

RATING OF DIESEL 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.

	50-61 5500 HP Alco DL55	130-348 500-542 1750 HP EMD GP3, F3	400-448 2400 HP EMD SD24	470-488 2000 HP EMD GP20	700-728 300-372 2250 HP EMD GP30	740-768 2500 HP EMD GP35	3000-3047 3000 HP EMD SD-40
Las Vegas	4000	1875	2800	1875	1900	2000	3200
Yermo	5400	2785	3800	2785	2600	2700	4300
Victorville	2600	1250	1800	1250	1250	1300	2100
San Bernardino	5800	2500	4100	2500	2800	2900	4600
Los Angeles	4000	1875	2800	1875	1900	2000	3200
San Bernardino	1900	850	1350	850	900	950	1500
Summit	4000	1875	2800	1875	1900	2000	3200
Kelso	1900	850	1350	850	900	950	1500
Cima	4000	1875	2800	1875	1900	2000	3200

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

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.

Referring to Special Rule 810 (B). Hot Box detectors are located as follows:

Mile-post	Between	With Readout at:
175.3	Harvard & Manix	Las Vegas
209.10	Crucero & Balch	Las Vegas
292.74	Roach & Borax	Las Vegas
324.3	Arden & Boulder Jct.	Las Vegas

UNION PACIFIC RAILROAD COMPANY
SOUTH-CENTRAL DISTRICT

California Division
Special Rules
No. 17
Effective
July 1, 1966

Superseding Special Rules No. 16

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

G. A. CUNNINGHAM,
General Manager

R. D. SMITH,
Superintendent

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

SPECIAL RULES—ALL SUBDIVISIONS

NOTE:—Referring to note on Page 17 of Operating Rules: The term "conductor" as used in Operating Rules, special rules, or in superintendent's bulletins or notices, also applies to engine herders.

Standard Time

2 (R). Notation under first paragraph of Rule 2 of "Operating Rules," "Maintenance of Way and Signal Rules," and Form 7528, "Rules and Instructions Governing the Requirements Concerning Watches," is changed to read:

"(A railroad grade watch is a pocket watch which is equipped with a lever set, or a wrist watch of approved type)."

Wrist watches approved under this revision are:

Ball "Official Railroad Standard" Model 1604B, 21 jewel, size 13 ligne;

Bulova "Accutron-Railroad Approved" model;

Elgin "B. W. Raymond" model, 23 jewel, size 13/0;

Hamilton electric Model 505 "Railroad Special";

Longines Model "T-905" Railroad Watch.

3 (R). Last paragraph of Operating Rule 3 (D) is changed to read: "Train dispatchers and employes subject to time service rules must not have a watch, other than a railroad grade watch, in their possession while on duty."

Color Signals

10 (R). When reflectorized yellow and green signals are placed as required by Rule 10 (H), display of yellow and green lights at night is not required.

Communicating Signal

16 (R). Rule 16(e) is cancelled.

Rule 16 (l) is changed to read:

One sound of communicating signal—

When standing—apply or release air brakes;

When running—brakes sticking;

look back for hand signals;

approaching meeting or waiting points

(see Rule S-90).

16 (S). On train equipped with communicating signal, when a train order is received indicating that normal main track is out of service, and that trains are to be detoured through a siding, shoofty or other track requiring reduction in normal train speed, four sounds of communicating signal (Rule 16f) must be sounded two miles before reaching temporary track or route, and must be acknowledged by three short sounds of engine whistle (Rule 14h). Running test of brakes must be made as prescribed by Air Brake Rule 1029.

Markers and Rear End Lights

19 (R). Referring to Operating Rule 19 (F):

When rear car of a passenger train is equipped with an oscillating red rear end light on which an auxiliary marker is mounted, markers need not be displayed as required by Operating Rules 19, 19 (A), 19 (C) and 19 (E).

Except in CTC territory when such train is clear of main track at night and rear end protection is not required, red rear end light must be extinguished and auxiliary marker must display green light to rear.

Rear trainman is responsible for proper display of auxiliary marker as well as rear end light.

19 (S). Referring to Operating Rule 19 (D):

Markers displaying yellow instead of green lights may be used on California Division.

19 (T). Red reflectorized disc on cabooses and car body type units is for emergency use only and must be concealed except under following conditions:

On cabooses so equipped, when electric markers fail at night, and on units so equipped when rules require display of markers and marker lamps are not available, red reflectorized disc must be displayed to rear when train is on main track. When train is clear of main track, except in CTC territory, red reflectorized disc must be concealed.

When red reflectorized disc is displayed, red light prescribed by Rule 19 (E) need not be displayed.

These instructions apply only on lines operated by the Union Pacific.

Indicators

24 (R). Rules 24 and 24 (A) are cancelled.

When an engine consists of more than one unit, the number of one unit only will be illuminated and will be the identifying unit; the

(Continued in Next Column)

24 (R) (Continued)

numbers of other units must not be illuminated. When practicable the number of the leading unit will be used.

Unit number will be permanently displayed in indicators on units so equipped.

Switch Lights on Branch Lines

27 (R). Switch lights will not be used on branch lines except San Pedro Branch.

On branch lines where switch lights are not used, trains and engines must approach facing point switches prepared to stop if switch is not in normal position.

Flag Protection

99 (R). Referring to Operating Rule 99 and second paragraph of Rule 99 (A): When a train stops on main track where rear of train is protected by a continuous block signal system, flagman must go back immediately with flagman's signals, but need go back only a sufficient distance to insure full protection against following trains moving at restricted speed.

This in no way modifies the requirements for full flag protection under other circumstances or where protection in accordance with Rule 99 is required by other rules.

99 (S). Rule 99 (D) is cancelled.

99 (T). First sentence of Rule 99 (F) Operating and Maintenance of Way Rules, is revised to read:

"99 (F). When an employe alone finds track or bridge unsafe for trains at normal speed, he must immediately place a red flag by day or a red light by night on or near the track in both directions ONE EIGHTH MILE (660 FEET) from the point of obstruction."

There is no change in remainder of this rule.

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

Switches

104 (R). Except where otherwise specified, No. 14 turnouts are installed at all dual control switches in CTC territory.

104 (S). For movement through a spring switch where engine does not precede the cars, switch must be operated by hand.

Centralized Traffic Control

266 (R). When a work train which has been authorized by Clearance Form C, clears the main track when work is completed or because of expiration of time limit, a member of crew must notify train dispatcher.

266 (S). Clearance Form B received at initial station by trains that leave CTC territory will be authority to re-enter CTC territory on that subdivision. This will include through trains, trains in branch line and turn-around service.

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

266 (T). When two or more trains or engines are given the same or overlapping track and time limits, train dispatcher must inform the conductor of each train or engine of the fact. Opposing movements will not be made unless a verbal understanding has been reached between the crews or has been authorized by train dispatcher. Such trains or engines must move at restricted speed within such limits.

