

UNION PACIFIC RAILROAD COMPANY
SOUTH-CENTRAL DISTRICT



Utah Division

Special Rules
No. 9

Effective Monday,
August 1, 1949

Superseding Special Rules No. 8

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

G. A. CUNNINGHAM,
Superintendent

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

Employees listed below and other employees 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 Provo and Second Subdivision must be set to Pacific Standard Time.

6 (R). Water from water columns at Milford, Carp, Rox, Moapa and Las Vegas, must not be used to fill water cars nor outfit tenders nor for drinking or culinary purposes.

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

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

When it is not possible to relay signals, the following method will be used: When ready to move, engineer on head end will make a 15-pound automatic brake pipe reduction, return brake valve to running position and wait three minutes. Engineer on helper engine will start three minutes after his gauge shows brake pipe pressure being restored.

8 (R). At Salt Lake City and Ogden, yellow flags by day and yellow lights by night will be used by switchtenders and herders.

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

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

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

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

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

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

10 (S). 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.

Continued opposite side.

17 (R). Continued.

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

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

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

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

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). Rule 19 (C) is cancelled.

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

19 (T). Between Salt Lake City and Las Vegas, markers displaying yellow instead of green lights as prescribed in Rule 19 (B) will be used.

21 (R). 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 branch.

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

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

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

30 (R). Salt Lake City ordinance reads as follows:

"It shall be unlawful for any person or persons employed on a locomotive to fail to ring bell continuously on such locomotive while in motion in the inhabited portions of the city."

D-83 (R). Rule D-83 is modified as follows:

Where Rule 251 is in effect, a train must not leave its initial station, or a junction, until it has been ascertained whether all first-class trains due in the same direction have left.

83 (S). At Salt Lake City, before entering or using Second Subdivision passenger main track between Second South Street and yard limit sign at M.P. 780.73, yard engines must obtain information regarding all first-class trains which are due.

83 (T). Trains operating between Lund and Iron Mountain need not register at Iron Springs.

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

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

91 (R). On Provo Subdivision, trains in the same direction must be kept at least thirty minutes apart, except in closing up at stations.

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.

93 (S). At Salt Lake City, unless otherwise directed, all trains operating via Second Subdivision 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.

Freight train movements may be made through passenger yard at Salt Lake City 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 (T). At Salt Lake City, while trains are passing on opposite track, switching movements between Second South and Eighth South Streets on Third West Street must stop and stand clear of street crossings.

93 (U). Following branches are operated under requirements of Rule 93: Sugar Factory; Syracuse; Thatcher; Bear River; Benson; at Tintic, tracks to Eureka, Silver City and Mammoth.

93 (V). All employees while using D. & R. G. W. tracks will be under the jurisdiction of D. & R. G. W. supervisors and will obey their instructions. Crews will be governed by the following D. & R. G. W. rules while using D. & R. G. W. tracks:

"11. In non-automatic block signal limits, a train finding a fusee burning on or near its track, must stop and wait until it has burned out before proceeding.

"D-11. A fusee will not apply to the main track on which a train is running, if displayed beyond the first rail of adjoining main track.

"15. The explosion of two torpedoes is a signal to proceed at restricted speed for one-half mile and is to be acknowledged by two short blasts of engine whistle. The explosion of one torpedo will indicate the same as two, but the use of two is required.

"(Definition of restricted speed:

"A speed that will permit stopping short of another train or obstruction, but not exceeding fifteen miles per hour.)

"93. Yard limits will be indicated by yard limit signs. 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.

"Special Rule 4-K. Trains have no time-table superiority between First South and Ninth South Streets, Salt Lake Union Depot Company's yard, Salt

Continued opposite side.

93 (V). Continued.

Lake City. Yard crews and others occupying these tracks must make way for passenger trains without unnecessarily delaying them. In case of collision, responsibility rests with approaching train or engine.

"Special Rule 4-L. All freight train, switch engine and light engine movements, including interchange deliveries (except passenger equipment destined Union Depot) between Salt Lake City and Roper will, unless otherwise provided, use the two freight main tracks extending from a point 150 feet east of First South Street, Salt Lake City, to 21st South Street, Roper, and will keep to the right. Movement against the current of traffic on these two freight main tracks can be made only under flag protection.

"Switch at end of two freight main tracks at First South Street normally lined for eastward track. Switch leading to connection with W. P. at First South Street normally lined for this connection. Switch 150 feet west of South Temple Street connecting passenger and freight tracks, normally lined for passenger main track.

"When display of markers not required, such as in switch movements, a member of crew must ride rear car and display a white light to rear at all times between sunset and sunrise."

93 (W). All eastward trains and Union Pacific interchange deliveries to D. & R. G. W. will stop before entering Roper yard at the "Talkee" near upper cross-over about 20th South Street and contact yardmaster in the west tower for a head-in if no previous head-in has been received at Ninth South tower.

To contact yardmaster, press push button located in the "Talkee" located about two-thirds of way from the ground and the speaking unit on top of stand. It is only necessary to push this button once to signal yardmaster. Engines should stop about 75 feet from the "Talkee" so voice communication with yardmaster can be carried out. After making interchange delivery, unless otherwise instructed, engines will use running track from east end of Roper yard.

