

# UNION PACIFIC RAILROAD COMPANY

## SOUTH-CENTRAL DISTRICT



### California Division

# Special Rules No. 8

## Effective Tuesday, June 15, 1948

Superseding Special Rules No. 7,  
Los Angeles and Utah Divisions.

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

**F. C. PAULSEN,**  
General Manager

**B. F. WELLS,**  
Assistant General Manager

**V. W. SMITH,**  
General Superintendent

**D. F. WENGERT,**  
Superintendent

Code	Description	Rate	Notes
1300	...	...	...
1301	...	...	...
1302	...	...	...
1303	...	...	...
1304	...	...	...
1305	...	...	...
1306	...	...	...
1307	...	...	...
1308	...	...	...
1309	...	...	...
1310	...	...	...
1311	...	...	...
1312	...	...	...
1313	...	...	...
1314	...	...	...
1315	...	...	...
1316	...	...	...
1317	...	...	...
1318	...	...	...
1319	...	...	...
1320	...	...	...

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

Employes listed below and other employes as may be designated 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 Hostler 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 a 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.

3 (R). Salt Lake City yard will be operated under Mountain Standard Time, except that watches of yard crews making movements on train order authority outside of yard limits on California Division must be set to Pacific Standard Time.

6 (R). Water from water columns at Black Rock, main line water columns at Milford, water columns at Carp, Rox, Moapa, Las Vegas, Desert, Kelso, Yermo, San Bernardino, Pomona, Ontario and East Yard must not be used to fill water cars nor outfit tenders nor for drinking or culinary purposes.

6 (S). Following sidings not shown on time-table:

Station	M.P. Location	Car Capacity of Siding etc., See Rule 6 (A)
Riter	773.7	98 P
Clover	731.7	102 P
Strong	655.5	99 P
Stine	449.5	70 P
Kyle	434.1	73 P
Byron	378.1	74 P
Crystal	368.6	72 P

7 (R). 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.

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.

10 (R). Rule 10 (H) is cancelled.

A sign reading "Reduce Speed" and showing by figures the maximum speed permitted, placed on engineer's side of track, indicates that the track one mile distant is in condition for a speed of not more than indicated by the "Reduce Speed" sign.

10 (R). Continued.

A sign reading "Resume Speed" placed on engineer's side of track indicates that reduced speed location has been passed.

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

The flagman will give proceed signal when rear of train has passed the "Resume Speed" sign.

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

10 (S). 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."

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 Rule 102.

When head end protection is required, engineer will immediately display red headlight. Except in CTC territory, when occupying main track in meeting an opposing train, red headlight will be displayed until opposing train dims its headlight in accordance with 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 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). Rule 17 (C) is cancelled.

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

17 (T). When a steam or Diesel-electric locomotive not displaying back-up headlight is standing or moving about yards at night under conditions not requiring display of markers, a red light must be displayed on rear of locomotive.

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.

19 (R). Oscillating red rear end light on passenger trains will be designated as a night signal in accordance with Rule 9 and will 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.

Red 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 Rule 99 nor any other rule.

19 (S). Markers displaying yellow instead of green lights as prescribed in Rule 19 (B) will be used.

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

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

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

30 (R). Within the corporate limits of towns and cities named below, the engine bell must be rung continuously while the train or engine is moving:

Salt Lake City	Riverside	Ontario
	Pomona	Los Angeles

83 (R). First-class trains are not required to register at East Yard. Operator will register for such trains, obtaining the information from train dispatcher.

Trains operating between Lund and Iron Mountain need not register at Iron Springs.

83 (S). Information required by Rule S-83 need not be obtained by trains entering CTC territory.

83 (T). Trains moving between Los Angeles Union Station and Downey Road must identify trains between those stations. Trains displaying signals must sound one long and two short blasts of engine whistle to all trains and engines on both tracks between those stations.

84 (R). At Salt Lake City, passenger trains must not leave passenger station without a signal from stationmaster or passenger director.

84 (S). To synchronize the starting of freight trains where signals cannot be seen with helper on the rear end, the following method will be used:

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

89 (R). At Bly, westward train holding main track with orders to meet or wait for eastward train, must stop to clear west cross-over switch near M.P. 48, and eastward train holding main track with orders to meet or wait for westward train, must stop to clear east switch of the east storage track at Signal 484.

89 (S). At Telegraph Road, eastward train on main track holding order to meet or wait for westward train, must stop west of Signal 50 until opposing train has arrived or wait order has expired.

93 (R). At Salt Lake City, Provo Subdivision main track between Eighth South Street and Second South Street may be used as a siding, complying with Rules 93, 99 and 105.

Provo Subdivision eastward trains must come to stop at Stop sign west of cross-over switches at Eighth South Street.

At Salt Lake City, unless otherwise directed, all First Subdivision trains operating via Passenger Line will use west track and Provo Subdivision trains will use east track on Third West Street between Second South and Eighth South Streets.

At Salt Lake City, freight train movements may be made through passenger yard only on track 10; other trains with freight equipment may use any track through passenger yard except when handling high or wide equipment. Caboose of 3700 and 3800 class must not be moved under umbrella sheds on track 9.

93 (S). Following branches are operated under requirements of Rule 93:

Eureka	Silver City	Mammoth
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93 (T). 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.

96 (R). Unless otherwise provided, clearance must be received by all trains at Provo, Lynndyl, Caliente and by westward trains at Riverside.

Trains are not required to receive clearance as per Rule 96 at initial stations which are not train order offices.

A clearance received at Lynndyl or Riverside by the only section of a regular train or a clearance received at Caliente by any train, will confer the same authority as when received at its initial station.

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

Location	Railroad Crossed or Junction With	Trains Which Have Precedence	How Governed
Salt Lake City. (M.P. 36.4, Freight Line)	S.L.G.&W.	U.P.	All trains stop.
Salt Lake City. (M.P. 36.6, Freight Line)	D. & R.G.W. 2 tracks	U.P.	All trains stop.
Salt Lake City. (M.P. 781.2, Freight Line)	W.P.		Automatic Interlocking. Rule 615.
Salt Lake City. (M.P. 37.8)	D. & R.G.W.		Interlocking. Rule 609.
Salt Lake City. (M.P. 38.0)	D. & R.G.W.		Interlocking. Rule 609.
Salt Lake City. (M.P. 38.4)	D. & R.G.W.	U.P.	Cabin Interlocking. Rule 616.
Near Burton. (M.P. 39.7)	D. & R.G.W.	U.P.	All trains stop.
Near Cushing. (M.P. 47.7)	Gauntlet track D. & R.G.W.	U.P.	Automatic Interlocking. Rule 615.
Near Sandy. (M.P. 48.6)	D. & R.G.W.	U.P.	Semi-automatic crossing protection. Rule 616.
Near Geneva. (M.P. 757.3)	D. & R.G.W. 2 tracks		Automatic Interlocking with movable point frogs. Rule 98(S).
Ironton. (M.P. 0.67)	D. & R.G.W.		Interlocking. Rules 98(T) and 609.
Garfield. (M.P. 767.1)	B.&G.	U.P.	Semi-automatic Interlocking. Rule 616.
Ontario (M.P. 38.1)	S.P.	U.P.	S.P. trains and engines stop.
Soto St. Jct. (M.P. 2.2)	U.P.		Special Rule 509(U).
Bridge Jct.	U.P.		Special Rule 98(U).
Redondo Jct.	A.T.&S.F.		Interlocking.

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Location	Railroad Crossed or Junction With	Trains Which Have Precedence	How Governed
Violet Alley, Los Angeles (100 ft. east of Santa Fe Ave.)	U.P.-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. Flagmen protect two crossings unless given proceed signal by 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.	Special Rule 98(X).
(M.P. 4.6-C)	L.A. Jct. Ry.	U.P.	L.A. Jct. Ry. engines stop and flagmen protect crossings.
(M.P. 4.8-C)	L.A. Jct. Ry.	U.P.	L.A. Jct. Ry. engines stop and flagmen protect crossings.
Douglas Jct.	U.P.		Stop sign.
Anaheim Team Track 85 (M.P. 22.36-C)	U.P.		Stop sign. Flagman protect crossing.
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>Pasadena Branch:</b>			
Main St. (M.P. 1.4) Ave. 20 (M.P. 2.1)	L.A. Ry. L.A. Ry.	U.P. 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.	A.T.&S.F. A.T.&S.F.	U.P. trains and engines stop, throw target and wait three minutes before moving over crossing.

Location	Railroad Crossed or Junction With	Trains Which Have Precedence	How Governed
Fair Oaks Ave. (M.P. 9.0)	P.E.	U.P.	U.P. trains and engines stop and flagman protect 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 Geneva, automatic interlocking M.P. 757.3, release section is located 500 feet east of westward interlocking home signal.

Westward trains occupying approach section of interlocking in advance of release section sign for a period of five minutes or more will automatically release interlocking, and home signals will change to Stop indication. To again clear home signal, westward trains will proceed into release section and home signals should change to Proceed indication after interval of two minutes. If signal does not change in two minutes, Rule 615 and instructions in signal case will govern.

Westward U.P. trains or engines standing between switches at Geneva will cause signals to display Stop indication for D.&R.G.W. trains and opposing U.P. movements. To clear signals, west switch of Geneva siding must be lined for the siding.

Member of crew of Diesel switch engine without cars or Sperry rail-detector car or operator of bus or track car must place selector levers in HAND position before using this crossing.

98 (T). At Ironton, interlocking signal governing movements from Columbia Steel Plant is located on left side of track. Upper arm governs movements to U.P. yard at Provo; lower arm governs movements to D.&R.G.W. westward main track.

One long sound of engine whistle must be used by U.P. engines when calling for signal.

98 (U). Eastward trains and engines moving from Santa Fe Ave. to Ninth Street Jct. must be governed by hand signals from switchtender at Bridge Jct.

98 (V). At Glendale Jct., trainmen of trains moving from Pasadena Branch must communicate with signalman at Mission Tower, who will release electric lock on switch; after lock has been released, trainman must operate switches and be governed by indication of signals. Trainmen of trains moving to Pasadena

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98 (V). Continued.

Branch must operate switch at east end of cross-over.

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 (W). 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 (X). All trains and engines entering main track from Vernon Lead or from south leg of L.A. Jct. Ry. wye, located west of crossing, must proceed westward and clear eastward home signal, west of crossing, before making reverse movement.

All trains and engines entering main track from L.A. Jct. Ry., north leg of wye, located east of crossing, must proceed eastward and clear westward home signal, before making reverse movement.

All trains and engines entering main track from Flood Control track east of crossing, or from General Motors track west of crossing, must send flagman to crossing and protect movement.

All trains and engines entering main track at 44th Street Spur, located 25 feet west of L.A. Jct. Ry. crossing, must be preceded over L.A. Jct. Ry. crossing by flagman to protect movement.

99 (R). Last paragraph of Rule 99 is changed to read:

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

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

This does not change the requirements of Rule 99 (F).