Remote Control and Dual Control Switches

529 (R). Referring to Operating Rule 529:

When a train has moved on signal indication beyond the leaving signal at a station, either on main track or siding, and it is necessary to make a reverse movement, a member of crew must so advise dispatcher.

Dispatcher must block switch and signal levers, and must not change position of the switch, clear a signal for a conflicting movement, or remove marker blocks until he has been advised verbally by a member of the crew that his train has backed clear of the insulated joints at the signal.

Use of Radio

650 (R). Radio communication must not be used to avoid compliance

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650 (R) (Continued)

with any operating rule. Radio communication may be used in addition to, or instead of, hand signals or communicating signals to convey required information.

When train or engine movements are to be made in response to radio communications, such as in switching operations, picking up or setting out cars, specific instructions must be given for each movement. When backing or pushing train, engine or cars, distance of movement must be specified. When such movements are being made by radio communication, failure to maintain communication with the employe directing the movement must be regarded as a stop signal.

Employes on trains must not ask, and employes at stations must not advise the indication of block signals, interlocking signals or train order signals, nor may such information be passed from one train to another by radio.

AT&SF channel is provided for use only while operating over AT&SF on California Division. Use of this channel in other territories is prohibited.

Radio must not be used for transmitting when located less than 250 feet from blasting operations. Train dispatcher will, upon advice from foreman, advise trains location of such operations.

General Regulations

702 (R). Operating Rule 702 (A) is changed to read as follows: Employes must not sleep while on duty.

Exchanging Signals and Inspection of Trains

713 (R). When passing depots and towers and where Operating Rule 713 (A) requires a trainman to be stationed on rear of train in position to give or receive signals, on freight trains he must be on rear platform of caboose; on passenger trains, he may be on platform of rear passenger carrying car, and top half of vestibule door must be open.

Safety Precautions

722 (R). Employes are prohibited from stepping on the sliding portion of cushioning device on any car.

Fire Prevention

727 (R). Cabs, outfit cars or other cars which contain stoves with fire burning, must be placed in yards or at stations where the danger of fire is minimized to the greatest extent practicable. Such cars must not be left unattended on bridges for extended periods of time.

727 (S.) Employes are prohibited from smoking or carrying lighted cigars, cigarettes or pipes in mail, baggage or express cars while same are being loaded, unloaded or while in transit.

Handling of Explosives or Other Dangerous Articles

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

Placards on Cars

BE 589 (b). A car requiring car certificates and "Explosives," "Dangerous," "Dangerous—Radioactive Material," "Poison Gas," "Flammable Poison Gas," "Dangerous—Empty Flammable Poison Gas," "Dangerous—Empty 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. Placards and car certificates lost in transit shall be replaced at the next inspection point, and those not required shall be removed at the next terminal where the train is classified.

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, Poison Gas, or Flammable Poison Gas or Placarded Trailers on Flat Cars

BE 589 (c). A car placarded "Explosives," "Poison Gas," or "Flammable Poison Gas," or any flat car carrying a trailer placarded "Explosives," "Poison Gas," "Dangerous," or "Dangerous—Radioactive Material" shall not be cut off while in motion. No car moving under its own momentum shall be allowed to strike any car placarded "Explosives," "Poison Gas," or "Flammable Poison Gas," or any flat car carrying a trailer placarded "Explosives," "Poison Gas," "Dangerous," or "Dangerous—Radioactive

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802 (R) (Continued)

Material," nor shall any such car be coupled into with more force than is necessary to complete the coupling.

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

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

Switching of Cars Containing Dangerous Articles

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

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

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

BE 589 (e). Cars placarded "Explosives" shall be so placed that they will be safe from all probable danger of fire. Freight cars placarded "Explosives" shall not be placed under bridges or overhead highway crossings nor in or along side 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 set off 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 or Flat Cars Carrying Trailers or Containers Placarded "Explosives" from Other Cars in Trains

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

1. Occupied passenger car, except as provided in paragraph (1) of this section.
2. Occupied combination car, except as provided in paragraph (1) of this section.
3. Any car placarded "Dangerous" or "Dangerous—Radioactive Material."
4. Engine.
5. Any car placarded "Poison Gas" or "Flammable Poison Gas."
6. Wooden underframe car (except on narrow gauge railroads).
7. Loaded flat car, except that cars carrying trailers or containers placarded "Explosives" as authorized by the regulations in this chapter may be coupled to each other. (Note: Flat cars equipped with permanently attached ends of rigid construction shall be considered as open-top cars. (See subparagraph (8) of this paragraph.)

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802 (R) (Continued)

8. Open-top car when any of the lading protrudes beyond the car ends or when any of the lading extending above the car ends is liable to shift so as to protrude beyond the car ends.

9. Car, with automatic refrigeration or heating apparatus in operation; car, with open-flame apparatus in service or with internal combustion engine in 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 cars occupied by gas handlers and authorized personnel accompanying shipment.
2. Occupied combination car, other than cars occupied by gas handlers and authorized personnel accompanying shipment.
3. Any car placarded "Explosives."
4. Engine or occupied caboose, (except when train consists only of placarded loaded tank cars).
5. Any car placarded "Poison Gas" or "Flammable Poison Gas."
6. Wooden underframe car (except on narrow gauge railroads).
7. Loaded flat car, other than specially equipped cars in trailer-on-flat-car service or flat cars loaded with automobiles, trucks, or trailer bodies which are secured by means of a device or devices designed and permanently installed on the flat car for that purpose and of a type generally accepted for handling in interchange between railroads. (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 protrudes beyond the car ends or when any of the lading extending above the car ends is liable to shift so as to protrude beyond the car ends.
9. Car, trailers or truck bodies on flat car with automatic refrigeration or heating apparatus in operation; car, trailers or truck bodies on flat car with open-flame apparatus in service or with internal combustion engines in operation.
10. Car, trailers or truck bodies on flat car containing lighted heaters, stoves or lanterns except when car is occupied by gas handlers or authorized personnel accompanying shipment.
11. Car loaded with live animals or fowl, occupied by an attendant.

Position in Freight Train or Mixed Train of Cars Placarded "Poison Gas," "Flammable 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," "Flammable Poison Gas" or containing poison liquids, class A, shall not be next to other freight cars placarded "Explosives" or cars placarded "Dangerous."

BE 589 (k). (1) In a freight train or mixed train either standing or during transportation thereof, a loaded tank car placarded "POISON GAS," or "FLAMMABLE POISON GAS," must not be handled next to:

(i) Occupied passenger car, other than cars occupied by gas handlers and authorized personnel accompanying shipment.

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802 (R) (Continued)

(ii) Occupied combination car, other than cars occupied by gas handlers and authorized personnel accompanying shipment.

(iii) Any car placarded "EXPLOSIVES."

(iv) Engine or occupied caboose.

(v) Any car placarded "DANGEROUS."