93 (X). At Salt Lake City, trains and engines using westward main track, must approach Diesel fuel pump opposite roundhouse prepared to stop if fueling hose is across track.

95 (R). Where Rule 251 is in effect, clearance Form 2643 issued to a train at its initial station will establish identity of train to the end of its run on that subdivision. Sections will display green signals when clearance so indicates.

Example: A clearance reading "First 7 green signals" will authorize display of green signals.

A clearance reading "Second 7 no signals" will authorize movement without display of signals.

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

Unless otherwise provided, all trains must receive clearance at:

Ogden Brigham Cache Jct. Provo Caliente

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

Location	Railroad Crossed or Junction With	Trains Which Have Precedence	How Governed
North Salt Lake. (M.P. 31.0)	B.R.R.	U.P.	Cabin Interlocking. Rule 616.
North Salt Lake. (M.P. 31.3)	D.& R.G.W.	D.& R.G.W.	Electric locked switches and derrails. Special Rule 98 (U).
Becks. (M.P. 32.9)	D.& R.G.W.	D.& R.G.W.	Electric locked switches and derrails. Special Rule 98 (U).

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Location	Railroad Crossed or Junction With	Trains Which Have Precedence	How Governed
Salt Lake Gravel Pit Spur.	B.R.R.	B.R.R.	Electric locked derails. Special Rule 98 (S).
Salt Lake City. (M.P. 36.4, Freight Line)	S.L.G. & W.	U.P.	All trains stop.
Salt Lake City. (M.P. 36.5, Freight Line)	D. & R.G.W. 2 tracks	U.P.	All trains stop.
Salt Lake City. (M.P. 781.3, Freight Line)	W.P.		Automatic Interlocking. Rule 615.
Salt Lake City. (First South and Tenth West Streets, Fisher Brewery track)	W.P.	W.P.	Special Rule 98 (V).
Salt Lake City. (Between South Temple and First South Street on Fourth West Street)	D. & R.G.W. interchange track		All trains stop.
Salt Lake City. (Between Eighth and Ninth South Streets on Fourth West Street, Utah Junk Spur)	D. & R.G.W. 2 tracks	D. & R.G.W.	D. & R.G.W. trains do not stop. U.P. engines stop and line derail. Special Rule 98 (V).
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)	D. & R.G.W. Gauntlet track	U.P.	Automatic Interlocking. Rule 615.
Near Sandy. (M.P. 48.6)	D. & R.G.W.	U.P.	Semi-automatic Interlocking. Rule 616.
Near Geneva. (M.P. 757.3)	D. & R.G.W. 2 tracks		Automatic Interlocking with movable point frogs. Special Rule 98 (X).
Ironton. (M.P. 0.67)	D. & R.G.W.		Interlocking. Special Rule 98 (Y) and Rule 609.
Garfield. (M.P. 767.1)	D. & R.G.W.	U.P.	Semi-automatic Interlocking. Special Rule 98 (W).
Syracuse Branch. (M.P. 0.3)	D. & R.G.W.	D. & R.G.W.	Semi-automatic Interlocking. Normal position of derails and signals against U.P. See instructions in signal case.

98 (S). Electric locked derails are located on the Salt Lake Gravel Pit spur crossing Bamberger Railroad.

Indicators are located on relay post on the east side of Bamberger main track and on the south side of U. P. tracks. Position of indicators must be observed before switch locks are removed or derails reversed. If either indicator displays Stop indication, it indicates movement on Bamberger tracks, and derails cannot be operated.

When indicator displays Proceed indication, switch locks may be removed and both derails must be reversed.

When indicator displays Stop indication, time release in relay box may be operated only after calling Bamberger dispatcher on telephone and ascertaining there is no approaching movement on Bamberger tracks.

Instructions for use of time release are posted inside relay box.

98 (T). At Atwood, trains and engines moving from Midvale Branch must stop clear of derail 325 feet from main track switch, and a member of crew must see that there is no conflicting movement approaching before lining switch for movement to main track.

98 (U). Before movement in either direction may be made over D. & R. G. W. crossings at North Salt Lake and Becks, member of crew must communicate with D. & R. G. W. operator at North Salt Lake. After electric locks have been released by operator both D. & R. G. W. switches must then be hand operated. When yellow light is displayed on single-unit signal, or red over yellow lights are displayed on two-unit signal, movement may be made.

When communication fails, or when operator is unable to release electric locks, crews will be governed by instructions posted in telephone booth and by Rule 616.

98 (V). At Salt Lake City, Fourth West Street, on the Utah Junk Spur before crossing D. & R. G. W. passenger main tracks, understanding must be had with signalman at Ninth South Street that he will hold westward D. & R. G. W. trains. In addition, member of crew must be left at crossing to provide protection against eastward D. & R. G. W. trains. Signalman must be notified when work has been completed.

On Fisher Brewery Spur, crews will be governed by Rule 98 (A), and in addition, during foggy and stormy weather flag protection must be provided in both directions on the W. P. main track.