Each caboose must be equipped with a red lantern for use as required by Rule 19 (C).

The equipment of each engine must include a red lantern as required by Rule 869.

Last sentence of Rule 870 is cancelled.

99 (S). Rule 99 is changed as follows:

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

99 (T). 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). Trains may be relieved from protecting against following extra trains by use of example (7) of train order Form E only on branches named:

Fairfield	Pioche	Anaheim
Fillmore	Mead Lake	
Iron Mountain	Boulder City	

99 (V). Except where protected by interlocking, trains and engines entering, leaving or occupying main track between Downey Road and Alhambra Avenue must be protected by flagman, and when such movements make it necessary to cross over on double track such movements must be protected in both directions. When stop is made, flagman must go back immediately a sufficient distance to insure full protection. Exception: At Downey Road, if signals indicate Proceed, trains and engines may move through cross-over without flagging in either direction.

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

103 (S). Where reference is made in Rule 103 (C) to rear of tender of engines, this requirement will also apply to rear end of Diesel engines.

103 (T). 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 (U). 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 Junction;

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.

103 (V). 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 Freight Terminal;

San Pedro Branch between East Yard and Southgate.

103 (W). At Salt Lake City, movement must not be made over main cross-walk in front of passenger station unless proceed signal is received from station or yard employe or movements preceded by a flagman.

Switching movements over main cross-walk must not exceed four MPH.

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

Pleasant Grove —Main highway crossing on Wahsatch Oil spur and at Hardy beet spur;

—United Concrete Conduit spur;

Bunker —Main highway crossing on spur track;

Lehi —Main highway crossing on Sugar Factory spur;

Nephi —Main street at Plaster Mill spur;

Arrollime Spur —Highway 91;

McCarran Spur —Highway 91;

Near Ennis —M.P. 3.15 on Crestmore trackage;

Glendale Branch —Fletcher Drive;

—San Fernando Road;

Manuel Hold Yard —Sepulveda Boulevard;

Pasadena —Lincoln Avenue;

—Colorado Boulevard;

—All crossings north of Colorado Boulevard.

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

103 (Y). At Fullerton, M.P. 17.3, South Spadra Road, trains must be prepared to stop.

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

104 (R). At Salt Lake City, Second South Street, unless proceed signal is received from switchtender, First and Provo Subdivision trains must remain clear of the following points:

Leaving passenger depot, remain clear of passenger lead. This requirement to include yard engines only when a first-class train is due.

Entering Salt Lake City, remain clear of Second South Street. This requirement to include yard engines.

Entering Second South Street westward from Pedro 1 or Pedro 2 tracks, remain clear of cross-over just east of Second South Street. This requirement to include yard engines.

104 (S). At Salt Lake City, trains and engines must not foul cross-over switches between North Temple Street and Second North Street without first receiving proceed signal from switchtender. This requirement to include yard engines only when a first-class train is due.

104 (T). At Salt Lake City, eastward trains on main track approaching Fifth North Street must stop to clear Fifth North Street unless proceed signal is received from switchtender.

Unless otherwise directed, all westward trains and engines moving from west yard or Toonerville yard via Freight Line will head through Main 1 pocket either via Toonerville lead or via cross-over just north of Fifth North Street. It will not be necessary to receive a proceed signal from switchtender-herder at Fifth North Street for movements via this route.

All other westward train and road engine movements including D.&R.G.W. switch engines must stop to clear Fifth North Street unless proceed signal is received from switchtender-herder.

Unless otherwise directed, all eastward trains and road engines, including D.&R.G.W. interchange cuts, moving to North Yard trackage from the Freight Line, must head through cross-over near North Temple viaduct to Pedro 2, stopping to clear Fourth North Street unless proceed signal is received from switchtender-herder at Fifth North Street.

All trains and road engines moving to roundhouse or North Yard trackage from points south of Fourth North Street must stop to clear that point unless proceed signal is received from switchtender-herder at Fifth North Street.

Road engines moving from roundhouse lead must sound whistle signals as follows:

Roundhouse to passenger depot .....	o —
Roundhouse to Thirteenth North Street .....	o o o o
Roundhouse to east or west lead, Fifth North Street .....	—

104 (U). Spring switches are located at:

\*Buena Vista —West switch;  
Cedar City —Entrance to loop track;  
Carp —Stem of wye;  
Kelso —Stem of wye;  
Yermo —East and west end of passenger siding;  
Riverside —West end of double track;  
Telegraph Road —Main track switch;  
Soto Street Jct. —Eastward main track;  
Soto Street Jct. —West end of Alameda freight terminal lead;  
Glendale Jct. —West end of cross-over.

\*Spring switch equipped with facing point lock.

Spring point derails are located as follows:

Boulder City Branch —M.P. 21.1;  
Cima —West end of caboose run-around track.

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

Provo —Switch leading to Ironton, for Ironton spur;  
Tintic —Wye on Eureka Branch, for Silver City main track;  
Iron Springs —Switch at stem of wye, for west leg of wye;  
Cedar City —Spring switch at entrance to loop track, for westward trains;  
Pioche —Highline switch, for highline;  
McCarran Field —Switch at west end of run-around track near highway crossing, for run-around track.

104 (W). All power-operated switches between Salt Lake City and Daggett except east and west ends Leith siding and east end Ute siding are equipped with No. 14 turn-outs.

105 (R). At Buena Vista, Freight Line ends at the switch of the east cross-over which leads from siding to Passenger Line.

105 (S). At Buena Vista, lower unit of Signal 7784 governs eastward movements from main track through siding. An eastward train which is to take siding must stop west of Signal 7784 before lining switch, and must be governed by Rule 509.

D-151 (R). At Salt Lake City, except when view is obscured, trains and engines may move against the current of traffic between Fifth North Street and passenger station without being preceded by flagman, upon receipt of proper signal from switchtender.

At Riverside, trains and engines may move against current of traffic within yard limits without being preceded by a flagman, except when a first-class train is due or when view is obscured.

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

251 (R). Between Downey Road and Alhambra Avenue, trains and engines will run with reference to other trains in the same direction by block signals, the indications of which will supersede the superiority of trains. In making such movements care must be exercised to avoid delay to first-class trains.

300 (R). Staff system is in effect between Santa Fe Avenue and Bridge Jct. Possession of staff is authority for a train or engine to proceed to the next staff station, complying with Rule 93 and the indications of interlocking signals at Redondo Tower.

If staff cannot be removed from machine, member of crew must communicate with switchtenders at Bridge Jct. and Santa Fe Avenue; after which, a flagman must be sent ahead and after a wait of five minutes after departure of flagman, train or engine may follow at a safe distance through the block.

Between Bridge Jct. and east derail at Redondo Tower and between Santa Fe Avenue and west derail at Redondo Tower, movements may be made without possession of staff, complying with Rule 93.

402 (R). CTC starting signals are located as follows:

Milford —Signals 5763, 5765, 5767, 5776 and 5778;  
Caliente —Signals 4589, 4593, 4596 and 4598;  
Las Vegas —Signals 3339, 3341, 3344, 3346 and 3348;  
Kelso —Signals 2353 and 2358.

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 Caliente, train stopped on main track or depot passing track by either Signal 4593 or 4598 must remain clear of fouling point of depot passing track until signal displays Approach or Proceed indication, or until authorized by train dispatcher to proceed when preceded by a flagman.

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.

402 (S). Clearance Form B will not be required by trains entering CTC territory from Cedar City or Boulder City Branches, Blue Diamond Spur or Sloan Quarry tracks.

Such movements will be governed by signal indications and instructions from train dispatcher.

405 (R). Eastward and westward freight trains at Milford and Caliente must remain clear of yard lead until train dispatcher is contacted and must be governed by his instructions and signal indication.

405 (S). At Caliente, main track switch at west end of yard, and cross-over switch at west end of drill track, are power-operated and controlled by train dispatcher at Las Vegas. Dwarf signal governs movement to main track. When illuminated "S" is displayed on signal unit located on top of signal case near cross-over switch, member of crew must operate push button on east side of signal case to cause switches to line for cross-over movement and dwarf signal to display Proceed indication.

405 (T). Trains or engines moving from Cedar City or Mead Lake Branches to siding or engines moving from house track at Cima, must receive permission from train dispatcher before occupying siding.

405 (U). 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.

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

405 (W). At Yermo, trains or engines moving from Track 1 through cross-over to main track must receive permission from CTC operator at Yermo before occupying main track.

494 (R). Before using a switch equipped with high-type electric lock, the switch operating lever must be left in its socket and no attempt made to operate switch until indicator at the lock shows that lock has released. This indication is provided in one of the following ways:

1. Indicator changes to Clear position;
2. The word "CLEAR" or "UNLOCKED" appears;
3. Small light on face of electric lock which flashes during operation of time element changes to a steady light.

After indication is received showing that lock has released, lock handle must be moved by trainman to extreme left position.

Lifting, or attempting to move switch operating lever BEFORE this has been done will result in binding of the lock rod, which will prevent movement of lock lever.

509 (R). At Riverside, a switch indicator is installed on east side of signal case of Signal 575.

Movements against current of traffic from eastward main track to single track must stop before fouling westward main track; after which, movement may continue if switch indicator and Signal 575 display Proceed indication. If switch indicator displays Stop indication, flag protection must be provided against movements on westward main track before movement may continue. If Signal 575 displays Stop indication, flagman must be sent ahead to next signal displaying Proceed indication.

509 (S). At Whittier Jct., switch leading from Anaheim Branch is equipped with electric lock. Instruction for operation of switch are posted at the switch.

509 (T). At Soto Street Jct., when a train or engine is stopped by Signals 20, 22 or B-23, a flagman must be sent ahead and train or engine must follow flagman at restricted speed to the next signal.

509 (U). At Willow Jct., switch from Manuel Hold Yard to San Pedro Branch main track is equipped with electric lock controlled by signalman at Thenard interlocking. Home Signal 215 and approach signal located at M.P. 20.7 govern westward movement on San Pedro Branch main track over this switch and to interlocking signal at Thenard.

Dwarf signal governs movement from Manuel Hold Yard to San Pedro Branch main track at Willow Jct. and to interlocking signal at Thenard.

Trains or engines moving from Manuel Hold Yard to San Pedro Branch main track at this switch must communicate with signalman at Thenard tower who will release electric lock. Trainman will then line switch for movement to San Pedro Branch main track and if there is no conflicting movement, signal will change to permit movement.

When signalman at Thenard tower is unable to release electric lock he will instruct trainman to operate time release which will, if there is no con-

509 (U). Continued.

flicting movement, release electric lock after three minute time interval and switch may then be lined for movement to main track.

If, after switch is opened, dwarf signal continues to display Stop indication, Rule 520 will govern.

Eastward trains or engines entering Manuel Hold Yard must occupy the 66-foot "unlocked section" of track immediately west of Willow Jct. main track switch in order to release electric lock.