(vi) Wooden under-frame car (except on narrow gauge railroads).

(vii) Loaded flat car, other than specially equipped cars in trailer-on-flat-car service or flat cars loaded with automobiles, trucks, or trailer bodies which are secured by means of a device or devices designed and permanently installed on the flat car for that purpose and of a type generally accepted for handling in interchange between railroads. (Note: Flat cars equipped with permanently attached ends of rigid construction shall be considered as open-top cars. See subparagraph (k) (1) (viii).)

(viii) Open-top car when any of the lading protrudes beyond the car ends or when any of the lading extending above the car ends is liable to shift so as to protrude beyond the car ends.

(ix) Car, trailers or truck bodies on flat car with automatic refrigeration or heating apparatus in operation; car, trailers or truck bodies on flat car with open-flame apparatus in service or with internal combustion engines in operation.

(x) Car, trailers or truck bodies on flat car containing lighted heaters, stoves or lanterns except when car is occupied by gas handlers or authorized personnel accompanying shipment.

(xi) Car loaded with live animals or fowl, occupied by an attendant.

Position in Freight Train or Mixed Train of Cars Placarded "Explosives" or "Poison Gas" or Both, and Cars Placarded "Flammable Poison Gas" When Accompanied by Cars Carrying Guards or Gas Handling Crews

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

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

BE 589 (m). Except as provided in Operating Rule 854, cars containing explosives, class A, poison gases or liquids, class A, or flammable poison gas, and tank car 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, or flammable poison gas, 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 a mixed train either standing or during transportation thereof, a car placarded "Dangerous—Radioactive Material" must not be handled next to cars placarded "Explosives" or next to carload shipments of undeveloped film.

Empty Tank Cars

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

Switching Operations

802 (S). Extreme care must be used in coupling to cabooses, outfit cars, flat cars containing rail trailers or open top cars loaded with motor vehicles. They must not be switched with unnecessarily. In switching operations, such cars must not be cut off while in motion and allowed to strike other cars, nor may other cars be cut off while in motion and allowed to strike such cars.

Running switches must not be made with outfit cars, flat cars containing rail trailers or open top cars loaded with motor vehicles.

802 (T). Those portions of Operating Rules 802 (J) and 804 (B) which refer to outfit cars are cancelled.
Before outfit cars are coupled to, occupants must be notified.

Movements on Yard and Other Tracks

802 (U). Operating Rule 802 (B) applies to all movements made in the engine house area as well as all other portions of yards.

All engine movements in engine house area must stop before fouling adjacent track or lead until proceed signal is received from employe at the first switch to be used.

Proceed signals must not be given for movement unless it can be seen there is no conflicting movement.

802 (V). In shoving cars into spur tracks, movement must be stopped three car lengths from bumper or end of track and further movement must be preceded by member of crew on the ground.

When spotting cars at rail trailer facilities or auto unloading ramps, movement must be stopped before entering track and member of crew must precede movement to ramp. Employes must not ride cars into any ramp track.

When placing cars at rail trailer facilities or auto ramps, cars must be coupled, slack bunched and hand brakes applied on not less than three cars farthest from ramp and not less than three cars at the bumper.

Switching Cars of Excess Height

803 (R). Second paragraph of Operating Rule 803 (B) is changed to read: Cars of excess height as per stencil or placard, must not be switched with except in placing them in and taking them out of trains. In switching movements, such cars must not be cut off while in motion, but must be shoved to a stop. No one will be permitted to ride on top of such cars.

Securing Cars

804 (R). Each passenger unit with control cab is provided with two chain wheel blocks for emergency use.

When necessary to set out a car or unit from a passenger train between terminals, in addition to applying hand brakes as required by the rules, wheels must be blocked using these chain wheel blocks.

Position of Cars in Train

807 (R). Rule 807 is modified as follows:
Eliminate "Outfit Cars."

Care must be exercised to insure that outfit cars which are stenciled or tagged for handling only on rear of train, or which, under other provisions of Rule 807 must be handled on rear of train, are so handled.

807 (S). Operating Rule 807 (B) is cancelled.

807 (T). Restrictions contained in Operating Rule 807 (D) prohibiting handling of open top cars loaded with certain types of lading next to engine or caboose do not apply to trailers on flat cars, bi-level and tri-level cars, except that flat cars containing rail trailers with load exposed, such as flat bed or stake body trailers, must be not nearer than the second car from engine or caboose.

When practicable, open top loads covered by tarpaulins must be entrained not less than five cars from engine.

807 (U). Automobiles, trucks or tractors loaded on flat cars or multi-level auto racks must be entrained not less than five cars behind the engine. If practicable, such cars must be entrained ahead of open top cars containing coal, coke, pumice, sand or any other abrasive material. If this cannot be done, such cars must be entrained not less than five cars behind any open top car containing abrasive material.

807 (V). The following aluminum center-flow covered hopper cars, loaded or empty, must be entrained at rear of train, not more than 15 cars from rear:

SN 5501 to 5510, inclusive.

These are cylindrical covered hoppers and do not have complete center sill.

807 (W). Cars loaded with phosphorous, or cars placarded "Caution—Residual Phosphorous," must be handled as near to rear of train as possible, but not nearer than sixth car from occupied caboose, length of train permitting.

807 (X). When moving in trains, empty flat cars 85 feet or more in length must not be coupled to diesel unit, whether operating or dead in tow.

Units Dead in Train

807 (Y). Foreign line, government, export or commercial diesel units, Union Pacific yard-switcher units of any type or Union Pacific road-switcher units of Alco or Baldwin type, to be moved dead in train must be separated from each other and from the engine by not less than five cars and must be entrained not more than 30 cars behind the control unit. Waybill instructions must be carefully checked and unless modified in writing must be complied with. In the absence of instructions relative to speed, a speed of 35 MPH must not be exceeded with yard-switcher, or 45 MPH with road-switcher units described above dead in train.

Inspection of Trains

810 (R). Location of hot box detectors shown on page 16. Crews of trains passing hot box detectors must be particularly alert to observe change of signal indications in case hot box is discovered on their train.

Installation of hot box detectors and the instructions contained in this rule in no way relieve members of crew, operators or others from compliance with rules relative to watching train, inspection of their train, or inspection of other trains.

When advised by dispatcher of suspected hot journal, train must stop immediately and journal must be inspected. If this journal is of normal temperature, before proceeding, all other journals on both sides of the car just ahead of and just behind the car reported, must be hand felt. Train dispatcher must be notified of result of inspection.

811 (R). Referring to Operating Rule 811 (E):

On turbine or diesel locomotives, wheels with flat spots two inches or longer are condemnable and when discovered, conductor or engineer must immediately report to train dispatcher and he governed by his instructions.

