to Diesel-electric locomotive.

807 (T). Last paragraph of Operating Rule 807 is cancelled.

807 (U). All empty flat cars moving between Cima and Kelso and between Summit and San Bernardino must be entrained near rear of train.

## Helper Engines

808 (R). *In helping freight train from Kelso, helper engine may be placed behind caboose or last car except when train is handling cars listed in Operating Rule 807, in which case helper engine must be placed ahead of train engine. Not more than one helper may be used behind caboose, except not more than two helpers may be used when caboose or cabooses involved are 3900 class.*

At Kelso, on all eastward freight trains a member of train crew must remain at rear of train until helper is coupled onto train.

There must be a trainman at rear of train while standing at Cima.

## Running Locomotives Backward

808 (S). Operating Rule 808 (A) is changed to read:

"Steam locomotives and Diesel-electric locomotives other than Diesel road-switch and switch locomotives must not be run backward in road service where wye tracks or turntables are available, except in an emergency. When back-up movement is necessary, engineer must secure authority from train dispatcher.

## Inspection of Trains

811 (R). On locomotive, tender and freight car wheels, flat spots two and one-half inches or longer, or if there are two or more adjoining spots each two inches or longer, and on passenger cars including streamline train equipment one inch or longer, are condemnable and when discovered in train, conductor or engineer must immediately report to chief dispatcher and be governed by his instructions.

811 (S). When a train with Diesel-electric locomotive is passing, trainmen, enginemen, yardmen and others should observe wheels under power units to see if wheels are turning. In event locked wheels are noticed, stop signal must be given to crew of passing train and proper precautions taken to prevent damage to equipment.

811 (T). When trains stop in sidings or other intermediate locations, such walking inspections of train must be made as time will permit. Walking inspections from rear must proceed until entire train is inspected, or until movement starts and engineer must comply with Operating Rule 811 (A) to afford slow roll-by inspection and pick up crew on rear.

Continued Opposite Side.

## 811 (T). Continued.

Unless otherwise instructed by conductor, swing brakeman must ride head end of train and when stop is made will commence walking inspection, continuing until meeting member of crew making inspection from rear of train, and if movement starts in meantime will make roll-by inspection. Swing brakeman will thereafter return to head end at first opportunity.

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

811 (U). *In addition to making inspection of trains as often as practicable, per Operating Rule 811, freight trains being handled with dynamic brake in operation and required to use retaining valves per Special Rule 1042 (S) must stop and be inspected at Cima, Elora and Kelso, except that trains of 3500 tons or less handled by four-unit Diesel-electric locomotive with dynamic brake in operation need not stop at Elora for inspection.*

Westward freight trains averaging 65 tons or more per operative brake must also stop at Desert and Sands for inspection.

Eastward freight trains must be inspected at Kelso or Cima.

Between Cima and Kelso, all freight trains being handled with dynamic brakes not in operation will stop 10 minutes at Chase and 10 minutes at Dawes for inspection and cooling of wheels.

Freight trains handling military impedimenta exclusively must stop and be inspected at the following points:

Desert —Eastward and westward;

Kelso —Eastward and westward;

Victorville —Eastward and westward;

Streeter —Eastward and westward.

Main trains with passenger equipment must stop and be inspected at the following points:

Kelso —Eastward and westward;

San Bernardino —Eastward and westward.

Walking inspection to be made on one side and roll-by on the opposite side.

## Hot Boxes

826 (R). When a hot box is detected on a train between stations, in addition to Operating Rules 810 and 826 the following will govern:

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

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

## Water Supply

850 (R). Water from water columns at Las Vegas, San Bernardino and East Yard, must not be used to fill water cars nor outfit tenders nor for drinking or culinary purposes.

## Closing Doors on Freight Cars

855 (R). Referring to Operating Rule 855:

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

## Duties of Engine Men

866 (R). The Mechanical Department will be charged with responsibility, and enginemen relieved, of complying with the following Operating Rules and portions thereof:

Rule 816;

Rule 869, first paragraph;

Rule 869 (A), first paragraph;

Rule 884, first sentence;

Rule 885, first sentence.

Engine crew will leave from roundhouse or designated point promptly when engine is available for service.

869 (R). Last sentence of first paragraph of Operating Rule 869 is changed to read: "Engineer must know that engine is supplied with 12 torpedoes, 6 fusees, a red flag and equipment for train signals."