When Signal 215 displays Stop indication, trains or engines governed by that signal must send a flagman ahead and after waiting 10 minutes may proceed at restricted speed to the next signal.

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

WO Tower for siding . . . . . ———— 0

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 ————

Downey Road:

For main track . . . . . ————

For San Pedro Branch . . . . . ———— 0

For Bridge Jct. . . . . 0 ———— 0

For middle track . . . . . 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 ————

Pasadena Jct., passing microphone at First Street:

For Union Station . . . . . 0 ————

To and from Glendale Jct. . . . . ————

For Alhambra S.P. coach yard or to turn equipment or engine . . . . . 0 0 ———— 0

For S.P. coach yard . . . . . 0 0 0 0 ————

Ninth Street Jct., passing microphone between Fourth and Sixth Streets:

For main track . . . . . ————

For Bridge Jct. . . . . ———— 0

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.

At Bridge Jct., when a train or engine is stopped by an interlocking signal at east end of Los Angeles River Bridge, it may proceed to dwarf signal at east end of Los Angeles River Bridge when proceed signal is received from switchtender. Switchtender at Bridge Jct. will obtain permission for such movements from towerman at Redondo Tower before giving proceed signal.

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).** When a train or engine is stopped by a Stop indication of an interlocking signal at Ninth Street Jct., and signal does not change to Proceed indication, a member of the crew must communicate with switchtender, and if instructed by switchtender, switches may be operated by hand and a member of the crew must precede the movement and give proceed signal from the crossing when safe to proceed.

Switches at Ninth Street Jct. are dual control. To operate switch by hand, selector lever must be moved to HAND position. Levers must be returned to normal position when movement is completed.

**609 (U).** Trains moving to Chamberlin Spur must communicate with switchtender at Bridge Jct., and be governed by signal indication.

Trains moving from Chamberlin Spur or from Griffith Spur to Soto Street Jct. must communicate with switchtender at Bridge Jct., and movement must be made through cross-over between Ninth Street Viaduct and Ninth Street Jct.

**609 (V).** At Bell, in performing switching between the home and approach signals, cars must not be left standing on clearing 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 Proceed 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 (W).** Home signal at east end Los Angeles River bridge governs 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 movements over A.T.&S.F. crossing at Redondo Tower.

**721 (R).** On multiple unit Diesel engine not more than four men may ride in cab of leading unit. On freight train when cab is occupied by four men, head brakeman will ride in cab of trailing unit.

When necessary for head brakeman to ride in cab of trailing unit on multiple unit Diesel freight engine, he may not occupy engineer's seat and must not tamper with or operate any of the switches or valves, nor place feet on dashboard or windshield.

Unauthorized persons, including deadhead train or engine crews, must not occupy cab of trailing unit of Diesel engine on freight or passenger train.

**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 to fresh air intake of passenger cars and care must be exercised at all times to see that there is sufficient ventilation where such engines are operated.

**733 (S).** Dangerous gases, present in exhausts from Diesel locomotives, Clarkson Steam Generator, or engines of Waukesha air conditioning equipment may cause incapacitation or fatalities if in sufficient concentration as might result when a Diesel locomotive is stopped in a tunnel. These gases are not generally associated with the obnoxious odors given off by the exhausts of gasoline engines, and cannot be readily detected even in dangerous quantities.

When a Diesel locomotive is stopped in a tunnel under conditions preventing prompt movement, Diesel engines must be promptly shut down, Clarkson Steam Generator shut off, and passenger cars equipped with Waukesha air conditioning systems must have both the ice engine and engine generator shut off. Fresh air intakes on such cars must be closed, and circulating fans shut off.

When Diesel propulsion engines are shut off, air brakes must be fully applied and, in addition, a chain must be placed securely at front and rear of a traction wheel for blocking and sufficient hand brakes must be applied throughout the train to prevent movement should air brakes leak off.

**733 (S).** Continued.

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.

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

**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.

**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 until cars are vacated.

**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(a) (1)** A car requiring car certificates and "Explosives," "Dangerous" or "Poison Gas" placards under the provisions of these regulations shall not be transported unless such freight car is at all times placarded and certificated as required by these regulations. Placards lost in transit shall be replaced at next inspection point and those not required must be removed.

**BE 589 (a) (2)** 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 (b) (1)** 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 (b) (2)** When transporting a car placarded "Explosives" in terminals, yards, side tracks, or siding, such cars shall be separated from the engine by at least one non-placarded car.

**BE 589 (b) (3)** Closed cars placarded "Explosives" shall have doors closed before they are moved.

#### Switching of Cars Containing Dangerous Articles

**BE 589 (c) (1)** In switching operations where use of hand brakes is not necessary, a placarded loaded tank car, or a draft which includes a placarded

Continued on Page 9.

**802 (S). Continued.**

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 (c) (2) 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 (d) (1) 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 Train**

BE 589 (e) (1) At all terminals or other places where trains are made up by crews other than road crew accompanying the outbound movement of cars, the railroad shall execute a consecutively numbered notice showing the location in the freight train 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 Train of Cars Containing Explosives**

BE 589 (f) (1) In a train either standing or during transportation thereof, a car placarded "Explosives" shall, when the length of the train permits, be not nearer than the sixteenth car from both the engine or occupied caboose; and shall when the length of the train will not permit them to be so placed be as near as possible the middle of the train. When moved in a train engaged in "pickup" and/or "setoff" service it shall be placed not closer than the second car from the engine or second car from occupied caboose, except as provided in section 589 (i) (1), to avoid unnecessary switching and handling of such car enroute. For the purpose of these regulations a train will be considered in "pickup" and/or "setoff" service when one or more cars are picked up and/or set off at more than three different stations enroute. Local trains engaged in loading and/or unloading of LCL merchandise in their trains will be considered engaged in "pickup" and "setoff" service.

BE 589 (f) (2) In a freight train or mixed train either standing or during transportation thereof, a car placarded "Explosives" 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. Placarded loaded tank car.
4. Engine.
5. Car placarded "Poison Gas."
6. Wooden under-frame car.
7. Loaded flat car.
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 of the gas-burning type.
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 permitted in Section 589 (i) (1)).

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

BE 589 (g) (1) In a train either standing or during transportation thereof, a placarded loaded tank car shall not, when the length of train permits, be nearer than the sixth car from the engine or occupied caboose, but in no instance nearer than the second car from the engine or occupied caboose unless the remainder of train consists of placarded loaded tank cars or the train is engaged in "pickup" and/or "setoff" service. For the purpose of these regulations a train will be considered in "pickup" and/or "setoff" service when a car or cars

**802 (S). Continued.**

are picked up and/or set-off at more than three different stations enroute. Local trains engaged in loading and/or unloading of LCL merchandise in their trains will be considered engaged in "pickup" and "setoff" service.

BE 589 (g) (2) 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 under-frame car.
7. Loaded flat car.
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 of the gas-burning type.
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 Train of Cars Placarded "Poison Gas" or Containing Poison Liquids Class A**

BE 589 (h) (1) In a train either at rest or during transportation, a car placarded "Poison Gas" or containing poison liquid Class A shall not be next to other freight cars placarded "Explosives" or cars placarded "Dangerous."

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

BE 589 (i) (1) A car placarded "Poison Gas" or containing poison liquids Class A in drums, tanks or bombs, or a car placarded 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.

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

BE 589 (j) (1) 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 (j) (2) 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 sec. 589 (i) (1).

BE 589 (j) (3) When a car containing explosives, Class B, or dangerous articles other than explosives requiring labels (not including Class A poison gases or liquids) is moved in a mixed train and such car is not occupied by an employe of the carrier, placards must be applied to the car as required by these regulations.

BE 589 (k) (1) 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 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.

802 (T). U.P. flat cars 55519, 56000, 56052 and 56228 are equipped with gas cylinders (high pressure flasks), to transport compressed gas, and are assigned between Wilmington and Pocatello-Council Bluffs.

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**802 (T). Continued.**

This gas is highly inflammable and extreme care must be exercised switching in yards and handling in trains. In case of leakage, no open flame should be permitted in the vicinity of the cars, and cars must be handled in accordance with Bureau of Explosives regulations.

**802 (U).** At Garfield, American Smelter & Refining Company yard commences at a point 250 feet west of the first switch leading into smelter from Union Pacific highline extending from Lake Point. Trains and engines using these tracks will be governed by D.&R.G.W. Rule 93 reading: "Within yard limits, the main track may be used clearing first-class trains as prescribed by the rules.

"Second and inferior class trains, extra trains and engines must move on all tracks within yard limits prepared to stop unless the track is seen or known to be clear."

**802 (V).** At Iron Springs, the main track must not be used in switching, weighing cars or making up trains. West leg of wye must not be used for storage of cars.

**802 (W).** Sanders or injectors must not be used over track scales and engines or cars must not stand on dead rail over scale deck or platform of track scales. 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 scale, speed must not exceed two MPH and four MPH must not be exceeded over scales in any case. Cars on live rail must not be moved by other cars or engines standing 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.

**804 (R).** Stock 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 in accordance with Rule 804 (A), if there is any possibility of their moving.

**804 (S).** At Provo, track 60, located between joint U.P.-Utah Railway yard and turntable, between storehouse and enginehouse, is descending grade of 1.2 per cent toward turntable and is equipped with derail, which must be locked in derailing position when not being used. Cars, engines or other equipment must not be stored nor left standing between derail and turntable.

At Ironton in making delivery to long interchange track, cars must be shoved into this track instead of pulled to avoid fouling D.&R.G.W. westward main track at the south end. Air brakes must be cut in and operative on all cars when handling cuts to or from Provo yard and Columbia Steel Co. yard. All brakes other than power type must be set with club.

**804 (T).** At Bauer, when making movements on any track with loads below the engine, air brakes must be cut in and operative or sufficient hand brakes must be set on the low end of cut to control movement of any cars which may become uncoupled.

**804 (U).** At Iron Mountain, in setting empties on any track, sufficient hand brakes must be set on low end to hold cars and in no case less than four hand brakes per track, number of cars permitting.

At Iron Mountain, on loads set on any track, sufficient hand brakes must be set on low end to hold the cars but in no case less than eight hand brakes per track, number of cars permitting.

From Iron Mountain to Iron Springs ore trains must not exceed 65 cars when handled with steam engine and must not exceed 90 cars when handled by Diesel-electric engine with dynamic brake in operation, and all cars in train must have air brakes operative and piston travel must not exceed 8½ inches.

At Jericho, in setting out cars for ore loading, hand brakes must be set on each car.

**804 (V).** At Caliente, when engine is detached from passenger train, sufficient hand brakes must be set on head end of westward trains and on rear end of eastward trains, to hold cars until engine is again attached.

When engine is detached from westward passenger train, enginemen will deliver engine to hostler on adjacent yard track. When engine is detached from

**804 (V). Continued.**

eastward passenger train, enginemen will move engine 15 feet from train were hostler will take charge.