811 (S). When a car is set out account hot box, all fire in box must be extinguished. Dirt, gravel or snow must be placed on top of box at back end over top of dust guard retainer opening. If dry chemical fire extinguisher available, contents of one bag should be thrown into journal box and lid closed until fire extinguished. Pad lubricator must be removed when practicable and any remaining fire extinguished. Journal box lid must be left closed. Conductor must make thorough inspection of car body before and after attention is given to hot box to insure there is no further danger of fire.

811 (T). Operating Rule 811 (A) is changed to read:

"When leaving initial station and intermediate stops, freight trains must not exceed 6 MPH for the first train length, unless proceed signal is received from trainmen, or it is known that all members of the crew are aboard the train."

Exhaust Gases

812 (R). When trains are stalled in snow of sufficient depth to restrict dissipation of exhaust gases from Waukesha engines, such engines must be stopped, and to avoid possible delay in getting them stopped, they should be stopped by pressing "stop" button in electric lockers.

Passenger Service

834 (R). Train service employes and chair car attendants must have vestibule side and trap doors closed until passenger train stops at stations and before starting from stations.

Passenger trainmen may open vestibule side and trap doors to get on and off moving equipment to handle switches and perform other duties except at passenger stations.

Engine Service

872 (R). Operating Rule 872 is amended to read as follows:

When an engine consisting of two or more units is to be moved in yards, around enginehouses, or between stations without cars, if unit at each end is equipped with control cab, engine must be operated from leading unit in direction of movement unless the movement is protected by a trainman.

874 (R). Operating Rule 874 (A) is cancelled.

875 (R). Referring to Operating Rule 875 and Air Brake Rule 1003, when a locomotive equipped with operative safety control feature is left unattended, hand brakes need not be set on units unless engines are shut down.

This does not modify the requirements of Air Brake Rule 1044 (B).

876 (R). Rule 876 is amended to read as follows:

Engineers must not permit any unauthorized person to handle

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876 (R) (Continued)

the locomotive. The fireman, when competent, may handle the locomotive when in road freight service under the close supervision of the engineer, the engineer being responsible. The fireman must not be permitted to handle the locomotive in yard service or in road passenger service, except in case of emergency.

Track Restrictions

899 (S). Freight cars 85 feet or more in length must not be handled on curves in excess of 16 degrees except as follows:

Where movement is authorized by an officer, these cars may be handled on curves of more than 16 degrees but not exceeding 20 degrees at speed not exceeding 4 miles per hour. A member of crew must watch movement closely, prepared to give stop signal if any indication of failure to safely negotiate the curve. Particular attention must be given to lateral movement of coupler, as critical point of movement on curve develops when coupler approaches maximum lateral movement permitted by coupler opening.

Overhang at end of these cars is greater than on other cars and clearances must be watched closely when handling on curves in excess of 16 degrees.

899 (T). Engines must not go on any industrial trestle.

High and Wide Cars

900 (S). California Public Utilities Commission General Order 26-D and Nevada Public Service Commission Order in Case No. 1159 cover 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, except as indicated below.

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 entrained at least 5 cars distant from both the caboose and the engine, provided, however, that the provisions of this sub-section shall not apply to the transportation of rail open top cars of highway trucks or trailers, either loaded or unloaded.

Notifying Train Employes

(7) A train order shall be delivered to every train containing any car the lading on which extends laterally in excess of 5' 5 1/2" 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 employes are prohibited from riding on any such cars.

(Continued in Next Column)

900 (S) (Continued)

(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 Employes

(9) Yard supervisors shall be given notification sufficiently in advance of the arrival of the cars, the lading on which extends laterally in excess of 5' 5 1/2" from center line of car, to enable them to take necessary precautions to safeguard employes in yard.

Observance of Cars by Employes

(10) Employes 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.

(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, must notify their supervisors 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, must make immediate report so that protection can be given.

The Public Utilities Commission of the State of California, and the Public Service Commission of the State of Nevada, have granted permission for the operation of "High-Cube" cars of a maximum height of 17 feet from top of rail to top of running board, within the State of California between California-Nevada state line and San Bernardino, via Daggett and Barstow, and within the State of Nevada.

The following conditions will govern the handling and movement of such cars in California and Nevada:

1. The crew of each train containing freight cars herein authorized to be operated shall be informed by an appropriate train order that the consist of the train includes freight cars of such excess height and that members of the train crew are forbidden to ride on top of any such cars.

2. Any yard crew required to handle freight cars herein authorized to be operated shall be notified by its supervising officials of the presence of such cars in said yard.

3. Appropriate instructions shall be issued to all road and yard crews forbidding them to ride on the top of the cars herein authorized to be operated.

Station Service

910 (R). Last sentence of Operating Rule 910 is changed to read as follows:

They must see that train bulletin boards are kept in a neat condition and bear such information regarding trains as required by instructions or by law.

Air Brakes

1001 (R). Hostlers must know before moving an engine that adequate air pressure is being maintained and that air brake equipment is functioning properly. Application and release test of independent brake must be made and in addition to noting brake cylinder pressure on gauge, visual inspection must be made to know that brakes apply when independent brake valve is in application position.

Engines must be stopped before moving onto a turn-table, and before entering enginehouse or servicing facilities where elevated tracks or pits are used.

At locations where units are cut into or out of an engine, it must be known that air brake hoses are coupled, that air is cut in and that brakes are operating properly on all units before any movement is made.

At terminals where hostler relieves incoming engineer, brakes must be tested with independent brake valve immediately after engine is detached from train to insure that brakes are operating properly.

Movement of engines at enginehouse, servicing or maintenance facilities must not exceed 5 miles per hour.

SPECIAL RULES—FIRST SUBDIVISION

BOULDER CITY BRANCH

Train Registering Exceptions

83 (R). At Yermo, first-class trains will register by registering ticket.

Yard Limits

93 (R). 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.

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

Movements on Yard and Other Tracks

93 (T). At Yermo, trains yarded on old main track must stop to clear No. 1 track. Trains yarded on No. 1 track must stop to clear old main track.

Target on west switch displays red indication when switch is lined for old main track.

Flag Protection

99 (U). On Boulder City Branch, between 6 A.M. and 5 P.M. daily except Saturday and 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). In territory shown below, when main track is impassable or before obstructing or in any way rendering it impassable or unsafe and there are not enough men to provide flag protection as prescribed by Maintenance of Way Rule 99 (E) and perform the work, protection as prescribed by Rule 99 (F) must be provided, after which all members of the gang may assist in the work. Foreman must maintain lookout for trains and if a train approaches, he must go toward it and flag it with hand signals:

Boulder City Branch;
Blue Diamond Spur.

Public Crossings

103 (R). All trains and engines must stop and be preceded by a member of the crew over the following public crossings:

Blue Diamond Spur—Main highway, when shoving cars over highway.

Switches and Derails

104 (T). Referring to Special Rule 104 (R).

No. 10 turnouts are installed at: Yermo—West switch, old main track.

104 (U). 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 derailing position.