870 (R). Last sentence of Operating Rule 870 is cancelled.

#### Movement of Diesel Locomotives

872 (R). When a Diesel-electric locomotive consisting of two "A" units operated rear end to rear end, with or without "B" unit or units, is to be moved by hostlers in yards or around enginehouses, locomotive must be operated from lead "A" unit according to direction in which movement is to be made.

#### Duties of Employes on Diesel Locomotives

874 (R). Second paragraph of Operating Rule 874 is cancelled.

On Diesel-electric locomotives in road service, not more than five men may ride in control cab.

The following instructions will govern firemen and head brakemen in performing their duties on Diesel-electric locomotives in road service, and will supersede and cancel all previous instructions, either written or oral, not consistent therewith.

Firemen will patrol engine rooms and make inspection of engine, temperatures, steam heat facilities and other parts, and give such attention as may be required. Any unusual condition or irregularity detected must be reported to engineer, and fireman will be governed by engineer's instructions.

On multiple-unit Diesel-electric locomotives on high-speed, streamlined, or main line through passenger trains, a fireman shall be in control cab at all times when the train is in motion.

This applies to the following trains:

Nos.	Between
1- 2	Las Vegas and Los Angeles
9- 10	Las Vegas and Los Angeles
37- 38	Las Vegas and Los Angeles
103-104	Las Vegas and Los Angeles

This rule shall be strictly observed and firemen who violate it shall be subject to discipline.

*When a fireman is required by this rule to remain in control cab at all times while train is in motion, his patrol of engine rooms will be made at initial stations and at other stops when time will permit.*

On other trains, fireman will patrol engine rooms at initial stations and at other stops. When time between stops is 30 minutes or more, and at such other times as may be directed by engineer, fireman will patrol engine rooms while train is in motion.

On freight trains, head brakeman must ride in control cab except while performing duties requiring him to be elsewhere, as specifically provided by rules. When necessary to ride elsewhere in freight locomotive, he will immediately return to control cab on signal from engineer. When fireman is patrolling engine rooms while train is in motion, head brakeman must remain in control cab during fireman's absence and must observe signals and other conditions prescribed by Operating Rule 810.

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

Unauthorized persons, including deadhead trainmen and enginemen must not occupy cab of trailing unit of Diesel-electric locomotive on any train.

#### Oil-Burning Engines

875 (R). Adequate spot fire to provide near maximum steam pressure must be maintained on oil-burning engines when not working steam to avoid fire box leakage.

#### Leaving Locomotives Unattended

875 (S). Operating Rule 875 is cancelled and the following will govern:

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

875 (S). Continued.

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

Engineer must see that air compressors are running, throttle closed, latched and safety pin inserted, cylinder cocks opened, independent or straight air brakes applied in full application position and brake cylinder pressure noted before leaving locomotive. Driver and tender brake cut-out cocks must be cut in, reverse lever latched in center position when on level track, and when on a grade, the reverse lever must be placed in the corner position in ascending grade direction.

When a Diesel-electric locomotive is left unattended, reverse handle must be placed in neutral position and handle removed, independent brake set in full application position, field generator switch pulled and hand brake set on each unit.

875 (T). At Kelso, on westward trains, an engineman must be in charge of locomotive at all times.

#### Fireman Handling Locomotive

876 (R). Operating Rule 876 is cancelled.

Enginemen must not permit any unauthorized person to handle the locomotive. The fireman, when competent, may handle the locomotive when in road freight and yard service under the supervision of the engineer, the engineer being responsible. The fireman must not be permitted to handle the locomotive when in road passenger service, except in emergency.

#### Use of Blow-off Cocks and Sludge Removers

879 (R). Blow-off cocks or sludge removers must not be used immediately adjacent to nor passing through tunnels.

#### Diesel Motors Cut Out

883 (R). When Diesel units are operating with less than full complement of motors or when it is necessary to cut out one or more of the motors at any time enroute, train dispatcher must be notified immediately.

#### Speedometers

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

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

When check indicates speedometer is not registering correctly, wire report must be made to train dispatcher promptly as possible, giving miles per hour that speedometer is slow or fast.

#### Inspecting Locomotives

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

#### Diesel Equipment and Control Locker Seals

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

#### Movements Around Fueling Stations, Etc.

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

#### Rules for Hostlers

894 (R).