Switching operations on Utah Junk and Fisher Brewery Spurs will be confined to daylight hours.

98 (W). At D. & R.G.W. crossing west of Garfield (M.P. 767.1), when a train or engine is stopped by semi-automatic interlocking signal, a member of crew must proceed to the crossing and if no conflicting movement is evident he will signal his engineer to proceed over the crossing.

98 (X). 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 signal 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-electric 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 (Y). 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.

99 (R). 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.

Last paragraph of Rule 99 is changed to read:

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

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

99 (S). Rule 99 (F) is modified 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 (T). Trains may be relieved from protecting against following extra trains by the use of Example (7) of train order Form E, only on the branches named:

Malad;	Iron Mountain;
Cache Valley;	Pioche;
Fairfield;	Mead Lake.
Fillmore;	

99 (U). Between 7:01 A. M. and 5:01 P. M. daily except Sunday, on Fairfield, Fillmore, Pioche and Mead Lake Branches, a speed of 10 MPH must not be exceeded approaching and moving on curves or where view is obscured and must be able to stop within distance track is seen to be clear. Whistle signals must be sounded frequently approaching and moving on curves and close look-out must be maintained for track cars and for men working without flag protection.

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

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

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

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:

Between Salt Lake City and Sandy—main track movements between Fifth North Street and Sandy;
Between North Salt Lake and North Yard—main track movements.

103 (V). At Salt Lake City, a yardman must take a conspicuous position on rear car of movements between North Yard and Roper Yard, and by night a red light must be displayed on rear car.

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

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

103 (X). All trains and engines must stop and be preceded by 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;
Bushnell Hospital Spur	—Highway 91.

103 (Y). At North Salt Lake, Cudahy Packing Plant crossing must not be blocked by standing train between 6:30 A.M. and 8:30 A.M.

At S. P. Jct., 12th Street crossing must not be blocked by standing train between 7:15 A.M. and 7:45 A.M. and between 4:15 P.M. and 5:30 P.M. Eastward trains will cut this crossing on arrival and will not re-couple until permission to enter Ogden yard is received.

During other hours, above crossings must not be blocked longer than ten minutes by standing train.

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

Provo	—Switch leading to Ironton, for Ironton spur;
Tintic	—Wye on Eureka Branch, for Silver City main track;
Lynndyl and Caliente	—All switches on No. 1 track, for No. 1 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 (S). At Salt Lake City, Second South Street unless proceed signal is received from switchtender, trains and engines must remain clear of following points:

Leaving passenger depot, remain clear of passenger lead. (Does not apply to yard engines unless a first-class train is due.)

Entering Salt Lake City, remain clear of Second South Street.

Entering Second South Street westward from Pedro 1 or Pedro 2 tracks, remain clear of cross-over just east of Second South Street.

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. (Does not apply to yard engines unless a first-class train is due.)

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

Unless otherwise directed, all southward 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. Proceed signal need not be received from switchtender at Fifth North Street for movements via this route.

Other southward trains and road engines, including D.&R.G.W. switch engines, must stop to clear Fifth North Street unless proceed signal is received from switchtender.

Unless otherwise directed, northward trains and road engines, including D.&R.G.W. switch engines, moving to North Yard tracks from 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 at Fifth North Street.

All trains and road engines moving to roundhouse or tracks in North Yard from points south of Fourth North Street must stop to clear Fourth North Street unless proceed signal is received from switchtender 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). At North Yard, unless otherwise directed, freight trains must enter and leave at Seventeenth North Street.

All trains must approach cross-overs at Seventeenth North Street prepared to stop and must not proceed until proceed signal is received from switchtender.

Eastward trains approaching Seventeenth North Street must use one long sound of whistle when they are to be routed via main track, and one long and one short when they are to be routed into yard.

Trains and engines crossing eastward main track at Seventeenth North Street may accept proceed signal from switchtender as authority to make this move.

104 (V). No. 14 turnouts are located at:

S.P. Jct.	—Spring switch with facing point lock;
Hot Springs	—Both ends of siding;
Willard	—Both ends of siding;
Honeyville	—Both ends of siding;
Dewey	—Both ends of siding;
Wheelon	—Both ends of siding;
Cache Jct.	—Siding switches at extreme east and west end of yard;
Trenton	—Both ends of siding;
Weston	—Both ends of siding;
Dayton	—Both ends of siding;
Coulam	—Both ends of siding;
Swan Lake	—Both ends of siding;
Downey	—Both ends of siding;
Arimo	—Both ends of siding;
McCammon	—All power-operated switches; —East end of both sidings, Utah Division.

All power-operated switches between Salt Lake City and Las Vegas are equipped with No. 14 turn-outs.

105 (R). At Nephi, house track will be used as an extension to siding and must be kept clear, with switches lined for continuous movement to house track.

105 (S). At Brigham, westward siding extends from east switch near M.P. 20 to cross-over at depot, and eastward siding is located on north side of main track. Track from cross-over at depot to cross-over near stockyards, including Malad Branch old main track, is designated as a yard track, upon which movements may be made in either direction, but cars must not be stored on this track.