104 (V). At Sloan, when switching on siding, switch to spur at east end of siding will be lined for spur, to act as derail.

At Arden, normal position of switch at tail track is for west leg of wye and must be left in this position after being used.

At Blue Diamond, switch to runaway track must be kept lined and locked for runaway track and all switching movements made toward this track.

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

Centralized Traffic Control

266 (S). Boulder City Branch trains need not receive Clearance Form B at Las Vegas as required by Operating Rule 266.

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

267 (R). At Las Vegas, when westward dwarf signal at west end of passenger station or westward high signal just west of west passenger siding switch displays Stop aspect, freight train may pass signal to enter icehouse track without stopping, provided the switches are properly lined for movement and proper hand signal is received from trainman or yardman, but movement must be made at restricted speed. Trainman or yardman must receive permission from dispatcher before lining switch for icehouse track.

267 (S). Eastward freight trains leaving Las Vegas will, unless otherwise directed, use drill track and leave yard at extreme east switch.

Automatic Train Stop

458 (R). If ATS becomes inoperative on westward passenger train between Las Vegas and Yermo, train dispatcher must be notified from first point of communication.

Power Operated Derail

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 Operating Rule 527 or 528, derail switch and selector lever on derail switch must also be hand operated.

Exchanging Signals and Inspection of Trains

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

Arden
Sloan
Kelso

Switching Cars with Air Brakes Cut In

804 (T). At Las Vegas, when switching on lead, main track, or old main track at east end of yard, 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, unless air brakes are cut in and operative on the 10 cars next to engine.

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804 (U). At Blue Diamond, if necessary to move to main track in doubling train together, air must be coupled on all cars and terminal test of air brakes required by Air Brake Rule 1025 must be made to determine if air brakes are operative before starting double over. After double over has been completed and brake pipe is fully charged as indicated on caboose gauge on rear of train, air brake test must be made in accordance with Air Brake Rule 1025.

Use of Hand Brakes

804 (V). In addition to complying with Operating Rule 804 (A), hand brakes must be set on cars as follows:

Location	Requirements
Las Vegas	Sufficient hand brakes must be set to keep cars from moving but not less than three hand brakes must be set on east end of trains or cuts of cars left standing on any track.
Kelso	Sufficient hand brakes must be set to keep cars from moving but not less than ten hand brakes must be set on west end of train left unattended on any track with or without engine attached.
Yermo	Sufficient hand brakes must be set to keep cars from moving but not less than six hand brakes must be set on all freight trains arriving Yermo unless out going crew or yard crew takes charge of train on arrival. In such cases, out going crew or yard crew must apply required hand brakes if engine is detached. Sufficient hand brakes must be set to keep cars from moving but not less than six hand brakes must be applied on east end of cars on all tracks at Yermo and on Lend-Lease tracks.

Position of Cars in Trains

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

Inspection of Trains

811 (U). In addition to making inspection of train as often as practicable, per Operating Rule 811, freight trains must be inspected as follows:

Westward freight trains with either dynamic brake or pressure maintaining feature NOT in operation must stop at Dawes and remain standing 10 minutes to cool wheels.

When a westward freight train stops at any station between Cima and Kelso, trainmen from front and rear of train must make such walking inspection of train as time will permit, but must be at engine or caboose when train is ready to proceed. Second paragraph of Rule 811 and Rule 811 (A) will not apply.

Engine Service

875 (R). Train or engine crews desiring to eat at Kelso must notify dispatcher as much before arrival as practicable, but not later than at Kelso initial switch.

While crew is eating, engine must be left on train with air coupled and in addition, a member of crew, mechanical employe, or road officer must remain on engine at all times.

Track Restrictions

899 (R). Unless specifically authorized, gas turbine electric locomotives or 5000 HP DE locomotives must not be operated on branch lines or industry tracks without authority from dispatcher or other officer. Operation of these units should be restricted to main track, sidings and yard tracks necessary for the movement of trains and the servicing of the units.

No engines are permitted to operate on the following tracks:

Boulder City —Machine Shop track 7.

Blue Diamond—In building at board plant, track 2.

(Continued in Next Column)

Close Clearances

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
FIRST SUBDIVISION		
M.P. 267.25	Bridge	Side.
M.P. 250.69	Bridge	Side.
M.P. 243.96	Bridge	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.

Air Brake Rules

1029 (R). Running air tests as required by Air Brake Rule 1029 must be made by passenger trains nt:

Cima—Eastward and westward;

1030 (R). Inspection required by Air Brake Rule 1030 (C) must be made on all trains at Las Vegas.

In making this air brake test on passenger trains when consist of train is not changed, following procedure will be followed:

1. Arriving engineer will, after stop has been made, immediately release the train brakes.
2. Upon receipt of proper signal, outgoing engineer will make a 20-pound service brake pipe reduction and check brake pipe leakage.
3. Upon receipt of proper signal, automatic air brakes will be released.

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, when retaining valves are to be used or when an angle cock has been turned or air hose separated.

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

1042 (R). Retaining valves must be used on all trains as follows:

1. All loaded cars Blue Diamond to Arden.
2. All passenger trains Cima to Kelso.
3. All freight trains Cima to Kelso handled by locomotives with dynamic brake or pressure maintaining feature not in operation must use retaining valves on all cars.

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

Maximum tonnage per operative brake in freight service, Cima to Kelso, is 80 tons.

Between Kelso and Sands when train is being handled by locomotive with dynamic brake not in operation, westward freight trains averaging 55 tons or more per operative brake must not exceed 30 MPH from Kelso to Sands.

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

1042 (S). The following will govern use of retaining valves on freight trains when handled by locomotives with dynamic brake and pressure maintaining feature in operation on descending grade, Cima to Kelso:

(Continued on Next Page)

(a)

1750-2400 HP	2500-4800 HP	4900-6900 HP	7000 or more
1150 tons or less averaging not more than 60 tons per operative brake: None.	2300 tons or less averaging not more than 60 tons per operative brake: None.	3450 tons or less averaging not more than 60 tons per operative brake: None.	4600 tons or less averaging not more than 60 tons per operative brake: None.
Over 1150 tons and averaging not to exceed 60 tons per operative brake: One retaining valve must be used for each 50 tons in excess of 1150 tons but not less than 25 retaining valves must be used.	Over 2300 tons and averaging not to exceed 60 tons per operative brake: One retaining valve must be used for each 50 tons in excess of 2300 tons but not less than 25 retaining valves must be used.	Over 3450 tons and averaging not to exceed 60 tons per operative brake: One retaining valve must be used for each 50 tons in excess of 3450 tons but not less than 25 retaining valves must be used.	Over 4600 tons and averaging not to exceed 60 tons per operative brake: One retaining valve must be used for each 50 tons in excess of 4600 tons but not less than 25 retaining valves must be used.
Averaging more than 60 tons per operative brake: Retaining valves must be used on all cars in train.	Averaging more than 60 tons per operative brake: Retaining valves must be used on all cars in train.	Averaging more than 60 tons per operative brake: Retaining valves must be used on all cars in train.	Averaging more than 60 tons per operative brake: Retaining valves must be used on all cars in train.