**804 (W).** At Caliente, cars switched into any track must have hand brakes set to secure them. This applies in all cases, whether cars are cut off in a switching movement or shoved into any track.

Trainmen of all freight trains arriving Caliente will set sufficient hand brakes to properly secure train but in no case must there be less than 10 hand brakes set, length of train permitting. All brakes other than the power type must be set with club.

Crews will be held responsible for properly securing cars in yard, especially when cars are coupled to other cars already standing. Sufficient hand brakes must be set on all cars standing to hold them if other cars are coupled to them. It is not permissible to kick or drop loads westward nor kick empties westward on a clear track. In no case may empties be permitted to run free over 10 car lengths. In switching house track at Caliente, cars must not be switched to nor left standing on main track.

Track 55 leading from wye track to turntable is descending grade of one per cent toward turntable. This track is equipped with derail, which must be locked in derailing position when not being used. Cars, engines or other equipment must not be stored nor left standing between derail and turntable.

**804 (X).** 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.

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

**804 (Y).** 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," "B," 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.

**805 (R).** Rule 805 is cancelled.

**807 (R).** Derricks, rotary snow plows and locomotive cranes must not be handled with less than one tender and one car between machine and locomotive over Fairfield, Pioche and Fillmore Branches.

**807 (S).** Open top or flat cars loaded with pipe, rail, lumber, poles or other lading which has tendency to shift must not be entrained immediately behind Diesel-electric locomotive.

**807 (T).** Stock cars containing horses may be handled next to Diesel engine.

**808 (R).** At Kelso, eastward passenger train requiring helper engine will place helper engine on rear of train when train consists entirely of steel under-frame cars; otherwise helper engine will be placed on head end of train. When helper engine is coupled on, slack will be stretched to know that coupling is made.

Passenger train with no head end work will stop rear of train to clear cross-over in front of station and helper engine will be brought out through this cross-over. Helper engines for other passenger trains will be brought out at extreme west end of yard.

When stopping, engineer on road engine will leave brakes applied until after helper engine is coupled on and train is ready to start.

After helper engine is attached to rear of train, start will be made on hand signal from member of train crew, and lead engine will sound two long blasts of engine whistle when ready to start.

After coupling onto rear of train, helper engineer will make a reduction of automatic air and cut out brake valve and will know before starting that air brakes are being handled by engineer on road engine.

**808 (S).** At Caliente, Carp and Kelso, helper engines must be placed behind caboose or last car except when train is handling cars listed in Rule 807, in which case helper engine must be placed ahead of train engine.

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## 808 (S). Continued.

In helping train Modena to Crestline, when helper engine is to move to Caliente, helper engine may be placed on head end of train Modena to Crestline. There must be a trainman at rear of train while standing at Crestline and Cima.

811 (R). In addition to making inspection of trains as often as practicable, per Rule 811, freight train handled with steam engine must stop and be inspected at the following points:

Provo	—Eastward and westward;
Nephi or Starr	—Eastward, including trains handled by Diesel-electric engines;
Tintic, Lofgreen or Faust	—Eastward;
Tintic	—Westward;
Black Rock	—Trains handling 5 or more cars of Iron Mountain ore including trains handled by Diesel-electric engines;
Modena or Beryl	—Eastward and westward;
Islen	—Westward;
Rox or Carp	—Eastward and westward;
Desert	—Eastward and westward;
Cima	—Westward;
Elora	—Westward, remain standing ten minutes;
Kelso or Sands	—Eastward;
Kelso	—Westward, including trains handled by Diesel-electric engines;

M.P. 6, Blue Diamond Spur —Eastward, remain standing ten minutes.

Freight train handled by Diesel-electric engine with dynamic brake in operation must stop for inspection at Elora when consist of train exceeds 3500 tons.

Freight train handled by Diesel-electric engine with dynamic brake not in operation must make same inspection as when handled by steam engine.

Moapa turn, when handling sand and rock, must not exceed 30 MPH at any point and must stop at Dry Lake and inspect train.

811 (S). 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.

874 (R). Second paragraph of Rule 874 is changed to read:

“On Diesel-electric through passenger trains that make few or no stops, fireman will remain in control room at all times when train is in motion.”

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

At Kelso, on westward trains, an engineman must be in charge of engine at all times.

875 (S). When Diesel-electric locomotive is left unattended not less than two hand brakes must be set on descending end of units. These hands brakes must be released before attempting to move units.

875 (T). On Diesel switch engine at least one engineman must remain on engine until expiration of shift or assignment, except at lunch periods.

876 (R). Fireman must not handle yard engine in any switching terminal.

879 (R). Blow-off cocks or sludge removers must not be used immediately adjacent to or passing through tunnels.

883 (R). When Diesel power 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 immediately notified.

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

(Note— Tracks which may be used by 0-6-0 type or heavier engine may be used by Diesel switch engine, except trestle tracks at Murray and Midvale smelters.

## 896 (R). Continued.

Single unit Diesel-electric locomotive road switchers with 6-wheel trucks may be operated on all branch main tracks and may be operated on any track not restricted for Consolidation engine.

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

Location	Track	Heaviest Engine Permitted
Salt Lake City . . . . .	South leg of wye . . . . .	2-10-2 (MacArthur type engines with two point suspension engine trucks, 2-10-2 and 800 class engine must be accompanied by road officer).
Officer . . . . .	W. H. Prince Coal Co. trestle . . . . . Egg house . . . . . Allen Steel Co. spur . . . . . W. H. Prince Coal Co. spur . . . . . W. H. Prince Co. gravel spur . . . . . Utah Fire Clay Co. tracks . . . . .	None permitted 0-8-0 0-8-0 Consolidation Consolidation Consolidation
Walton . . . . .	Walton Coal Co. spur . . . . .	Consolidation
Fire Clay . . . . .	Utah Fire Clay Co. tracks . . . . . Woolen Mill spur . . . . .	Consolidation Consolidation
Burton . . . . .	Shell Oil Spur . . . . . Coal yard spur . . . . . Bennett spur . . . . .	Consolidation Consolidation Heavy MacArthur
Huslers . . . . .	Huslers Mill spur . . . . .	Consolidation
Murray . . . . .	Cannery spur . . . . . House track . . . . . Team track . . . . . Diamond Coal & Feed spur . . . . . Murray Elevator . . . . . Phillips Coal spur . . . . .  Brookfield Oil spur . . . . . Morrison-Merrill spur . . . . . Old stock track . . . . .	Consolidation Consolidation Consolidation Consolidation Heavy MacArthur Heavy MacArthur from main track to beginning of trestle Consolidation Consolidation Consolidation
Pallas . . . . .	Tracks 1 and 2 . . . . . Siding . . . . . Short 1 . . . . . Utah Ore Sampler, all tracks Old and new scale and run-around tracks . . . . . Murray Smelter slag track and tracks 5, 6 and 7 . . . . . Other tracks inside Murray Smelter fence . . . . .	Consolidation Consolidation Consolidation Consolidation Consolidation 0-6-0
Atwood . . . . .	U. S. Smelter spur . . . . . Beet spur . . . . .	Consolidation Consolidation
Draper . . . . .	Sand spur . . . . .	Heavy MacArthur
M.P. 781.26 . . . . .	Mellen Sand spur to point 540 feet west of switch . . . . . Beyond point 540 feet west of switch . . . . .	Heavy MacArthur None permitted
Mount . . . . .	Gravel spur, at east end of pit between tracks 1 and 2 . . . . .	None permitted
Cutler . . . . .	Emsco spur, frame trestle . . . . . Emsco spur . . . . .	None permitted 2-10-2

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Location	Track	Heaviest Engine Permitted
Fairfield Branch	All tracks	Consolidation
Lehi	Cereal Mill spur Sugar factory, all tracks	Heavy MacArthur Heavy MacArthur
American Fork	Chipman's spur Pulley spur	Heavy MacArthur Heavy MacArthur
Pleasant Grove	Cannery spur Lumber spur Wahsatch Oil Co. spur United Concrete Conduit spur, beyond derail	Heavy MacArthur Heavy MacArthur Heavy MacArthur None permitted
Hardy	Loading track	Heavy MacArthur (No engine may go beyond 700 feet east of switch)
M.P. 754.8	Cutting plant spur	Heavy MacArthur
Provo	Texas Oil spur Wye	0-8-0 Consolidation
Payson	Sugar factory spurs Stock track	Heavy MacArthur Heavy MacArthur
Nephi	Plaster mill spur and loading track East leg of wye Team track West leg of wye Mill and oil spur Thermoid pit on track 1	Heavy MacArthur Consolidation Consolidation Heavy MacArthur Consolidation None permitted
Levan	Spur	Heavy MacArthur
Small Arms Spur	Coal unloading bin at heating plant building No. 15	None permitted
Lake Point	A.S.&R. spur	Heavy MacArthur
Bauer	Combined Metals Co. trestle All mill spurs	None permitted Heavy MacArthur
Stockton	Gravel pit tracks	Heavy MacArthur
Tintic	Track 2 adjacent Eureka Branch	Heavy MacArthur
Lynndyl	Sand pit tracks	Consolidation
Delta	Hal Oil spur, to point 380 feet from switch	Consolidation
Fillmore Branch	All tracks west of Alfalfa Mill spur	Heavy MacArthur
Cedar City Branch	Iron Springs to Cedar City	Heavy MacArthur
Cedar City	Doolittle track Commissary Spur Lead to Freight House Track 6	Heavy MacArthur Heavy MacArthur Heavy MacArthur
M.P. 472.3	Spur	2-10-2
Pioche Branch	Bridge 0.94 and all tracks west thereof	6000, 6001, 6002 6003, 6007 and light Pacific type
Caliente	Dike track	Heavy MacArthur
Mead Lake Branch	All tracks west of M.P. 0.2	Consolidation
Boulder City	Machine Shop Track 7	None permitted
Henderson	Basic yard, industrial trackage beyond former interchange track	Consolidation
Arden	Blue Diamond spur	Consolidation

Location	Track	Heaviest Engine Permitted
Sloan	U. S. Lime Co. spur	Consolidation
Jean	Two Yellow Pine Mining Co. spurs	Consolidation
Chase	Water track over unloading flume	None permitted
Basin	Trestle on lime quarry spur	None permitted
Colton	Wye tracks	Heavy MacArthur
Riverside	Mission spur track serving A. F. G. Co. yard	None permitted. Diesel switch en- gines may use to east end of pack- ing house
	City of Riverside oil spur Magnolia Ave. spur track	Heavy MacArthur Heavy MacArthur
Crestmore Branch	All tracks	Consolidation
Crestmore Spur	Between Bly and Ormand Quarry All other tracks	Heavy MacArthur Consolidation
Crestmore	Over trestle in plant yard of R.P.C. Company	None permitted
Mira Loma	Tracks within government enclosure	None permitted
Ontario	Cucamonga Cooperative Winery spur (M.P. 39.0) beyond point 75 feet east of frog Cutler-Lobinger Packing Co. spur Packing House Spur at Cypress Ave. General Electric Co. east spur Canneries spur at Campus Ave.	Heavy MacArthur Heavy MacArthur Heavy MacArthur Heavy MacArthur
Pomona	250 feet easterly of Pomona Fruit Growers Exchange track on east side of Exchange Growers building	Consolidation
Whittier	Whittier Citrus Association spur Murphy Packing House spur be- yond point 220 ft. from switch	Diesel switch engines only Diesel switch engines only
Anaheim Branch	All tracks	Consolidation
Glendale Branch	All tracks	Consolidation
Pasadena Branch	All tracks	Heavy MacArthur
South Gate	Three Fibreboard Products Co. spurs	0-6-0
Fallon	Spur track	Consolidation
Hudson	Spur track	Consolidation
Bell	Storage track	Consolidation
Douglas Jct.	Douglas spur	Heavy MacArthur
Clearwater	Macco Lumber Co. spur	Consolidation
Paramount	Southern California Edison Co. spur	Consolidation
Rioco	Two Richfield Oil Co. spurs	Consolidation

At Mira Loma, 3500, 3800 and 3900 class engines must not go on Dixon spur. 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.