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

(2) Hostlers are in charge of their helpers and attendants and must know they are familiar with and perform their duties;

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894 (R). Continued.

instruct them if necessary and caution them as to risks; inefficiency or insubordination must be reported to the proper officer.

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

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

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

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

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

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

**Track Restrictions**

896 (R). Engines heavier than indicated below must not go on the tracks named:

(Note—Tracks which may be used by Diesel-electric switch locomotives may be used by 0-6-0 type steam locomotives.

Consolidation type steam locomotives may be operated on all branch main tracks and may be operated on any track not restricted for Diesel-electric road switch locomotive with 6-wheel trucks.

Heavy MacArthur type steam locomotives may be operated on any track not restricted for Diesel-electric road locomotives.

Tracks where heaviest locomotive permitted is Diesel-electric road switch locomotives must not be used by heavy Pacific type steam locomotives.)

Location	Track	Heaviest Engine Permitted
Boulder City	Machine Shop Track 7	None permitted
Henderson	Basic yard, industrial track-age beyond former interchange track	1800 class and 1 unit DE-Rd switch
Arden	Blue Diamond spur	1 unit DE-Rd switch
Basin	Trestle on lime quarry spur	None permitted
Riverside	Mission spur track serving A. F. G. Co. yard	None permitted 1 unit DE-Rd switch engines may use to east end of packing house
Crestmore Spur	Old Crestmore Branch, M.T. spur Between Bly and Ormand Quarry All other tracks	1 unit DE-Rd switch DE-Rd locomotive 1800 class and 1 unit DE-Rd switch
Crestmore	Over trestle in plant yard of R.P.C. Co.	None permitted
Mira Loma	Tracks within government enclosure	None permitted
Pomona	250 feet easterly of Pomona Fruit Growers Exchange track on east side of Exchange Growers building	1 unit DE-Rd switch
Whittier	Whittier Citrus Association Spur Murphy Packing House spur beyond point 220 ft. from switch	1 unit DE-Rd switch 1 unit DE-Rd switch
Anaheim Branch	All tracks	1 unit DE-Rd switch
Glendale Branch	All tracks	1 unit DE-Rd switch
South Gate	Three spurs Fibreboard Products Co.	DE-Yd switch
Fallon	Spur track	1 unit DE-Rd switch
Bell	Storage track	1 unit DE-Rd switch
Clearwater	Macco Lumber Co. spur	1 unit DE-Rd switch
Paramount	Southern California Edison Co. spur	1 unit DE-Rd switch
Rioco	Two spurs Richfield Oil Co.	1 unit DE-Rd switch

896 (R). Continued.

At Kelso, pit tracks are for use of locomotives only and must not be used while making switching movements of cars.

At Rioco, spur tracks serving A. Schulman, Inc. must not be used beyond sign opposite derail, account insufficient overhead clearance.

Snow plows, Jordan spreaders and other roadway machines must not be moved on any track unless it is known there is proper clearance.

In operating snow-clearing equipment it must be known there is proper guard rail clearance.

Diesel-electric road locomotives or heavier locomotives must not go on any beet trestle or industrial trestle.

**Close Clearance**

900 (R). There are close clearances above and at the side of main tracks as shown below and in addition thereto at platforms and other structures above and at the side of industry, stock and other tracks:

Location	Structure or Obstruction	Clearance of engine or car is close at
<b>FIRST SUBDIVISION</b>		
M.P. 267.25	Bridge	Side.
M.P. 250.69	Bridge	Side.
M.P. 243.96	Bridge	Side.
M.P. 192.3	Tunnel No. 1	Top.
<b>SECOND SUBDIVISION</b>		
M.P. 55.9	Highway bridge	Side.
M.P. 55.7	Canal syphon wall	Side.
M.P. 52.4	Bridge	Side.
M.P. 31.9 (Thomas Street)	Iron post barricade	Side.
M.P. 15.72	Bridge	Side and top.
M.P. 15.39	Bridge	Side and top.
M.P. 15.05	Bridge	Side and top.
M.P. 11.1	Highway bridge	Top.
M.P. 10.80	Bridge	Side and top.
M.P. 8.90	Highway bridge	Top.
M.P. 1.89 (Butte Street)	Bridge	Side.
Los Angeles River	Bridge	Side.
Los Angeles Union Station	Umbrella sheds	Top. (See note.)
<b>SAN PEDRO BRANCH</b>		
M.P. 5.10 (Randolph Street)	Trolley wire	Top.
M.P. 8.52	Bridge	Side.
Cota, M.P. 17.4	Trolley wire	Top.
Clearwater (P.E. crossing)	Trolley wire	Top.
Thenard	Trolley wire	Top.
<b>PASADENA BRANCH</b>		
Ave. 21 to Ave. 22	Brick building, pipe and eaves	Side.
M.P. 5.2	Retaining wall	Side.
M.P. 6.1	Fence, concrete railing, lights at bridge	Side.
M.P. 6.2	Guy wire	Side.
M.P. 8.1	Highway bridge	Top.
M.P. 8.1	Retaining wall	Side.
M.P. 8.2	Highway bridge	Top.
<b>GLENDALE BRANCH</b>		
Forest Lawn Cemetery M.P. 6.3	Trees	Side.

Note—Employees are prohibited from riding on top of freight or passenger cars on passenger yard tracks.

Umbrella sheds in LAUPT passenger yard will not clear a man on top of car, nor on side of car except when standing on sill step.

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

Connections with electrically operated railways at following locations:

- Los Angeles —Butte St. and Santa Fe Ave.;
- Axelson lead —From Fruitland Spur to Randolph St.;
- Bethlehem Steel Co.'s tracks—At Slauson Ave.;
- La Habra —Citrus packing house.

Continued Opposite Side.

900 (T). At Kelso, when cantilever ore ramp located about middle of track 5 is in loading position it will not clear box or other high type car and will not clear man on side or top of car. Switching must not be done on track 5 when ramp is down in loading position. A support six feet wide is located between tracks 4 and 5 and care should be exercised when passing.

#### High and Wide Cars

900 (U). California Public Utilities Commission General Order 26-D covers the operation of cars of excess height and width and of open top cars containing lading of excess height and width.

In addition to Operating Rule 803 (B), the following applies to the operation of such cars:

##### Cars of Excess Height

(1) Freight cars of a height exceeding 15' 6" must not be operated.

Freight cars of a height exceeding 15' 4" but not greater than 15' 6" shall be permanently marked, stenciled or placarded and such marking maintained in a legible condition, reading, "THIS CAR EXCESS HEIGHT."

All such required markings and placarding shall be placed on the side adjacent to the ladder or hand-holds near the floor line of the car at each of the four corners.

##### Cars of Excess Width

(2) Freight cars of width exceeding 10' 10" must not be operated.

Freight cars of a width not exceeding 10' 10" may be handled without restrictions or placarding.

##### Cars with Lading of Excess Height or Width

(3) No movement shall be made of open top cars containing lading in excess of 15' 6" above the top of rail or extending laterally in excess of 5' 5" from center line of car except as hereinafter described:

(4) The operation of cars, the lading of which extends laterally in excess of 5' 5" from center line of car, shall be restricted to lading the size or dimensions of which cannot be reduced.

(5) All open top cars with lading extending laterally in excess of 5' 5" from center line of car or in excess of 15' 6" in height above top of rail, shall be placarded on the load itself in a conspicuous place when practicable, and the car shall be marked, stenciled, or placarded at locations specified in paragraph (1) of this rule.

(6) On any train, the consist of which includes cars loaded as described in the preceding paragraph of this rule, such cars shall be blocked together in one place in the train and if its length permits, they shall be trained at least 5 cars distant from both the caboose and the engine.

##### Notifying Train Employees

(7) A train order shall be delivered to every train containing any car the lading on which extends laterally in excess of 5' 5½" from center line of car or in excess of 15' 6" in height above top of rail, informing the crew of the train that the train includes such car or cars, stating total number thereof, and advising that no member of the train crew is required to ride on any such cars.

(8) A train order shall be delivered to every train the operation of which may be affected by the presence or movement of a train containing such wide loads, described in the preceding paragraph of this rule, informing the crew of the train of that fact.

##### Notifying Yard Employees

(9) Yard supervisors shall be given notifications sufficiently in advance of the arrival of the cars, the lading on which extends laterally in excess of 5' 5½" from center line of car, to enable them to take necessary precautions to safeguard employees in yard.