Note: On westward freight trains exceeding 70 tons per operative brake retaining valves must be used on all cars in train Cima to Kelso with retaining valves on all loads placed in heavy holding position.

- (b) Dynamic brake must be placed in service and tested for proper operation between M.P. 309 and M.P. 292.
- (c) In applying tables in paragraph (a) above, dynamic brake must be operative on number of units necessary to equal horsepower shown at top of column.
- (d) When use of retaining valves is required, these valves must be used consecutively from head end of train.
- (e) Additional retaining valves must be used in accordance with provisions of Air Brake Rule 1042, when in the judgment of the engineer or conductor, use thereof is necessary.
- (f) Conductor must advise engineer number of cars, total tonnage, average tons per operative brake and location of loads and empties in train.

SPECIAL RULES—SECOND SUBDIVISION

**ANAHEIM, LAKEWOOD, SAN PEDRO,
PASADENA AND GLENDALE BRANCHES**

Markers and Rear End Lights

19 (U). Referring to Operating Rule 19 (F):
Oscillating rear end light on passenger trains will not be used within switching limits of LAUPT between Pasadena Junction and Union Depot.

21 (E). Southern Pacific extra trains need not display white classification lights between Bartolo and Puente Junction.

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

The use of engine whistle and bell must be minimized while moving through cities on the Anaheim, Pasadena and San Pedro Branches.

Train Registering Exceptions

83 (R). Trains registering at Los Angeles are not required to register at East Yard.

At Yermo, first-class trains will register by registering ticket.

Starting Trains

84 (R). Rule 8, LAUPT Operating Rules is amended to read:

"8. TRAINS WILL BE STARTED AS FOLLOWS:

- A. Conductor will secure release from Stationmaster, Assistant Stationmaster or Mail Foreman.
- B. Signal to proceed will not be given until passenger clearance light displays 'green'. (This light is located on train shed above loading platform.)
- C. Conductor will immediately push train starter button, after which he will signal enginemen to proceed.
- D. Engineers will start train only on signal from trainmen."

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

Yard Limits

93 (S). Yard limits include:
Crestmore —Crestmore to Pedley;
Whittier Jct.—Entire Anaheim Branch;
Paramount —Lakewood;
Los Angeles —Glendale and Pasadena Branches and to M.P. 8.3 on San Pedro Branch.

Movements on Yard and Other Tracks

93 (T). At Yermo, trains yarded on old main track must stop to clear No. 1 track. Trains yarded on No. 1 track must stop to clear old main track.

Target on west switch displays red indication when switch is lined for old main track.

93 (U). At Los Angeles (East Yard), all trains, yard and engine movements in both directions must stop at Stop sign before entering curve at point opposite Union Pacific bus garage on diesel shop running lead, and herder or hostler attendant will precede movement around curve.

All train and engine movements on coach run around track will stop at Stop sign before fouling coach yard lead at east end of coach yard.

(Continued in Next Column)

93 (V). Before starting yard movement in either direction between Santa Fe Avenue and Olympic Boulevard, member of crew must ascertain from yardmaster at "A" yard that there are no conflicting movements in the area.

Yard movements on two parallel tracks between Santa Fe Avenue and cross-over between 14th and 15th Streets must use track to the right in direction of movement. Cars must not be left standing on these tracks when to do so would interfere with normal yard movements.

Eastward movements must stop at Stop sign at Santa Fe Avenue near dividing switch in red and green side and ascertain that there are no conflicting movements in or out of Butte Street yard before proceeding.

93 (W). At L. A. Junction yard, before fouling lead or adjacent tracks, member of crew must receive authority from L. A. Junction yardmaster.

93 (X). Southern Pacific and Union Pacific operate jointly over Anaheim branch between Colima and Fullerton, under provisions of Rule 93.

Between Fullerton Jct. and Fullerton, assigned hours of operation are as follows:

SP crews—12:01 A.M. to 11:59 A.M.

UP crews—12:01 P.M. to 11:59 P.M.

If necessary to use main track between Fullerton Jct. and Fullerton outside of assigned hours, movements must be protected as prescribed by Rule 99.

Trains or engines going beyond Whittier must have Clearance Form 2643 before leaving Whittier Jct.

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. Special Rule 98(S).
M.P. 33.0	S.P.		C.T.C. Signals.
Puente Jct. (M.P. 17.8)	S.P.		C.T.C. Signals.
Bartolo (M.P. 11.2)	S.P.		C.T.C. Signals.
Mission Tower	A.T.&S.F.		Interlocking. Rule 609.
Redondo Jct.	A.T.&S.F.		Interlocking. Rule 609.
Violet Alley, Los Angeles (100 ft. east of Santa Fe Ave.)	A.T.&S.F.	U.P.	Member of crew must protect crossing U.P. old main track.
Violet Alley, Los Angeles (North leg of wye)	A.T.&S.F.	A.T.&S.F.	Member of crew must protect crossing Santa Fe lead track.
Santa Fe Ave., Los Angeles	A.T.&S.F.	A.T.&S.F.	U.P. trains and engines stop. Member of crew protect two crossings.
15th St., Los Angeles	A.T.&S.F.		Stop signs.

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98 (R) (Continued)

Location	Railroad Crossed or Junction With	Trains Which Have Precedence	How Governed
SAN PEDRO BRANCH			
Hobart (M.P. 3.1)	A.T.&S.F.	A.T.&S.F.	Interlocking. Rule 609.
M.P. 3.6 M.P. 4.6-C M.P. 4.8-C	L.A. Jct. Ry.	U.P.	Semi-automatic Interlocking. L.A. Jct. Ry. engines stop and member of crew protect crossings.
South Industry Joint U.P.-S.P. Lead	Bethlehem Steel	U.P.-S.P.	Stop sign. U.P.-S.P. 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 member of crew protect crossing.
M.P. 5.1	S.P.		Automatic Interlocking. Rule 612.
M.P. 7.4	S.P.		Automatic Interlocking. Rule 612.
M.P. 11.2	S.P.		Automatic Interlocking. Rule 612.
M.P. 17.4	S.P.		Stop signs. Rule 98 (A).
M.P. 21.7	S.P.		Interlocking. Special Rule 609 (R).
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. Member of crew protect crossing.
Henry Ford Boulevard (M.P. 23.2)	Drawbridge		Interlocking.
Permanente Co. Spur (M.P. 23.52)	U.P.		Stop sign. Member of crew protect crossing.
PASADENA BRANCH			
Ave. 33 (M.P. 2.7) Highland Park (M.P. 5.4)	A.T.&S.F.	A.T.&S.F.	Gate. Special Rule 98 (T).
ANAHEIM BRANCH			
M.P. 0.1	S.P.		C.T.C. Signals.
M.P. 15.5	A.T.&S.F.	A.T.&S.F.	Interlocking. See Instructions in phone box near derails.
Anaheim Sugar Spur (M.P. 19.0)	A.T.&S.F.	U.P.	A.T.&S.F. trains and engines stop and member of crew protect crossing. U.P. trains and engines approach prepared to stop unless crossing is clear.