105 (T). At Cache Junction, Cache Valley Branch ends at Signal 492.

At Brigham, Malad Branch ends at sign located at west end of yard.

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

D-151 (S). Except as provided in Special Rule D-151 (R), where Rule 251 is in effect no movement against current of traffic may be made by a work extra unless full protection is provided against all trains, except when such work extra has been given right over all trains; and no movement against current of traffic may be made by any other train unless full flag protection is provided against all trains, except when authorized by train order to move against current of traffic.

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.)"

402 (R). At Buena Vista, when an eastward train receives Proceed or Approach indication on CTC signal or Form C clearance, train may proceed on Passenger Line to passenger depot Salt Lake City or on Freight Line to North Yard, being governed by CTC and interlocking signals.

At North Yard, in addition to receiving Form B clearance, conductor of westward train using Freight Line must receive permission from train dispatcher before starting, which will be authority to proceed to beginning of CTC territory.

At Salt Lake City, in addition to receiving Form B clearance, conductor of westward train using Passenger Line must receive permission from train dispatcher before starting. Proceed signal must be received from Second South Street switchtender, which will be authority to proceed to beginning of CTC territory.

Before Second South Street switchtender may give proceed signal to a westward train he must receive verbal permission from train dispatcher and switch indicator at Second South Street must display Main Track Clear indication. When switch indicator displays Main Track Occupied indication but train dispatcher informs switchtender that track is clear and route properly lined, proceed signal may be given.

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402 (R). Continued.

Yard movements on Passenger Line must not pass signal at Eighth South Street until verbal permission is received from Ninth South Street towerman. When authorized by Ninth South Street towerman and CTC signal indication, yard movements may be made into CTC territory without receipt of Form B clearance.

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

Lynndyl	—Signal 6655;
Milford	—Signals 5763, 5765, 5767, 5776 and 5778;
Caliente	—Signals 4589, 4593, 4596 and 4598;
Las Vegas	—Signals 3339, 3341, 3344, 3346 and 3348.

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 flagman.

402 (T). Clearance Form B will not be required by trains entering CTC territory from Cedar City, or Fillmore Branches, or Tintic mine tracks, but trains will be governed by signal indication and instructions from train dispatcher.

Exception: When crew of a train in turn-around service leaves CTC territory and ties up before returning to CTC territory, CTC clearance must be received before train may again enter CTC territory.

405 (R). At Milford eastward and westward freight trains 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 must receive permission from train dispatcher before moving—

From Fillmore Branch	—to siding, Delta;
From Cedar City Branch	—to siding, Lund;
From Mead Lake Branch	—to siding, Moapa.

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 Lynndyl, westward trains or engines must not move from Track 2 to Track 1 at west end of yard without permission from train dispatcher.

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 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 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). On Midvale Spur, Provo Subdivision, when Signal 01 or 02 displays Stop indication, trains and engines must be preceded by flagman between these two signals and must move at restricted speed.

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

721 (R). On multiple unit Diesel-electric locomotive, 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-electric freight locomotive, he must 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-electric locomotive on freight or passenger train.

733 (R). There is hazard of carbon monoxide fumes from exhaust of Diesel and 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 there is sufficient ventilation where such engines are operated.

733 (S). Dangerous gases, present in exhausts from Diesel engines, Clarkson Steam Generator, and engines of Waukesha air conditioning equipment may cause incapacitation or fatalities if in sufficient concentration as might result when a Diesel-electric 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-electric 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.

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 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.

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.

802 (S). Continued.

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 sidings, 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 necessary, a placarded loaded tank car, or a draft which includes a placarded loaded tank car shall not be cut off until the preceding car or cars clear the ladder track and the draft containing the placarded loaded tank car, or a placarded loaded tank car shall in turn clear the ladder before another car is allowed to follow.

BE 589 (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 Freight Trains or Mixed Trains

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 or mixed train of every car placarded "Explosives." A copy of such notice shall be delivered to the train and engine crew and a copy thereof showing delivery to the train and engine crew shall be kept on file by the railroad at each point where such notice is given. At points other than terminals where train or engine crews are changed, the notice shall be transferred from crew to crew.

Position in Freight Train or Mixed Train of Cars Containing Explosives

BE 589 (f) (1) In a freight train or a mixed train either standing or during transportation thereof, a car placarded "Explosives" shall, when length of train permits, be placed not nearer than the sixteenth car from both the engine or occupied caboose, except:

Continued opposite side.

Continued on Page 8.

802 (S). Continued.

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

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

(c) When transported in a freight train or a mixed train performing pickup and/or setoff service, it shall be placed not nearer than the second car from both the engine or occupied caboose, except as provided in section 589 (i).

BE 589 (f) (2) In a freight train or a mixed train either standing or during transportation thereof, a car placarded "Explosives" must not be handled next to:

1. Occupied passenger car, other than car occupied by gas handlers or military personnel accompanying shipments.
2. Occupied combination car, other than car occupied by gas handlers or military personnel accompanying shipments.
3. Any car placarded "Dangerous."
4. Engine.
5. Any car placarded "Poison Gas."
6. Wooden underframe car (except on narrow gauge railroads).
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 provided in sec. 589 (i).