MacArthur type or heavier engines must not go on any beet trestle or industrial trestle.

Tracks where heaviest engine permitted is 2-10-2, may also be used by 3800 and 3900 class or Mallet type engines of 3500 and 3600 class.

Tracks where heaviest engine permitted is Consolidation type, must not be used by heavy Pacific type engines.

900 (R). Pennsylvania box cars, series 36987-37090 inclusive, inside length 60 feet 6 inches and height over running board 15 feet 2½ inches. The handling of these cars must be closely watched when movements made over yard, warehouse and industrial tracks and tracks adjacent to umbrella and train sheds at passenger station, to know there is sufficient clearance.

900 (S). 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—
At all stations . . . .	Mail cranes . . . . .	Side.
Salt Lake City North Temple Street Passenger station . .	Viaduct . . . . . Train shed and umbrella sheds . .	Top and side. Top and side. (See note.)
South Temple Street M.P. 38.12 . . . . .	Viaduct . . . . . Overhead steam line . . . . .	Top. Top.
Provo Subdivision		
Pallas . . . . .	Water tank spout . . . . .	Side and top.
Draper . . . . .	Water column . . . . .	Side.
Cutler . . . . .	Water tank spout . . . . .	Side and top.
Lehi . . . . .	Cereal spur buildings . . . . .	Side and top.
M.P. 754.42 . . . . .	Bridge . . . . .	Side.
Provo . . . . .	Water tank spout . . . . .	Side and top.
Payson . . . . .	Water tank spout . . . . .	Side and top.
M.P. 735.76 . . . . .	D.&R.G.W. crossing . . . . .	Side and top.
Santaquin . . . . .	Overhead highway crossing . . . . .	Top.
Starr . . . . .	Water tank spout . . . . .	Side and top.
Nephi . . . . .	Water tank spout . . . . .	Side and top.
Nephi . . . . .	Plaster Mill platform . . . . .	Side.
Mills . . . . .	Water column . . . . .	Side.
First Subdivision		
Garfield . . . . .	Water tank spout . . . . .	Side and top.
Garfield . . . . .	Highway overhead crossing . . . . .	Top.
Lake Point . . . . .	Highway overhead crossing . . . . .	Top.
Erda . . . . .	Water column . . . . .	Side.
Shields . . . . .	Highway overhead crossing . . . . .	Top.
Warner . . . . .	W.P. overhead crossing . . . . .	Top.
Stockton . . . . .	Water column . . . . .	Side.
Faust . . . . .	Water column . . . . .	Side.
Lofgreen . . . . .	Water column . . . . .	Side.
Tintic . . . . .	Water tank spout . . . . .	Side and top.
Tintic . . . . .	Water and oil columns . . . . .	Side and top.
Jericho . . . . .	Water tank spout . . . . .	Side and top.
Lynndyl . . . . .	Two water columns . . . . .	Side.
Delta . . . . .	Water column . . . . .	Side.
M.P. 601.13 . . . . .	Bridge . . . . .	Side.
Black Rock . . . . .	Water column . . . . .	Side.
Milford . . . . .	Two water columns . . . . .	Side.

Location	Structure or Obstruction	Clearance of engine or car is close at—
<b>Second Subdivision</b>		
Thermo . . . . .	Water tank spout . . . . .	Side and top.
Lund . . . . .	Two water columns . . . . .	Side.
M.P. 527.60 . . . . .	Bridge . . . . .	Side.
Modena . . . . .	Oil spout and water columns . . . . .	Side and top.
Acoma . . . . .	Water column . . . . .	Side.
Big Springs . . . . .	Water column . . . . .	Side and top.
M.P. 471.74 . . . . .	Bridge . . . . .	Side.
M.P. 471.46 . . . . .	Bridge . . . . .	Side.
M.P. 471.28 . . . . .	Bridge . . . . .	Side.
M.P. 470.91 . . . . .	Bridge . . . . .	Side.
M.P. 469.95 . . . . .	Bridge . . . . .	Side.
M.P. 469.33 . . . . .	Bridge . . . . .	Side.
M.P. 469.07 . . . . .	Bridge . . . . .	Side.
M.P. 468.06 . . . . .	Bridge . . . . .	Side.
Caliente . . . . .	Water and oil columns . . . . .	Side.
M.P. 458.56 . . . . .	Bridge . . . . .	Side.
M.P. 452.03 . . . . .	Bridge . . . . .	Side.
M.P. 447.89 . . . . .	Bridge . . . . .	Side.
M.P. 444.56 . . . . .	Bridge . . . . .	Side.
M.P. 437.22 . . . . .	Bridge . . . . .	Side.
M.P. 433.47 . . . . .	Bridge . . . . .	Side.
M.P. 431.82 . . . . .	Bridge . . . . .	Side.
M.P. 430.68 . . . . .	Bridge . . . . .	Side.
M.P. 419.30 . . . . .	Bridge . . . . .	Side.
M.P. 409.25 . . . . .	Signal poles . . . . .	Side.
M.P. 409.16 . . . . .	Bridge . . . . .	Side.
M.P. 408.97 . . . . .	Bridge . . . . .	Side.
M.P. 408.24 . . . . .	Bridge . . . . .	Side.
M.P. 407.09 . . . . .	Bridge . . . . .	Side.
M.P. 406.55 . . . . .	Bridge . . . . .	Side.
M.P. 397.32 . . . . .	Bridge . . . . .	Side.
M.P. 397.04 . . . . .	Bridge . . . . .	Side.
M.P. 395.42 . . . . .	Bridge . . . . .	Side.
Moapa . . . . .	Water column . . . . .	Side when on siding.
<b>Third Subdivision</b>		
Ivanpah . . . . .	Water column . . . . .	Side.
M.P. 267.25 . . . . .	Bridge . . . . .	Side.
M.P. 250.69 . . . . .	Bridge . . . . .	Side.
Chase . . . . .	Water tank spout . . . . .	Side and top.
M.P. 243.96 . . . . .	Bridge . . . . .	Side.
M.P. 192.34 . . . . .	Tunnel No. 1 . . . . .	Top.
<b>Fourth Subdivision</b>		
M.P. 57.1 . . . . .	Relay box . . . . .	Side.
M.P. 56.2 . . . . .	Relay box . . . . .	Side.
M.P. 55.90 . . . . .	Highway bridge . . . . .	Side.
M.P. 55.74 . . . . .	Canal syphon wall . . . . .	Side.
M.P. 52.40 . . . . .	Bridge . . . . .	Side.
M.P. 50.7 . . . . .	Relay box . . . . .	Side.
Bly, west cross- over switch . . . . .	Switch indicator . . . . .	Side.
M.P. 34.2 to 33.0 . . . . .	Telegraph poles . . . . .	Side.
WO Tower . . . . .	Lever rod for train order signal . . . . .	Side.
Pomona . . . . .	Signal case . . . . .	Side.
Pomona . . . . .	Signal 320 . . . . .	Side.
Pomona . . . . .	Signal 319 . . . . .	Side.
M.P. 31.95 (Thom- as Street) . . . . .	Iron post barricade . . . . .	Side.
M.P. 30.65 . . . . .	Telegraph poles . . . . .	Side.
M.P. 15.72 . . . . .	Bridge . . . . .	Side and top.
M.P. 15.39 . . . . .	Bridge . . . . .	Side and top.

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Location	Structure or Obstruction	Clearance of engine or car is close at—
<b>Fourth Subdivision</b> continued.		
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.
Soto Street	Signal 24	Side.
M.P. 1.89 (Butte Street)	Bridge	Side.
Los Angeles River	Bridge	Side.
Los Angeles Union Station	Umbrella sheds	Top (800, 3800 and 3900 engines ventilators open). (See note.)
<b>Fairfield Branch</b>		
M.P. 1.60	D.&R.G.W. crossing	Top.
<b>Fillmore Branch</b>		
Fillmore	Water tank spout	Side and top.
<b>Cedar City Branch</b>		
Iron Springs	Water tank spout	Side and top.
M.P. 22.51	Kaiser ore tipple	Side and top.
Cedar City	Water column	Side.
<b>Iron Mountain Branch</b>		
Iron Mountain	All ore tipples	Side and top.
<b>Pioche Branch</b>		
M.P. 0.68	Bridge	Side.
M.P. 20.60	Water tank spout	Side and top.
Pioche	Water tank spout	Side and top.
<b>Mead Lake Branch</b>		
M.P. 5.49	Cut	Side.
Arrowhead spur		
M.P. 3.3	Conveyor, Nevada Mineral Co.	Top.
M.P. 7.75	Cut	Side.
<b>San Pedro Branch</b>		
M.P. 5.10 (Randolph Street)	Trolley wires	Top.
M.P. 8.52	Bridge	Side.
Clearwater (P.E. crossing)		
Thenard	Trolley wire	Top.
	Trolley wire	Top.
<b>Pasadena Branch</b>		
Ave. 21 to Ave. 22	Brick building, pipe and eaves	Side.
M.P. 5.24	Retaining wall	Side.
M.P. 6.1	Fence, concrete railing, lights at bridge	Side.
M.P. 6.2	Guy wire	Side.
M.P. 8.7	Retaining wall	Side.
M.P. 8.09	Highway bridge	Top.
M.P. 8.09	Cross-arms	Side.
M.P. 8.16	Highway bridge	Top.
<b>Glendale Branch</b>		
Forest Lawn Cemetery M.P. 6.3	Gates	Side.

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

900 (T). Framed copies of Chief Engineer's Drawings Nos. 53663, 53664, 54313 and 54398 are posted in yard offices and engineers' rooms.

C. E. Drawing 53663 provides information with respect to the maximum widths and heights of loads that can be handled between Los Angeles and Council Bluffs or Kansas City, either via Denver or North Platte, and through Aspen Tunnel.