98 (S). 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.

98 (T). On Pasadena branch, track occupancy indicators have been installed at AT&SF crossings Avenue 33 (M.P. 2.7) and Highland Park (M.P. 5.4).

When indicator displays "UNOCCUPIED" indication, gate may be lined against AT&SF and movement over crossing may be made at once.

When indicator displays "OCCUPIED" indication, train or engine must wait for change of indication. After waiting five minutes, if indication has not changed to "UNOCCUPIED" indication, flag protection must be provided in both directions on AT&SF, after which

(Continued in Next Column)

98 (T) (Continued)

gate may be lined against AT&SF and train or engine may then move over crossing.

After movement over crossing is completed, gate must be restored to its normal position against Union Pacific movements.

98 (U). 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 (V). 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.

Flag Protection

99 (U). On Anaheim Branch, between 6 A.M. and 5 P.M. daily except Saturday and 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). In territory shown below, when main track is impassable or before obstructing or in any way rendering it impassable or unsafe and there are not enough men to provide flag protection as prescribed by Maintenance of Way Rule 99 (E) and perform the work, protection as prescribed by Rule 99 (F) must be provided, after which all members of the gang may assist in the work. Foreman must maintain lookout for trains and if a train approaches, he must go toward it and flag it with hand signals:

- Crestmore Branch;
- Anaheim Branch;
- Pasadena-Glendale Branch.

99 (W). 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.

Public Crossings

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

- City of Industry —Railroad Street;
- Manuel Lead —Sepulveda Boulevard;
- Pasadena —Lincoln Avenue; Colorado Boulevard.

103 (T). Automatic crossing gates are in service, Turnbull Canyon Road, M.P. 17.2, between switches City of Industry.

If necessary for train stopped in siding to cut crossing, cut will be made clearing aluminum stripes on rails each side of crossing. Crew member can raise gates by operating switch key control box located on instrument house west of crossing. Gates will again lower when switch key is removed. Black switch key control box keyed for Union Pacific and Southern Pacific switch key.

103 (U). On Glendale Branch, all trains and engines must approach and pass over San Fernando Road and Fletcher Drive very carefully, keeping sharp lookout for street traffic.

103 (V). 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.

Not more than ten cars including cabooses may be handled over this crossing.

103 (W). The city of Los Angeles has placed the following restrictions on trains and engine movements over Olympic Blvd. and Lemon Sts. in vicinity of Alameda Freight Terminal:

(1) 7:00 A.M. to 8:00 A.M., one locomotive in each direction and one drag one way of not in excess of 10 cars.

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103 (W) (Continued)

(2) 8:01 A.M. to 9:30 A.M., one locomotive in each direction and one drag one way of not in excess of 15 cars.

(3) 4:45 P.M. to 5:45 P.M. (Not to use crossing at all.)

(4) 3:30 P.M. to 4:44 P.M.; also 5:46 P.M. to 6:00 P.M., a total of one locomotive in each direction and one drag in each direction of not in excess of 15 cars each.

(5) 6:30 A.M. to 6:30 P.M., no movements may block the crossing for a total period of time in excess of 6 minutes out of any 15 minute interval.

Yardmasters as well as crews must see that these restrictions are complied with.

103 (X). At North Main Street, Los Angeles, between Pasadena Jct. and Dayton Ave. tower, marker posts indicate the limits of time-out crossing signal circuits. When stop is to be made approaching Main Street, train or engine must stop before passing marker posts. If necessary to stop after crossing Main Street, stop must be made beyond marker posts in order to release automatic gates. After stop has been made, any further movement toward the crossing must be made in compliance with Rule 103 (C).

103 (Y). At Manuel, train crossing Sepulveda Blvd. on Manuel lead must stop clear of Sepulveda Blvd. to open gates at the Veteran's Administration grounds. Gates must be closed and locked after movement is completed.

103 (Z). On Anaheim Branch, all trains and engines must be prepared to stop at Harbor Blvd. near Fullerton, M.P. 17.3.

Switches and Derails

104 (T). Referring to Special Rule 104 (R):

No. 10 turnouts are installed on dual controlled switches as follows:

- Yermo —West switch, old main track.
- M.P. 160.27 —West switch, Lend-Lease Yard.
- Riverside —West switch, siding.
- Whittier Jct. —Anaheim Branch switch.
- M.P. 3.75 —Cross-over and switch from No. 2 main track to yard lead.
- M.P. 3.47 —Switch, west end of "A" Yard, from No. 2 main track to yard lead.
- Downey Road —M.P. 2.82—From No. 3 auxiliary track to Hobart lead.
- Downey Road —M.P. 2.75—Cross-over from No. 2 main track to No. 3 auxiliary track.
- 9th St. Jct. —No. 1 main track diverging switch to Butte Street Yard.
- 7th St. Yard —No. 1 main track—Dual control switches, east and west end of yard at Olympic Blvd. and 1st Streets.

104 (W). On Pasadena Branch, switch point derail is located in main track 150 feet north of Lincoln Avenue at M.P. 11.

On Pasadena Branch, spring point derail is located in main track at M.P. 8.07, and must be locked in derailing position when not being used. Eastward trains and engines trail through derail. Westward trains and engines must stop and line derail.

104 (X). On Glendale Branch, derail located on main track just below run around switch at Glendale.

Normal Position of Switches

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

- Los Angeles Coach Yard—All switches at east end (including round house switch and Washington Blvd. lead switch)—for tail track;
- Santa Fe Ave.—Old U.P. main line switch—for Butte Street yards.
- Colima Jct.—For S.P. Yorba Linda branch.
- Fullerton Jct.—For U.P. Anaheim branch.

104 (Z). At Mead Transfer, main track switch to west leg of wye and main track switch to Mead Yard may be left lined as last used. All trains and engines must approach these switches prepared to stop unless switch is properly lined.

Centralized Traffic Control

266 (T). All westward trains must receive Clearance Form B at Riverside.

266 (U). Eastward freight trains originating at East Yard and yard engines destined beyond Vail Avenue may move from East Yard to East Los Angeles on C.T.C. signal indication and must receive Form B or Form C Clearance at East Los Angeles Telegraph Office.

Anaheim Branch trains need not receive Clearance Form B at East Los Angeles as required by Operating Rule 266.

Clearance Form 2643 received by Anaheim Branch trains at East Los Angeles confers the same authority on Anaheim Branch as when received at Whittier Junction.