##### Observance of Cars by Employees

(10) Employees in yards and elsewhere must keep close lookout for wide loads in trains and in switch movements, being on the alert when such movements are passing to avoid hazard of injury from such excess width loads, or damage to equipment.

Continued Opposite Side.

900 (U). Continued.

(11) Any employe observing a car of excess height or a car containing lading of excess height or width which is not placarded or stenciled as required by this rule, should notify their supervisor immediately.

(12) Any employe observing a close overhead or side clearance with a car of excess height or a car with lading of excess height or width, should make immediate report so that protection can be given.

#### Air Brake Rules

1025 (R). On locomotives having automatic brake valve modified to provide pressure maintaining, first service cock should be in "In" position while making brake pipe reduction for terminal test and brake pipe test, and must be in "Out" position while checking brake pipe leakage during terminal test and when brake pipe reduction is being made from rear end of train during brake pipe test, and must be left in "Out" position thereafter until entire test is completed. After test is completed and automatic brake valve is returned to running position, first service cock must be placed in "In" position if pressure maintaining feature is to be used.

1035 (R). Running air test as required by Air Brake Rule 1035 must be made by passenger trains at:

Cima—Eastward and westward;

Kelso—Westward, when stop is made at Kelso.

1036 (R). To prevent undesired emergency brake applications, engineers should be governed by the following in making the initial brake pipe reduction of 6 to 8 pounds when braking conventional passenger trains in accordance with Air Brake Rules 1239 (B) and 1239 (C) of form 7172.

"When applying brakes for making ordinary slow-downs or stops, the air gauge must be observed for measuring reductions and the initial reduction should be 6 from 70, 7 from 90, and 8 from 110 pounds as indicated by equalizing reservoir gauge."

1041 (R). Unless otherwise provided, air brake test as required by Air Brake Rule 1041 must be made by all freight trains at following points:

Cima—Westward.

Cima—Eastward when angle cock has been turned or air hose separated.

1042 (R). Retaining valves must be used on all cars in freight trains handled by steam locomotives or Diesel-electric locomotives with dynamic brake not in operation from Cima to Kelso, and on Blue Diamond Spur from end of track to Arden.

On other grades, conductor and engineer must have understanding as to number of retaining valves to be used.

Retaining valves must be used from Cima to Kelso on all passenger trains handled in automatic brake operation when use of dynamic brake is not available.

On passenger trains, retaining valves must not be turned down until train passes mile board east of Kelso.

When possible, the use of retaining valves on live poultry cars must be avoided.

Except when train is being handled by Diesel-electric locomotive with dynamic brake in operation, westward freight trains averaging 55 tons or more per operative brake must not exceed 30 MPH from Kelso to Sands, and where tonnage of westward freight trains exceed 65 tons per operative brake, retaining valves must be used on every other load throughout train between Kelso and Sands. Speed must not exceed 20 MPH and stop of 10 minutes must be made at Kerens for inspection of train.

Maximum tonnage per operative brake in freight service, Cima to Kelso is 70 tons.

1042 (S). The following will govern use of retaining valves on freight trains when handled by Diesel-electric locomotives with dynamic brake in operation on descending grade west-bound between Cima and Kelso:

Continued on Page 14.

1042 (S). Continued.

(a)

2 Unit Locomotive	3 Unit Locomotive	4 Unit Locomotive
1200 tons or less: None.	1800 tons or less: None.	2400 tons or less: None.
Over 1200 tons averaging 50 tons or less per operative brake: One retaining valve must be used for each 50 tons in excess of 1200 tons, but not less than 25 retaining valves must be used.	Over 1800 tons averaging 50 tons or less per operative brake: One retaining valve must be used for each 50 tons in excess of 1800 tons, but not less than 25 retaining valves must be used.	Over 2400 tons averaging 50 tons or less per operative brake: One retaining valve must be used for each 50 tons in excess of 2400 tons, but not less than 25 retaining valves must be used.
Over 1200 tons averaging more than 50 tons but not to exceed 60 tons per operative brake: Retaining valves must be used on one half of total cars in train.	Over 1800 tons averaging more than 50 tons but not to exceed 60 tons per operative brake: Retaining valves must be used on one half of total cars in train.	Over 2400 tons averaging more than 50 tons but not to exceed 60 tons per operative brake: Retaining valves must be used on one half of total cars in train.
Over 1200 tons averaging more than 60 tons per operative brake: Retaining valves must be used on all cars in train.	Over 1800 tons averaging more than 60 tons per operative brake: Retaining valves must be used on all cars in train.	Over 2400 tons averaging more than 60 tons per operative brake: Retaining valves must be used on all cars in train.