Position in Train of Loaded Placarded Tank Car

BE 589 (g) (1) (a) In a freight train or a mixed train, except a train consisting entirely of placarded loaded tank cars and as provided in sec. 589 (g) (2), a placarded loaded tank car shall when the length of the train permits, be not nearer than the sixth car from the engine, occupied caboose or passenger car.

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

BE 589 (g) (1) (c) When transported in a freight train engaged in "pickup" or "setoff" service, a placarded loaded tank car shall be not nearer than the second car from both engine or occupied caboose.

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 (except on narrow gauge railroads).
7. Loaded flat cars.
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).

Continued opposite side.

802 (S). Continued.**Position in Freight Train or Mixed Train of Cars Placarded "Poison Gas" or Containing Poison Liquids Class A**

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

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

BE 589 (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 the gas handling crews, when accompanying such car.

BE 589 (i) (2) A car placarded "Explosives" shall at all times be next to and ahead of the car occupied by military personnel 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).

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). Engines must not be moved over live rails of track scales and when moved over dead rails of track scales, a speed of five miles per hour must not be exceeded.

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 scales, speed must not exceed 2 MPH and 4 MPH must not be exceeded over scales in any case.

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

802 (U). At McCammon, cross-over leading to storage track must not be left blocked with cars.

802 (V). At Smithfield, in spotting cars between warehouses on California Packing Corporation spur, it must be seen that drawbridge between buildings is raised.

802 (W). At Garfield, American Smelter & Refining Company yard commences at a point 250 feet west of 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 and 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 (X). 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.

804 (R). Cars equipped with roller bearings will start with much less effort than those otherwise equipped. When such cars are set out, either in yards or on line, hand brakes must be set 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 Salt Lake City, all yard movements into South yard from points south of Fourth South Street and all movements from Utah Sand and Gravel Plant, must have air brakes cut in and operative on all cars being handled.

At least four hand brakes must be set on all cuts of cars left in South yard. All brakes other than power type must be set with club.

Cars must not be cut off while in motion at any time in switching on Third West Street, and when cars are left standing on this street, sufficient hand brakes must be set to hold cars.

At Woods Cross, when making movements on north or south cannery tracks, air brakes must be cut in and operative on all cars.

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 locomotive and must not exceed 90 cars when handled by Diesel-electric locomotive 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.

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.

804 (W). Continued.

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

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

805 (R). Rule 805 is cancelled.

807 (R). Referring to Rule 807 (C):

Stock cars containing horses may be handled next to Diesel-electric locomotive.

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). Derricks, pile drivers and rotary snow plows must be separated from the locomotive and from each other by at least three cars of not over 169,000 pounds gross weight over Evona and Malad Branches.

807 (U). Last paragraph of Rule 807 is cancelled.

808 (R). In helping freight train from Caliente or Carp, 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.

In helping freight 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.

808 (S). Diesel-electric helper engines will be placed behind steel under-frame caboose at rear of train, except when train contains car or cars listed in Rule 807 helper engine will be placed on head end of train. must have air brakes operative and piston travel must not exceed 8½ inches.

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

811 (S). In addition to making inspection of train as often as practicable as per Rule 811, freight trains handled with steam engines, or with Diesel-electric locomotives with dynamic brakes not in operation, must stop and be inspected at the following points:

Cache Jct. —Eastward and westward;

Provo —Eastward and westward;

Nephi or Starr —Eastward, including trains handled by Diesel-electric locomotives;

Tintic, Lofgreen
or Faust —Eastward;

Continued opposite side.

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811 (S). Continued.

Tintic —Westward;
 Neels —Trains handling 5 or more cars of Iron Mountain ore including trains handled by Diesel-electric locomotives;
 Modena or Beryl—Eastward and westward;
 Islen —Westward;
 Rox or Carp —Eastward and westward.

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

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

Rule 816;
 Rule 869, first paragraph;
 Rule 869 (A), first paragraph;
 Rule 884, first sentence;
 Rule 885, first sentence.

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

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

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

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

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.

875 (S). When Diesel-electric locomotive is left unattended, not less than two hand brakes must be set on descending end of units. Hand brakes must be released before attempting to move. Except during lunch periods, at least one engineman must remain on Diesel-electric locomotive until expiration of shift or assignment.

876 (R). Rule 876 is cancelled.

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

879 (R). Blow-off cocks or sludge removers must not be used immediately adjacent to nor 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 motors enroute, train dispatcher must be immediately notified.

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

896 (R). ENGINES HEAVIER THAN INDICATED BELOW MUST NOT GO ON THE TRACKS NAMED:

(Exceptions: Tracks which may be used by 0-6-0 type or heavier engines may be used by Diesel switch engines except trestle tracks at Midvale smelter.

Single-unit Diesel-electric 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 engines.

Continued opposite side.

896 (R). Continued.

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 unless otherwise specifically restricted.