The permissible maximum load line as shown on the drawing above a point 3 ft. 3 in. above top of rail is the limit for loads that can be moved between above points and taken through Aspen Tunnel. The permissible maximum load line shown on the print below a point 3 ft. 3 in. above top of rail is due to signals, switch stands, platforms and other structures along the balance of the route. In other words, the permissible maximum load line below 3 ft. 3 in. above top of rail does not refer to Aspen Tunnel.

Attention is called to the table appearing at the right of the diagram showing various heights above top of rail and opposite each height the maximum width of the load that can be handled at that height, when loaded on a car the length of which does not exceed 43 ft. from center to center of trucks.

The maximum published width of 12 feet is the maximum width of load that can be handled, without restrictions, between above points and is limited by wide loads or equipment on adjacent tracks, based on minimum track centers of 13 feet. 12 ft. 6 in. is the maximum width of load that can be moved, with special handling, between the limiting heights as given in the table at the right hand side of the drawing. Advance approval of the General Superintendent Transportation must be obtained for the movement of any shipment having an effective width in excess of 12 feet in order that protection can be arranged for other shipments exceeding 12 feet in width that may be moving in the same territory.

In all cases the measurements are based on symmetrical loads being exactly centered on the car, and it is important to know that loads are so centered. The effective width of an eccentric load is double the maximum extension of the load from the center of the car at any given height above top of rail.

See C. E. Drawing 53664 for dimensions of loads that can be handled between Los Angeles and Council Bluffs through Bear River Tunnel via McCammon and Granger.

See C. E. Drawing 54313 for dimensions of loads that can be handled between Los Angeles and Kansas City through Bear River Tunnel via McCammon, Granger and North Platte.

See C. E. Drawing 54398 for dimensions of loads that can be handled between Los Angeles and Kansas City, through Bear River Tunnel via McCammon, Granger and Denver.

900 (U). A.T.&S.F. 6450 to 6459 inclusive, specially constructed high, wide cars are in service.

These cars must not under any circumstances be handled between Granger and Ogden via Evanston but may be handled to Granger via McCammon and Bear River Tunnel.

Union Pacific 961000 and 561000 series, over-size wing cars, must not be handled between Ogden and Granger via Evanston, but may be handled to Granger via McCammon and Bear River Tunnel.

Union Pacific 661000 and 761000 series, over-size wing cars, may be handled to Granger via Evanston and Aspen Tunnel.

The above over-size wing cars must not be handled on tracks equipped with umbrella sheds.

900 (V). Cars of excess width must not be stored on or moved over tracks 1 and 2 at same time in Milford yard, tracks 1, 2 and 3 at Lund, or tracks 7, 8 and 9 in Caliente yard.

900 (W). (1) California Public Utilities Commission General Order 26-D covers the operation of cars exceeding a maximum height of 15'6" from the top of the rail to the top of the running board; cars exceeding 10'10" but not greater than 11'1" in width, and open top cars containing lading extending in excess of 15'6" in height above the top of the rail or extending laterally in excess of 5'5" from the center line of the car.

(2). The minimum overhead clearance above railroad and street railroad tracks, which are used or proposed to be used for transporting freight cars,

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shall be twenty-two (22) feet six (6) inches. Structures constructed prior to the effective date of this order may be maintained at such clearances as was lawful at the time of construction.

(3). The overhead clearance above top of rail of such tracks located inside of buildings may be reduced to eighteen (18) feet, provided that this clearance shall apply only to tracks terminating within the building, and further provided, that when an overhead clearance of less than twenty-two (22) feet exists on tracks inside such building, all cars, trains, motors, engines or other equipment shall be brought to a stop before entering such building, the conditions provided to require such stop to be approved by the Commission.

(4). Unless otherwise provided herein, overhead clearances authorized in this section are applicable only to tracks on which freight cars having a height not exceeding fifteen (15) feet six (6) inches are transported. Freight cars of a height exceeding fifteen (15) feet four (4) inches, but not greater than fifteen (15) feet six (6) inches shall be permanently marked, stenciled, or placarded as hereinafter required, and such markings maintained in a legible condition reading as follows:

**"This Car  
Excess Height"**

The markings required in this paragraph shall be made permanent on owned cars as soon as practicable with a  $\frac{3}{4}$ " stripe outlining an area not less than seven (7) inches by ten (10) inches, such stripes and lettering to be of a color contrasting with the car body color. 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.

(5). Freight cars not exceeding a height of fifteen (15) feet six (6) inches may be transported without compliance with the requirements of the preceding paragraph of this rule provided that the tracks over which such operations are conducted exhibit throughout the route an overhead clearance of twenty-two (22) feet six (6) inches as required in paragraph (2) of this rule.

(6). Minimum side clearances authorized in this paragraph are applicable to tracks on which freight cars having a width not greater than ten (10) feet ten (10) inches are transported. Freight cars of a width exceeding ten (10) feet ten (10) inches but not greater than eleven (11) feet one (1) inch may be transported for a period of not more than one (1) year after the effective date of General Order No. 26-D which will be until February 1, 1949, provided they shall be permanently marked, stenciled, or placarded, and such markings maintained in a legible condition reading:

**"This Car  
Excess Width"**

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

(7). No movements shall be made of open top cars containing lading extending in excess of fifteen (15) feet six (6) inches in height above top of rail or extending laterally in excess of five (5) feet five (5) inches from center line of car, except as hereinafter prescribed.

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

(9). All open top cars with lading extending laterally in excess of five (5) feet five (5) inches from center line of car or in excess of fifteen (15) feet six (6) inches 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 (6) of this rule.

(10). 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 five (5) cars distant from both the caboose and the engine.

(11). A train order shall be delivered to every train containing any car the lading on which extends laterally in excess of five (5) feet five and one-half (5½) inches from center line of car or in excess of fifteen (15) feet six (6) inches 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.

(12). 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.

(13). Yard supervisors shall be given notifications sufficiently in advance of the arrival of the cars, the lading on which extends laterally in excess of five (5) feet five and one-half (5½) inches from center line of car, to enable them to take necessary precautions to safeguard employes in yard.

(14). Cars on which the lading exceeds fifteen (15) feet six (6) inches in height above top of rail, if otherwise in compliance with these requirements as to width of lading, and the nature of which precludes the probability of employes getting on top of or passing over them are exempt from the conditions contained in the foregoing portion of this rule beginning with paragraph (7), with the exception of paragraph (10).

When closed cars in excess of 15' 6" in height are interchanged between carriers in the State of California, the delivering carrier shall give sufficient advance notice to the receiving carrier that such excess height cars are to be placed on the interchange track as will enable the receiving carrier to comply with the conditions in General Order 26-D.

Below are shown where a number of close clearances exist, and every possible precaution must be taken in the movement of these cars over the railroad and close attention given the cars in yards, and on passing tracks when meeting trains, to know positively there is sufficient clearance on opposite track to clear loads, stopping trains, or yard movements on opposite tracks if necessary, to know positively there is clearance.

Excess width loads must not be moved over main and passing tracks at same time at Riverside, WO Tower, Pomona, Rowland, Montebello, Fruitland and Paramount.

Excess width loads must not be stored on or moved over yard tracks at same time in yards at Las Vegas, Yermo and East Yard, unless there is an intervening track between excess width loads.

Account close clearance, 800, 3800 and 3900 class engines must not be moved at the same time with cars with excess width loads over main track and passing tracks at Paramount, Fruitland, Montebello, Rowland, WO Tower, Pomona and Riverside. This close clearance also applies on all yard tracks at East Yard; between tracks 1, 2, 3, 4, 5 and 6 in Yermo Yard; between tracks 1, 2, 3, 4, 5 and 6 on north side of old main track and between tracks 1 and 2 on south side of old main track at Las Vegas.

Any employe noting a close side or overhead clearance with one of the wide loads, or one of the high cars, should make immediate report so that protection can be given.

Excess width loads must not be stored on or moved over yard tracks in yards where clearance is insufficient, unless there is an intervening track between trains or cars containing excess width loads.

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. When employes have been informed of a load of excess width in a train, they must inspect their own train for swinging doors or anything projecting beyond normal clearance, and if any excess width loads in their train, must obtain meeting or passing order at stations where there is sufficient clearance.

Employes observing cars of excess height or width, or cars containing loads of excess height or width, should notify their supervisor in the event such cars are not placarded or stenciled as required by this rule.

900 (X). Ore dock at Lovell is equipped with apron that cannot be raised nor lowered to normal position alongside of dock when high cars are spotted at dock. It is necessary that apron be lifted before high cars are spotted under it, and if no one is there to lift apron, cars should be left clear of apron. When there are cars to be set in or taken out of dock, it must be known that apron will clear car. Apron in raised position over track will not clear engines, nor high cars.

900 (Y). 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:

Salt Lake City —South Temple Street;  
Riverside —Market Street;  
Los Angeles —Butte St. and Santa Fe Ave.;  
La Habra.

#### TRACKS NOT SHOWN ON TIME-TABLE

Location	Mile Post	Car Capacity	Switch Connections
<b>Provo Subdivision.</b>			
Burton	796.8	20	
Walton	795.0	10	
Bentz	794.1	8	
Fire Clay	793.4	4	
Cushing	788.8	27	
Mellen sand spur	781.3	10	East
Rideout spur	778.0	7	East
Mount gravel pit	775.5	41	Both
Lehi sugar spur	769.1	98	East
Utah Oil Co. spur	765.8	2	West
Hardy beet spur	761.8	27	West
Bunker spur	759.9	12	East
Provo—Cutting spur	754.8	38	East
Ironton	752.3	108	East
Levan	699.0	5	East
Uisco rock spur	676.3	12	East
<b>First Subdivision</b>			
Small Arms spur	779.9	64	West
<b>Second Subdivision</b>			
Little Springs	472.3	16	East
Hoya gravel pit	401.5	64	Both
Arrolime	353.8	31	Both
Lovell	344.5	18	Both
McCarran Airport spur	342.6		West
<b>Third Subdivision</b>			
Blue Diamond	321.8		West
Chase water track	251.2	15	Both
Basin quarry and gravel pit tracks	196.9	117	
New Dunn	188.5	20	East
<b>Fourth Subdivision</b>			
Riverside (Magnolia Ave.)	55.2	13	East
Dixon spur, Mira Loma	45.8	267	East
Champagne	43.5	35	Both
Ballou	40.5	41	Both
Cucamonga Cooperative Winery spur	39.1	12	West
San Antonio Meat Co.	34.1	22	East
Industrial spur	27.0		East
Fallon	21.7	9	West
Hudson	17.9	6	East
St. Helens spur	11.1	16	West
Mammoth spur	1.6	7	East
Mammoth to Mammoth Mine		2.41 miles	
Mammoth Mine to Grand Central Mine		.42 miles	
Eureka spur		3.6 miles	
Silver City spur		2.4 miles	
<b>Cedar City Branch</b>			
Kaiser siding	22.5	48	Both