267 (T). In CTC territory between Riverside Junction and Pasadena Junction, push-buttons have been installed in telephone booths of relay houses at dual control switch locations for emergency use when dispatcher cannot clear signals or when a Stop indication is displayed and communication has failed.

Two push-buttons are installed at each location, one marked "East" and the other marked "West" and operation of button for proper direction will, when conditions permit, cause signals to clear for movement. The following will govern:

Emergency push-buttons installed in telephone booths of relay houses at dual control switch locations may be used in an attempt to obtain proceed signal indication only when so instructed by dispatcher, or when communication fails.

When instructed by dispatcher to use emergency button and a clear indication is received, train or engine may proceed in accordance with signal indications.

When stopped by a Stop indication and communication has failed, proper push-button may be used, and if a Clear indication is then displayed, train or engine may proceed, but must move at restricted speed to next Stop signal (A signal) in advance, keeping close lookout for track car or obstruction. A report must be made by wire to superintendent and chief dispatcher at first stop or first open telegraph office.

Automatic Train Stop

458 (R). If ATS becomes inoperative on westward passenger train between Yermo and Daggett, or on eastward passenger train between Los Angeles and Riverside Junction, train dispatcher must be notified from first point of communication.

Block Signals

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

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. siding	0
From U.P. main track to A.T.&S.F. eastward main track	0
From U.P. 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
(Continued on Next Page)

605 (R) (Continued)

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 S.P. crossing M.P. 21.7, San Pedro Branch, when a train or engine is stopped by an interlocking signal, 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 an interlocking signal at Signal Bridges 3, 4, or 6, between Dayton Avenue and Mission Tower and signal does not change to proceed indication, a member of crew must communicate with signalman at Dayton Avenue or Mission Tower.

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

At Bell, when making movements from siding or Bethlehem Steel Corporation spur to main track, trainmen must be governed by track occupancy indicator. If track occupancy indicator displays Unoccupied 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 home signals.

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

609 (U). Home signal at east end Los Angeles River bridge at Redondo Tower 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.

Exchanging Signals and Inspection of Trains

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

- Riverside Pomona
- Mira Loma City of Industry
- Ontario Pico

Riding Engines and Cars

802 (W). A yardman or trainman need not ride on leading foot-board of engine, as follows:

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

On main tracks, between East Los Angeles and Kenosha Auto Transport spur, M.P. 9.1;

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.

(Continued in Next Column)

802 (W) (Continued)

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

802 (X). A yardman must take a conspicuous position on rear car of movements between locations named:

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

802 (Y). At Tube Sales Co., East Los Angeles, all movements must stop before entering building.

802 (Z). Open top cars loaded with motor vehicles must not be moved into East Los Angeles freight house account restricted overhead clearance.

Switching on Kenosha Auto Transport Trackage, Montebello

803 (S). Tracks at Kenosha Auto Transport facilities have capacity of five 85-foot cars each to clear gate. There is heavy descending grade from main track to gate. Before attempting to place cars at this location, movement must stop on main track and must remain standing on main track until gate is opened.

Due to close clearance created by curvature and long cars, west track (right hand track entering from main track) must, when practicable, be spotted first.

Use of Hand Brakes

804 (V). In addition to complying with Operating Rule 804 (A), hand brakes must be set on cars as follows:

Yermo — Sufficient hand brakes must be set to keep cars from moving but not less than six hand brakes must be set on all freight trains arriving Yermo unless out going crew or yard crew takes charge of train on arrival. In such cases, out going crew or yard crew must apply required hand brakes if engine is detached.

Sufficient hand brakes must be set to keep cars from moving but not less than six hand brakes must be applied on east end of cars on all tracks at Yermo and on Lend-Lease tracks.

Riverside — Sufficient hand brakes must be set to keep cars from moving but not less than one hand brake must be set on west end of cars left standing on any track.

East Yard — Sufficient hand brakes must be set to keep cars from moving but not less than six hand brakes must be set on east end of all trains or cuts of cars left standing on any track.

East Yard Coach Yard — Sufficient hand brakes must be set to keep cars from moving but not less than one hand brake must be set on east end of cars left standing on any track and, in addition, wheels must be blocked.

Butte Street Yard Sufficient hand brakes must be set to keep cars from moving but not less than three hand brakes must be set on Alameda Street end of cuts of cars delivered to Southern Pacific.

Switching Cars with Air Brakes Cut In

804 (X). That part of Operating Rule 804 (C) referring to oil loading or unloading facilities or incline tracks applies only at the following locations:

- Rioco Richfield Oil Loading Platform

804 (Y). Equipment being handled in East Los Angeles Freight House tracks, and equipment being set at trailer ramp, East Yard, must be handled with air brakes cut in and operative.

Other Methods of Securing Cars

804 (Z). In addition to use of hand brakes and other precautions outlined in Special Rule 802 (V), All Subdivisions, rail clamps are in use at following locations:

(Continued on Next Page)

804 (Z) (Continued)

- East Yard —Trailer ramp tracks;
- East Los Angeles —Freight house tracks 2 and 3;
- Alameda St. —Auto dock, old freight house;
Alameda team tracks 14 and 15

These rail clamps are a wheel block and are equipped with metal staff and red metal flag, and will be placed and removed by personnel handling loading or unloading.

Where rail clamps are in use, cars so protected must not be coupled to until rail clamps are removed.

Position of Cars in Trains

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

Track Restrictions

899 (R). Unless specifically authorized, gas turbine electric locomotives or 5000 HP DE locomotives must not be operated on branch lines or industry tracks without authority from dispatcher or other officer. Operation of these units should be restricted to main track, sidings and yard tracks necessary for the movement of trains and the servicing of the units.

No engines are permitted to operate on following tracks:

- Riverside —Mission spur track serving A. F. G. Co. yard except engines may use to east end of packing house;
- San Pedro Branch —M.P. 10.20 over trestle Dayton Foundry Co. spur;
- Anaheim Branch —M.P. 2.6 over trestle on Old Sunkist Packing Co. spur.

Note: Referring to all subdivisions Special Rule 899 (S):

Los Angeles Terminal area has a great number of curves in excess of 16°, and before switching freight cars 85 feet or more in length into industry tracks, it must be known that the curvature is less than 16°.

Close Clearances

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 engines or car is close at
SECOND SUBDIVISION		
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. 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.)
SAN PEDRO BRANCH		
Anaheim Boulevard	Highway Viaduct	Top.
M.P. 8.52	Bridge	Side.
PASADENA BRANCH		
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.

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

(Continued in Next Column)

900 (R) (Continued)

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.

All trains and engines must stop before passing under Anaheim Street Viaduct at M.P. 22, San Pedro Branch, and all persons are prohibited from riding on top of cars while passing under viaduct.

900 (V). Sign reading "Trains Must Not Operate Beyond This Sign" is located 877 feet west of switch to Novack Scrap Yard, Champagne Spur; no train or engine movement may be made beyond this sign. All cars must be left east of sign.

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