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

Diesel-electric road locomotives may be operated on any track not restricted for heavy McArthur type in territory between Salt Lake City and Las Vegas.

Location	Track	Heaviest Engine Permitted
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
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
Lynnndyl	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

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Location	Track	Heaviest Engine Permitted
Cedar City Branch	Iron Springs to Cedar City	Heavy MacArthur
Cedar City	Doolittle track	Heavy MacArthur
	Commissary spur	Heavy MacArthur
	Lead to Freight House Track 6 ..	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
Midvale	Tracks 1, 2 and 3	Consolidation
	All other tracks	0-6-0
Atwood	U. S. Smelter spur	Consolidation
	Beet spur	Consolidation
Pallas	Siding	Consolidation
	Short 1	Consolidation
	Utah Ore Sampler, all tracks ..	Consolidation
	Old and new scale and run-around tracks	Consolidation
	All tracks inside Murray Smelter fence restricted to 0-6-0 type engines, except the slag track and tracks 5, 6 and 7 may be used by Consolidation class.	Consolidation
Murray	Cannery spur	Consolidation
	House track	Consolidation
	Team track	Consolidation
	Diamond Coal & Feed spur	Consolidation
	Murray Elevator spur	Heavy MacArthur
	Phillips Coal spur	Heavy MacArthur from main track to beginning of trestle.
	Brookfield Oil spur	Consolidation
	Morrison-Merrill spur	Consolidation
	Old stock track	Consolidation
Huslers	Huslers Mill spur	Consolidation
Burton	Shell Oil spur	Consolidation
	Coal yard spur	Consolidation
	Bennett spur	Heavy MacArthur
Fire Clay	Utah Fire Clay Co. tracks	Consolidation
	Woolen Mill spur	Consolidation
Walton	Walton Coal Co. spur	Consolidation
Officer	Egg House	0-6-0 or 0-8-0
	Allen Steel Co. spur	0-6-0 or 0-8-0
	W. H. Prince Co. coal spur	Consolidation
	W. H. Prince Co. gravel spur	Consolidation
	Utah Fire Clay Co. tracks	Consolidation
	W. H. Prince Coal Co. trestle	None permitted
Salt Lake City	Business car tracks	Consolidation
	Salt Lake Hardware Co. spur ..	Consolidation
	Freight house tracks	Consolidation
	Morrison-Merrill Co. tracks	Consolidation
	All coach yard tracks	Heavy MacArthur
	Storehouse and foundry tracks ..	Consolidation
	Material yard tracks, east of scrap dock	Consolidation
	Scrap dock spur	Consolidation

Continued opposite side.

Location	Track	Heaviest Engine Permitted
Salt Lake City	Tank car wash track	Consolidation
	Bamberger interchange tracks ..	Heavy MacArthur
	Utah Oil tracks	Heavy MacArthur
	Becks storage tracks	Heavy MacArthur
	South leg of wye	2-10-2 (MacArthur type engines with two-point suspension engine trucks, 2-10-2 and 800 class engines must be accompanied by road officer)
	D. & R.G.W. interchange tracks Sixth West and South Temple Streets	Heavy MacArthur
	Garden tracks 2, 3 and 4	Consolidation
	Load shifter spur	2-10-2
	Pepper Junk spur	Heavy MacArthur from First Subdivision main track switch to junk yard gate, 0-6-0 class engines inside junk yard
	All industry tracks Third West Street between Ninth South and South Temple Streets	0-8-0
	Ford Motor Company spur	0-8-0
	Gantry Crane tracks	0-8-0
	Utah Light & Traction Co. spur ..	0-8-0
	All spur tracks off north leg of wye	0-8-0
	Depot heating plant spur	0-8-0
	Spur tracks at north end of freight platform	0-8-0
	Spur track on east side of Utah Ice Co. warehouse	0-8-0
	Patek Soap Company spur	0-8-0
	Cement plant tracks, Ninth South Street	0-8-0
	Bennett Oil Company spur	0-8-0
	Fisher Brewery tracks	0-8-0
	Mountain States Supply Co. spur ..	0-8-0
	Jordan Steam Plant tracks	0-8-0
	Barrett Roofing Co. spur	0-8-0
	Jones Coal Co. spur	0-8-0
	Lundin & May Foundry spur	0-8-0
	Depressed cinder pit track	0-8-0
	Scale shop spur	0-8-0
	Wheel shop track	0-8-0
	All gravel pit tracks	0-8-0
	Garbage track	0-8-0
	Utah Barrel & Cooperage Co. spur ..	0-8-0
	Peerless Coal Co. trestle	None permitted
	Service Coal Co. trestle	None permitted
	HiHeat Coal Co. trestle	None permitted
North Salt Lake ...	North Salt Lake trackage	Heavy MacArthur
Woods Cross	Oil tracks, all tracks inside gate ..	Heavy MacArthur
	Cannery tracks	Consolidation
Farmington	Team track	Consolidation

Continued on Page 12.