#### TRACKS NOT SHOWN ON TIME-TABLE Continued

Location	Mile Post	Car Capacity	Switch Connections
<b>Mead Lake Branch</b>			
Standard Oil Co. spur	3.1	1	East
Arrowhead	3.3	18	West
Amber	9.5	4	East
Glassand	13.7	9	West
<b>Boulder City Branch</b>			
Magnesium	10.5	20	Both
<b>Crestmore Spur Tracks</b>			
Setout track	0.2	49	Both
Ennis	3.1	15	Both
Ormand	3.9	14	West
Ormand quarry track	3.9		East
Crestmore	6.9	Yard	
<b>Anaheim Branch</b>			
Gladding McBean spur	0.1	6	West
Sunny Hills spur	13.8	118	East
Fullerton Industrial lead	15.4		West
California Juice, Inc.	19.1	13	West
Southern California Citrus	19.2	16	West
<b>Glendale Branch</b>			
Dohrmann-Walker spur	5.4	2	East
Clifford spur	5.5	9	East
<b>Pasadena Branch</b>			
Baker spur	5.3	5	West
Team track	5.4	1	East
Crown Fence and Supply Co.	8.6	3	East
Standard Bakeries Corp.	9.4	5	East
<b>San Pedro Branch</b>			
Bell Foundry spur	8.5	3	East
Vernon Foundry Co.	10.2	6	West
Hollydale spur	10.4	18	West
Macco Construction Co.	11.5	15	West
Export Petroleum spur	13.5	20	West
Richfield Oil Co.	13.8	36	East
Export Petroleum spur	14.1	20	East
Champion Gasoline Co.	14.4	19	West
<b>North Long Beach</b>			
Siding, Industrial spur and wye	16.5		Both
Montana Ranch spur	17.1	98	West
City of Long Beach	17.1	8	East
Cherry Ave. team track	17.1	17	East
Hancock Refining Co.	17.2	26	East

#### SET OUT TRACKS

Location	Mile Post	Car Capacity	Switch Connections
<b>First Subdivision</b>			
Riter	773.6	14	Both
Morris	760.6	14	Both
Erda	756.5	14	Both
Shields	752.3	14	Both
Stockton	742.7	37	Both
St. John	736.2	41	Both
Ajax	729.0	14	Both
Pehrson	717.2	14	Both
Dunbar	714.2	14	East
Lofgreen	709.9	7	West
McIntyre	692.1	14	Both
Jericho	685.4	32	Both

Continued on Page 17.

SET OUT TRACKS Continued

Location	Post Mile	Car Capacity	Switch Connections
<b>First Subdivision continued.</b>			
Dyer	679.4	14	Both
Champlin	674.9	14	Both
Adams	671.1	14	Both
Cline	660.2	14	West
Strong	655.6	14	Both
Oasis	644.5	9	East
Oasis	644.4	25	Both
Van	640.1	14	Both
Clear Lake	631.0	22	Both
Neels	625.9	14	Both
Borden	620.9	14	Both
Cruz	609.8	14	Both
Pumice	604.3	45	Both
Black Rock	599.6	26	Both
Read	589.4	13	West
Murdock	584.6	14	Both
<b>Second Subdivision</b>			
Upton	571.2	14	Both
Laho	566.6	26	Both
Thermo	561.9	14	Both
Nada	555.0	14	Both
Latimer	550.4	14	Both
Zane	531.4	14	Both
Beryl	526.6	20	Both
Heist	515.8	20	Both
Modena	509.8	14	Both
Uvada	501.2	20	Both
Crestline	494.3	20	Both
Brown	489.7	14	Both
Acoma	484.7	20	Both
Barclay	478.7	17	Both
Islen	475.2	20	Both
Minto	468.4	14	Both
Eccles	464.2	14	Both

SET OUT TRACKS Continued

Location	Mile Post	Car Capacity	Switch Connections	Descending Grade
<b>Second Subdivision</b>				
Etna	454.3	18	East	West
Stine	449.5	13	East	West
Boyd	445.0	12	Both	West
Elgin	438.5	22	Both	West
Leith	428.9	12	Both	West
Carp	418.9	16	East	Level
Vigo	413.6	12	Both	West
Galt	408.8	20	Both	West
Hoya	402.7	7	East	West
Rox	397.5	19	West	West
Byron	377.9	13	West	East
Crystal	368.8	16	East	Level
Dry Lake	362.8	21	Both	West
Garnet	357.3	6	West	East
Apex	352.0	8	Both	East
Dike	347.3	8	East	West
Valley	342.6	13	Both	West
Wann	338.8	16	Both	Level

SET OUT TRACKS Continued

Location	Mile Post	Car Capacity	Switch Connections	Descending Grade
<b>Third Subdivision</b>				
Bracken	328.2	12	Both	East
Arden	322.6	9	East	East
Sloan	315.2	15	West	East
Erie	309.1	12	Both	West
Sutor	305.4	17	East	West
Jean	300.8	10	East	West
Borax	296.9	14	Both	West
Roach	291.5	11	Both	East
Calada	287.1	14	Both	Level
Desert	282.2	12	Both	Level
Nipton	277.7	12	Both	East
Moore	271.9	8	Both	East
Ivanpah	267.2	12	Both	East
Brant	262.8	7	Both	East
Joshua	258.0	12	Both	East
Cima	254.2	20	Both	East
Chase	250.3	12	Both	West
Elora	246.8	11	Both	West
Dawes	243.4	16	Both	West
Hayden	238.9	11	Both	West
Flynn	230.8	15	Both	West
Kerens	225.8	18	Both	West
Glasgow	222.0	16	Both	West
Sands	217.4	12	Both	Level
Balch	212.0	14	Both	West
Crucero	204.1	23	West	East
Afton	191.6	17	West	East
Field	182.4	16	Both	Level
Manix	177.6	19	East	East
Harvard	173.3	16	Both	East
Toomey	168.5	5	East	East

1006 (R). Standard brake pipe pressure for main line passenger trains is 110 pounds.

Between Salt Lake City and Los Angeles, including all branches, standard brake pipe pressure for all freight trains is 90 pounds.

1018 (R). Air Brake Rule 1018 is changed to read: "Speed governor control with high speed control brake equipment must be in operation on passenger train cars so equipped, when handled in passenger trains and must be made inoperative when such cars are handled in freight and mixed trains. Toggle switch located adjacent to air brake control relay cabinet controls operation of speed governor control and must be placed in 'On' position for operation and in 'Off' position to discontinue operation. Safety valve on D-22 control valve must be adjusted to 75 pounds air pressure when speed governor control is in operation and this safety valve must be adjusted to 60 pounds air pressure when speed governor control is not in operation."

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

1035 (R). Westward passenger trains must make running air test between "S" sign east of Cima and east switch.

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:

Mount	} Eastward and westward when angle cock has been turned or air hose separated.
Boulter	
Tintic	

Continued on Page 18.

**1041 (R). Continued.**

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

**1042 (R).** Between Crestline and Minto, westward freight trains handled with steam engine or Diesel-electric locomotive with dynamic brake not in operation will use retaining valves as follows:

Trains averaging 65 tons or more per brake will use one-half of retaining valves, alternating on cars throughout the train between Crestline and Islen and must stop at Acoma for inspection and cooling wheels, and will use all retaining valves Islen to Minto.

Trains averaging 51 tons or more per brake will use not less than 25 retaining valves on head end Islen to Minto.

Trains averaging 50 tons or less per brake will use not less than 25 retaining valves on head end, Islen to Minto, if in judgment of conductor and engineer their use is necessary.

**1042 (S).** Between Crestline and Minto, westward freight trains handled with Diesel-electric locomotive with dynamic brake in operation will use retaining valves as follows:

Trains averaging 65 tons or more per brake will use one-half retaining valves, alternating on cars throughout the train, Islen to Minto.

Trains averaging 64 tons or less per brake will use not less than 25 retaining valves on the head end, Islen to Minto, if in the judgment of conductor and engineer their use is necessary.

**1042 (T).** Retaining valves must be used on all trains as required by Air Brake Rule 1042, as follows:

- Pioche to M.P. 30;
- M.P. 27 to M.P. 22, Pioche Branch;
- Prince to Prince Junction;
- Eureka to Tintic;
- Grand Central Mine to Tintic;
- Iron Mountain to Iron Springs—duplex retaining valves must be placed in full retaining position. Retaining valves must not be turned down until train reaches Cedar City Branch main track.

On other grades, conductor and engineer will see that as many retaining valves are used as necessary to control train.

When retaining valves are in use, speed of 20 MPH must not be exceeded.

**1042 (U).** One retaining valve must be used for each 40 tons of train as required by Air Brake Rule 1042 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.

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 exceeds 65 tons per operative brake, retaining valves must be used on every other load throughout train between Stine and Leith and Kelso and Sands. Speed must not exceed 20 MPH and stop of 10 minutes must be made at Elgin and Kerens for inspection of train.

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

**1042 (V).** On westward freight trains handled by Diesel-electric freight locomotives, dynamic brakes will be placed in service and tested between M.P. 309 and M.P. 292. Fireman must make inspection in each unit while dynamic brakes are in operation and he will observe brake cooling fans and contactors and advise engineer the units on which dynamic brakes are operating.

Maximum speed of 20 MPH westward must not be exceeded between Cima and Kelso and dynamic brakes, when in use, must be handled in accordance with Rules 1244 and 1245.

Conductor must advise engineer tonnage, number of cars, and location of loads and empties in train. If dynamic brake is operative on only one unit of the locomotive, retaining valves must be used as provided in Rule 1042 (B) and Special Rule 1042 (U).

The following table will govern the use of retaining valves between Cima and Kelso on trains handled by Diesel-electric locomotive with dynamic brake in operation:

**Dynamic Brake Operative On:**

Two Units	Three Units	Four Units
1350 tons or less, NONE Over 1350 tons, one retaining valve must be in operating position for each 40 tons over 1350, but not less than ten retaining valves must be in operating position from locomotive toward rear.	2100 tons or less, NONE Over 2100 tons, one retaining valve must be in operating position for each 40 tons over 2100, but not less than ten retaining valves must be in operating position from locomotive toward rear.	2750 tons or less, NONE Over 2750 tons, one retaining valve must be in operating position for each 40 tons over 2750, but not less than ten retaining valves must be in operating position from locomotive toward rear.

Additional retaining valves must be used in accordance with provisions of Rule 1042 (B) when in the judgment of engineer or conductor their use is necessary.

When retaining valves are not used, train need not stop at Cima for inspection as required by Rule 811 (R), and standing air test required by Rule 1041 (R) need not be made. Running air test must be made between "S" board and east switch at Cima and engineer and conductor must know that air brakes are operating properly and that brake pipe pressure is being restored.

**1043 (R).** To properly control trains on descending grade from Grand Central or Mammoth Mine to Mammoth, the following will govern:

- The combined leakage from brake cylinder and retaining valve pipe must not exceed seven pounds per minute;
- All brakes to be cut in and operative;
- Speed must not exceed six MPH at any point;
- Limit of train descending shall be a maximum of three cars.