- (b) Dynamic brake must be placed in service and tested for proper operation between M.P. 309 and M.P. 292.
- (c) During dynamic brake operation firemen must make frequent inspections to determine if dynamic brake is properly operating on each power unit and report results of each inspection to engineer.
- (d) If dynamic brake is inoperative on any one power unit of locomotive, dynamic brake must not be used and retaining valves must be used as prescribed by Special Rule 1042(R).
- (e) If while using dynamic brake it becomes inoperative on one or more power units of locomotive, train must be immediately stopped and retaining valves placed in use as prescribed by Special Rule 1042(R) before proceeding.
- (f) When use of retaining valves is required, these valves must be used consecutively from head end of train.
- (g) Additional retaining valves must be used in accordance with provisions of Air Brake Rule 1042(B) when in the judgment of the engineer or conductor use thereof is necessary.
- (h) When retaining valves are in use, speed of 20 MPH must not be exceeded.
- (i) Conductor must advise engineer number of cars, total tonnage, average tons per operative brake and location of loads and empties in train.
- (j) Tonnage per operative brake must not exceed maximum of 70 tons.

## RATING OF DIESEL-ELECTRIC LOCOMOTIVES IN FREIGHT SERVICE IN TONS OF 2,000 POUNDS

Total weight of trains, exclusive of locomotives, which the different classes of locomotives will haul in each direction between stations named under favorable weather conditions.

Type	Numbers (Inclusive)	H. P.	No. Units	Las Vegas to Yermo	Yermo to Victorville	Victorville to Summit	San Bernardino to Los Angeles
EMD ALCO FM Baldwin	1000-1095 1100-1153 1300-1304 1200-1210	YdSw 1000	1	1500	1500	900	1500
ALCO	1180-1190	RdSw 1500	1	1800	1800	1000	1800
ALCO	1191-1195	RdSw 1500	1	2000	2100	1300	2100
FM	1325-1329	RdSw 1500	1	1700	1800	1000	1800
FM	1360-1370	RdSw 2000	1	2000	2300	1300	2500
EMD	1400-1477	Frt 4500	3	4065	5250	2775	6255
ALCO	1600-1643	Frt 4500	3	5100	5850	3150	6705
EMD	1400-1477	Frt 6000	4	5420	7000	3700	8340
ALCO	1600-1643	Frt 6000	4	6800	7800	4200	8940
EMD	1800-1877	RdSw 2400	2	2500	2750	1750	3500

### DRAG TONNAGE RATING

Note: Diesel-electric switch locomotives and single unit Diesel-electric locomotives with one air compressor are restricted in road service to a maximum of 45 cars on descending grades of one percent and over.

#### TOTAL LOADED WEIGHT ON DRIVERS

220,000 to 237,000 pounds  
Nos. 1400 to 1477  
1550 to 1563

235,000 to 243,000 pounds  
Nos. 1600 to 1643

Type	Numbers (Inclusive)	H. P.	No. Units	Los Angeles to San Bernardino	San Bernardino to Summit	Summit to Kelso	Kelso to Cima	Cima to Las Vegas
EMD ALCO FM Baldwin	1000-1095 1100-1153 1300-1304 1200-1210	YdSw 1000	1	1500	500	1150	500	1200
ALCO	1180-1190	RdSw 1500	1	1700	675	1700	675	1700
ALCO	1191-1195	RdSw 1500	1	2100	750	2100	750	2100
FM	1325-1329	RdSw 1500	1	1700	650	1700	650	1700
FM	1360-1370	RdSw 2000	1	2300	800	2300	800	2300
EMD	1400-1477	Frt 4500	3	4200	1875	4200	1875	4200
ALCO	1600-1643	Frt 4500	3	5025	2250	5025	2250	5025
EMD	1400-1477	Frt 6000	4	6400	2500	6400	2500	6400
ALCO	1600-1643	Frt 6000	4	6700	3000	6700	3000	6700
EMD	1800-1877	RdSw 2400	2	2750	900	2750	900	2750