Location	Structure or obstruction	Clearance of engine or car is close at—
Cache Valley Branch.		
Wellsville	Water tank spout	Side and top.
Logan	Water column	Side.
Logan	Shed, psgr. depot platform	Side.
Richmond	Water tank spout	Side and top.
Preston	Water column	Side.
Preston	Stockyard platform	Side.
Preston	Oil Co. pumphouse	Side.
Preston	Beet loading trestles	Side.
Preston	Preston Milling Co.	Side.
Second Subdivision.		
Garfield	Water tank spout	Side and top.
Garfield	Highway overhead crossing	Top.
Lake Point	Highway overhead crossing	Top.
Erda	Water column	Side.
M.P. 751.27	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.
Third Subdivision.		
Thermo	Water tank spout	Side and top.
Lund	Two water columns	Side.
M.P. 527.60	Bridge	Side.
Modena	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.

Continued opposite side.

Location	Structure or obstruction	Clearance of engine or car is close at—
M.P. 395.42	Bridge	Side.
Moapa	Water column	Side when on siding.
Provo Subdivision.		
Pallas	Water tank spout	Side and top.
Midvale spur	D.&R.G.W. overhead crossing	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	Plaster Mill platform	Side.
Mills	Water column	Side.
Fairfield Branch.		
M.P. 1.60	D.&R.G.W. crossing	Top.
Fillmore Branch.		
Fillmore	Water tank spout	Side and top.
Cedar City Branch.		
Iron Springs	Water tank spout	Side and top.
M.P. 22.51	Kaiser ore tippie	Side and top.
Cedar City	Water column	Side.
Iron Mountain Branch.		
Iron Mountain	All ore tipples	Side and top.
Pioche Branch.		
M.P. 0.68	Bridge	Side.
M.P. 20.60	Water tank spout	Side and top.
Pioche	Water tank spout	Side and top.
Mead Lake Branch.		
M.P. 5.49	Cut	Side.
Arrowhead spur M.P. 3.3	Conveyor, Nevada Mineral Co.	Top.
M.P. 7.75	Cut	Side.

900 (T). 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 Salt Lake City:

South Temple Street	Salt Lake City Gravel Pit
B.R.R. interchange	13th South Street

900 (U). 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 (V). Framed copies of Chief Engineer's Drawings No. 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

Continued on Page 14.

900 (V). Continued.

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 ft. 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 General Superintendent Transportation must be obtained for the movement of any shipment having an effective width in excess of 12 ft. to provide protection for other shipments exceeding 12 ft. in width that may be moving in 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 (W). 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.

1006 (R). Standard brake pipe pressure for freight and mixed trains is 90 pounds.

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.

1041 (R). Where helper engine is cut out of rear of train, brake pipe test as required by Air Brake Rule 1041 must be made before leaving station where helper engine was cut out.

1041 (S). 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	
Crestline	

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.

Continued opposite side.

1042 (R). Continued.

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). Between Stine and Leith when westward freight train is handled by steam locomotive or by Diesel-electric locomotive with dynamic brake not in operation and tonnage of train exceeds 65 tons per operative brake, retaining valves must be used on every other load throughout train, and stop of 10 minutes must be made at Elgin for inspection of train.

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 must be cut in and operative;

Speed must not exceed 6 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.

1048 (R). When a helper locomotive is added to a train, except when operated as lead locomotive, brakes on such locomotive must be tested as prescribed by Rule 1040 (D), which covers test of brakes on one or more cars added to a train at any point subsequent to a terminal test of air brakes.

1200 (R). Diesel-electric switchers and single unit Diesels with one air compressor are restricted in road service to a maximum of 45 cars on grades of one percent and over.

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 on locomotives 1360 to 1370 inclusive should be used only when handling single, and must not be used when double-heading with other power or handling trains.

1251 (R). When a helper locomotive is added to a train, except when operated as lead locomotive, brakes on such locomotive must be tested as prescribed by Rule 1242 (E), which covers test of brakes on one or more cars added to a train at any point subsequent to a terminal test of air brakes.