On descending grades from Mammoth, Eureka and Silver City, speed must not exceed 6 MPH and limit of cars will not exceed ten. The rules as to air brake inspection and test are the same as between Mammoth Mine and Mammoth.

On descending grades in the Tintic District, conductor must see that trainmen are properly distributed in position to control train with hand brakes if necessary.

**1093 (R).** Following has been added to Air Brake Rule 1093 (I):

If rear end of rear car is not equipped with inside operating lever to steam train line end valve, or if for any reason inside operating lever cannot be operated, trainman must fully open steam train line end valve from ground immediately after train is stopped.

**1244 (R).** When Fairbanks-Morse Diesel units 700, 700-B and 701 are used together, the low braking range on dynamic brake must not under any circumstances be used at a speed in excess of 36 MPH.

Dynamic brake must not be used on Diesel freight locomotives at a speed in excess of 45 MPH.

**RATING OF STEAM LOCOMOTIVES IN FREIGHT SERVICE IN TONS OF 2,000 POUNDS**

Total weight of trains, exclusive of engine and tender, which the different classes of engines will haul in each direction between stations named, under favorable weather conditions. A deduction of ten per cent may be made for fast trains.

Type of Engine	Numbers (Inclusive)	Salt Lake City to Lake Point	Lake Point to Tintic	Tintic to Lynndyl	Lynndyl to Milford	Milford to Lund	Lund to Uvada	Uvada to Crestline	Salt Lake City to Mount	Mount to Payson	Payson to Sharp	Sharp to Lynndyl	EXPLANATION	
P 77	22 150 28	3100 to 3113 3160	2750	1190	3000	1250	1500	1500	970	860	1080	890	1080	P Pacific
P 77	25 165 28 184	3176 to 3181 3114 to 3133	3000	1420	3000	1500	1800	1800	1170	1020	1350	1070	1350	C Consolidation
C 57	22 191 30 198	201 to 358 560 to 622 6010 to 6085	3300	1780	3700	2000	2400	2160	1450	1280	1900	1430	2160	S Switch
MacA 63	26 212 28 228	2200 to 2320 2504 to 2532 2555 to 2564 2700 to 2715 2726 to 2735	3900	2100	4350	2400	3000	2660	1720	1530	2200	1660	2560	T Ten Wheeler
MacA 63	26 220 30	2535 to 2554											2560	MC Mallet
MT 73	29 230 28	7000 to 7039 7850 to 7869	4500	2260	5000	2600	3280	2860	1900	1680	2350	1900	2900	MacA MacArthur
TTT 63	29 1/2 290 30 311	5000 to 5089 5400 to 5414 5500 to 5529	5900	2700	6600	3600	4000	3800	2450	2250	2850	2350	3800	MT Mountain
FTT 63	27 307 32	5090 to 5099	5950	2800	7050	3660	4200	3900	2510	2220	2510	2450	3410	TTT 2-10-2
SA-C 59	23-23 471 30	3500 to 3569	8000	4000	8000	5000	5400	5400	3460	3200	3460	3350	4700	FTT 4-10-2
C-SA 69	22-22 400 32 394 407	3800 to 3809 3810 to 3814 3815 to 3839	8000	3700	8900	4900	5700	5250	3350	3120	3350	3250	4500	UP 4-12-2
C-SA 69	21-21 404 32	3930 to 3934 3936, 3937 3940 to 3999	8000	3700	8900	4900	5700	5250	3350	3120	3350	3250	4500	C-SA Challenger
														SA-C Mallet SA
														UP 4-6-6-4
														UP 4-8-8-4
														EXAMPLE: Consolidation engine having 57-inch drivers, cylinders 22-inch diameter and 80-inch stroke and weighing 191,000 pounds on drivers :
														C 57 22 191 30
Type of Engine	Numbers (Inclusive)	Caliente to Islen	Islen to Crestline	Crestline to Milford	Milford to Lynndyl	Lynndyl to Boulder	Boulder to St. John	St. John to Bauer	Bauer to Salt Lake City	Lynndyl to York	York to Cutler	Cutler to Mount	Mount to Salt Lake City	
P 77	22 150 28	3100 to 3113 3160	400	600	2400	1500	1190	3000	1400	2750	1250	1350	700	1500
P 77	25 165 28 184	3176 to 3181 3114 to 3133	650	680	2740	1800	1420	3000	1660	3000	1500	1470	980	1900
C 57	22 191 30 198	201 to 358 560 to 622 6010 to 6085	700	1000	3200	2160	1780	3700	2000	3300	1600	2050	1250	2050
MacA 63	26 212 28 228	2200 to 2320 2504 to 2532 2555 to 2564 2700 to 2715 2726 to 2735	800	1140	4300	2660	2100	4350	2460	3900	1800	2590	1400	2590
MacA 63	26 220 30	2535 to 2554												
MT 73	29 230 28	7000 to 7039 7850 to 7869	900	1380	4600	2860	2260	5000	2650	4500	2000	3000	1600	3000
TTT 63	29 1/2 290 30 311	5000 to 5089 5400 to 5414 5500 to 5529	1132	1520	5000	3800	2700	6600	3400	5900	2500	3800	1900	3800
FTT 63	27 307 32	5090 to 5099	1260	1670	5850	3900	2800	6530	3620	6320	2510	3430	2120	3900
SA-C 59	23-23 471 30	3500 to 3569	1800	2200	6400	5400	4000	9100	4820	8200	3460	5400	2820	5510
C-SA 69	22-22 400 32 394 407	3800 to 3809 3810 to 3814 3815 to 3839	1750	2110	6240	5250	3700	8900	4700	8000	3850	5250	2750	5370
C-SA 69	21-21 404 32	3930 to 3934 3936, 3937 3940 to 3999	1750	2110	6240	5250	3700	8900	4700	8000	3850	5250	2750	5370

## RATING OF STEAM LOCOMOTIVES IN FREIGHT SERVICE IN TONS OF 2,000 POUNDS

Total weight of trains, exclusive of engine and tender, which the different classes of engines will haul in each direction between stations named, under favorable weather conditions. A deduction of ten per cent may be made for fast trains.

Type of Engine			Numbers (Inclusive)	Moapa to Las Vegas	Las Vegas to Yermo	Yermo to Victorville	Victorville to Summit	San Bernardino to Los Angeles	Los Angeles to Riverside	Riverside to San Bernardino	San Bernardino to Summit	Sands to Kelso	Kelso to Cima	Cima to Leith	Leith to Caliente
P 77	25 28	165	2885 to 2887 3128 to 3133 3176 to 3181	1170	1170	1170	720	1350	1220	1170	500	1170	500	1170	780
C 57	22 30	198	6010 to 6085	1450	1450	1780	925	2000	1700	1450	575	1350	575	1450	900
MacA 63	26 28	212 214 218	2700 to 2715 2726 to 2735	1720	1720	2000	1075	2300	2000	1800	700	1600	700	1720	1150
MacA 63	26 28	212 214	2200 to 2253, 2261, 2264 2293	1800	1800	2050	1130	2400	2000	1800	735	1650	735	1800	1210
MT 73	29 28	230	7018 to 7024 7850 to 7869	1850	1850	2100	1175	2450	2050	1850	800	1690	800	1850	1240
TTT 63	29½ 30	287 290 291 298	5000 to 5026 5070, 5316, 5317 5500 to 5529	2520	2450	2520	1625	2800	2520	2520	1000	2520	1000	2520	1600
FTT 63	27 32	307	5090 to 5099	2600	2500	2600	1700	2900	2600	2600	1050	2600	1050	2600	1680
SA-C 59	23-23 30	471	3500 to 3563	3460	3500	3500	2250	4200	3600	3500	1650	3500	1650	3460	2450
C-SA 69	22-22 32	400 394 407	3800 to 3809 3810 to 3814 3815 to 3839	3350	3350	3350	2120	3880	3490	3350	1500	3070	1500	3350	2380
C-SA 69	21-21 32	407	3975 to 3980	3350	3350	3350	2120	3880	3490	3350	1500	3070	1500	3350	2380

Note: Rating, Caliente to Moapa, Summit to San Bernardino, Summit to Sands, and Los Angeles to East San Pedro, car limit.

Note: Rating, 6010 to 6085 class engines East San Pedro to Rioco 3000 tons, Rioco to Los Angeles 3500 tons.

Note: Rating Diesel 1000 class engines 3000 tons East San Pedro to Los Angeles.

### EXPLANATION

P Pacific Type  
C Consolidation  
MacA MacArthur  
TTT 2-10-2  
MT Mountain Type  
FTT 4-10-2  
SA-C Simple-Articulated-Consolidation  
C-SA Challenger Simple Articulated

EXAMPLE: Consolidation engine having 57-inch drivers, cylinders 22-inch diameter and 30-inch stroke and weighing 198,000 pounds on drivers:

C 57      22  
                 30      198

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

Stations	EMD 4-UNIT 6000 H.P.	ALCO 4-UNIT 6000 H.P.	Stations	EMD 4-UNIT 6000 H.P.	ALCO 4-UNIT 6000 H.P.
Salt Lake City to Lake Point	8000	8000	Los Angeles to Riverside	5080	6700
Lake Point to Tintic	6100	7900	Riverside to San Bernardino	5080	6700
Tintic to Lynndyl	8000	8000	San Bernardino to Summit	2450	3000
Salt Lake City to Mount	5080	6700	Sands to Kelso	5080	6700
Mount to Payson	6540	6900	Kelso to Cima	2450	3000
Payson to Sharp	5080	6700	Cima to Leith	5080	6700
Sharp to Lynndyl	6330	6920	Leith to Caliente	4220	4650
Lynndyl to Milford	8000	8000	Caliente to Islen	3240	3500
Milford to Lund	8000	8000	Islen to Crestline	4600	6320
Lund to Uvada	7330	8000	Crestline to Milford	8000	8000
Uvada to Crestline	5080	6700	Milford to Lynndyl	8000	8000
Moapa to Las Vegas	5080	6700	Lynndyl to Boulter	6100	7900
Las Vegas to Yermo	5080	6700	Boulter to St. John	8000	8000
Yermo to Victorville	7000	7500	St. John to Bauer	7500	8000
Victorville to Summit	3700	4000	Bauer to Salt Lake City	8000	8000
San Bernardino to Los Angeles	7500	8000	Lynndyl to York	6270	7200
			York to Cutler	8000	8000
			Cutler to Mount	5080	6700
			Mount to Salt Lake City	8000	8000

### TOTAL LOADED WEIGHT ON DRIVERS, DIESEL-ELECTRIC FREIGHT POWER UNITS

200,000 to 250,000 POUNDS

1400 to 1441      1600 to 1625  
1400B to 1428B      1600B to 1616B  
1400C to 1428C      1600C to 1616C

250,000 to 300,000 POUNDS

1360 to 1369