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

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

Type	Numbers (Inclusive)	H.P.	No. Units	Salt Lake City to Ogden	Ogden to McCammon	McCammon to Ogden	Ogden to Salt Lake City	Type	Numbers (Inclusive)	H. P.	No. Units	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	Crestline to Moapa	Moapa to Las Vegas	Salt Lake City to Mount	Mount to Payson	Payson to Sharp	Sharp to Lynndyl
EMD	1000-1095	Yd. SW 1000	1	1400	1150	1150	1400	EMD ALCO FBM Baldwin	1000-1095 1100-1153 1300-1304 1200-1210	YdSw 1000	1	2200	1500	2200	1600	1800	1800	1200	1500	1200	950	950	1025	1150
ALCO	1100-1153	Yd. SW 1000	1	1570	1800	1800	1570	ALCO	1180-1190	RdSw 1500	1	2600	1900	2700	2000	2500	2500	1600	1800	1700	1370	1500	1500	1800
FBM	1300-1304	Yd. SW 1000	1	2030	1580	1580	2030	ALCO	1191-1195	RdSw 1500	1	2900	2100	3000	2500	2900	2900	1900	2300	2100	2000	2000	1850	2000
Baldwin	1200-1210	Yd. SW 1000	1	1910	1550	1550	1910	FBM	1825-1329	RdSw 1500	1	2600	1900	2700	2000	2500	2500	1600	1800	1700	1370	1500	1500	1800
ALCO	1180-1195	Rd. SW 1500	1	2710	1880	1880	2710	FBM	1360-1370	RdSw 2000	1	3000	2500	3000	2700	3000	3000	1900	2375	2100	2000	2000	2000	2000
FBM	1325-1329	Rd. SW 1500	1	2550	1580	1580	2550	EMD	1400-1477	Frt 4500	3	6000	4420	6000	6000	6000	5350	4060	4300	4290	3860	4750	3410	4750
FBM	1360-1370	Rd. SW 2000	1	2530	2000	2000	2530	ALCO	1600-1643	Frt 4500	3	6000	5800	6000	6000	6000	6000	5100	5400	5100	5025	5200	5000	5200
EMD	1400-1477	Frt. 4500	3	6300	5000	5000	6300	EMD	1400-1477	Frt 6000	4	8000	6100	8000	8000	8000	7330	5030	5800	5080	5080	6540	5080	6330
ALCO	1600-1643	Frt. 4500	3	Car Limit	6000	6000	Car Limit	ALCO	1600-1643	Frt 6000	4	8000	7900	8000	8000	8000	8000	6700	7300	6700	6700	6900	6700	6920
EMD	1400-1477	Frt. 6000	4	Car Limit	6500	6500	Car Limit																	
ALCO	1600-1643	Frt. 6000	4	Car Limit	7000	7000	Car Limit	Type	Numbers (Inclusive)	H. P.	No. Units	Las Vegas to Caliente	Caliente to Islen	Islen to Crestline	Crestline to Milford	Milford to Lynndyl	Lynndyl to Boulder	Boulder to Bauer	Bauer to Salt Lake City	Lynndyl to York	York to Outler	Outler to Mount	Mount to Salt Lake City	
								EMD ALCO FBM Baldwin	1000-1095 1100-1153 1300-1304 1200-1210	YdSw 1000	1	800	525	650	2200	1200	1200	1600	2000	975	1150	900	1170	
								ALCO	1180-1190	RdSw 1500	1	1100	775	1200	2700	2000	2000	2500	2500	1650	1800	1750	1900	
								ALCO	1191-1195	RdSw 1500	1	1400	900	1475	2900	2300	2500	2700	2700	2000	2400	1900	2500	
								FBM	1325-1329	RdSw 1500	1	1100	750	1200	2700	2000	2000	2500	2500	1650	1800	1750	1900	
								FBM	1360-1370	RdSw 2000	1	1600	1100	1600	2900	2700	2650	3000	3000	2200	2700	1900	2700	
								EMD	1400-1477	Frt 4500	3	3020	2380	3300	6640	6640	4430	5980	6200	4550	5600	3920	4500	
								ALCO	1600-1643	Frt 4500	3	3450	2550	3600	7500	7500	5800	7200	7350	5400	6000	4500	6000	
								EMD	1400-1477	Frt 6000	4	4220	3240	4600	8000	8000	6100	7500	8000	6000	8000	5080	8000	
								ALCO	1600-1643	Frt 6000	4	4650	3500	6320	8000	8000	7900	8000	8000	7200	8000	6700	8000	

Note: Tonnage rating limited to maximum of 45 cars for single unit with one air compressor.

TOTAL LOADED WEIGHT ON DRIVERS

220,000 to 237,000 pounds

235,000 to 243,000 pounds

Nos. 1400 to 1477
1550 to 1563

Nos. 1600 to 1643

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

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

Type of Locomotive		Numbers (inclusive)	Salt Lake City to Ogden	Ogden to McCammon	McCammon to Ogden	Ogden to Salt Lake City
C 57	22	190	2610	2060	2060	2610
	30	191				
MacA 57	23 1/2	206	8000	2400	2400	8000
	30	210				
MacA 63	26	214	3200	2525	2525	3200
	28	216				
MacA 63	26	220	3300	2600	2600	3300
	30	220				
MacA 63	26	223	3230	2550	2550	3230
	28	223				
SA-C 59	23-28	475D	5000	4740	4740	5000
	30	475D				
CSA 69	22-22	400	5000	4600	4600	5000
	32	394				
		407				
4-6-6-4 69	3	404	5000	4600	4600	5000
	4	407				
	5	406				
TTT 63	29 1/2	290	4250	3350	3350	4250
	30	311				
		5000 to 5089				
		5300 to 5318				
UP 67	27	368	5000	4600	4600	5000
	31-32	372				
		5400 to 5414				
		5500 to 5529				

EXPLANATION	MacA MacArthur	SA-C Mallet SA
	TTT 2-10-2	UP 4-6-6-4
C Consolidation	UP 4-12-2	FEF 4-8-4
	C-SA Challenger	

EXAMPLE: Consolidation locomotive having 57-inch drivers, cylinders 22-inch diameter and 30-inch stroke and weighing 191,000 pounds on drivers.

22
C 57 — 191
30