

Total weight of boiler, including all accessories, and weight of fuel, water, and steam, will vary in proportion to the pressure to which the boiler is operated. A correction of 1 lb. per sq. in. of pressure will vary the weight of the boiler as follows:

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Pressure (psi)	Weight (tons)	Pressure (psi)	Weight (tons)	Pressure (psi)	Weight (tons)	Pressure (psi)	Weight (tons)
100	100	100	100	100	100	100	100
150	150	150	150	150	150	150	150
200	200	200	200	200	200	200	200
250	250	250	250	250	250	250	250
300	300	300	300	300	300	300	300
350	350	350	350	350	350	350	350
400	400	400	400	400	400	400	400
450	450	450	450	450	450	450	450
500	500	500	500	500	500	500	500
550	550	550	550	550	550	550	550
600	600	600	600	600	600	600	600
650	650	650	650	650	650	650	650
700	700	700	700	700	700	700	700
750	750	750	750	750	750	750	750
800	800	800	800	800	800	800	800
850	850	850	850	850	850	850	850
900	900	900	900	900	900	900	900
950	950	950	950	950	950	950	950
1000	1000	1000	1000	1000	1000	1000	1000

When weights of boiler, including all accessories, and weight of fuel, water, and steam, will vary in proportion to the pressure to which the boiler is operated. A correction of 1 lb. per sq. in. of pressure will vary the weight of the boiler as follows:

TABLE OF TONNAGES IN WEIGHT REMAINEE IN TONS OF 2,000 POUNDS

Pressure (psi)	Weight (tons)	Pressure (psi)	Weight (tons)	Pressure (psi)	Weight (tons)	Pressure (psi)	Weight (tons)
100	100	100	100	100	100	100	100
150	150	150	150	150	150	150	150
200	200	200	200	200	200	200	200
250	250	250	250	250	250	250	250
300	300	300	300	300	300	300	300
350	350	350	350	350	350	350	350
400	400	400	400	400	400	400	400
450	450	450	450	450	450	450	450
500	500	500	500	500	500	500	500
550	550	550	550	550	550	550	550
600	600	600	600	600	600	600	600
650	650	650	650	650	650	650	650
700	700	700	700	700	700	700	700
750	750	750	750	750	750	750	750
800	800	800	800	800	800	800	800
850	850	850	850	850	850	850	850
900	900	900	900	900	900	900	900
950	950	950	950	950	950	950	950
1000	1000	1000	1000	1000	1000	1000	1000

UNION PACIFIC RAILROAD COMPANY

Eastern District

Kansas Division

Special Rules No. 11

Effective Saturday, MARCH 1, 1952

Superseding Special Rules No. 10.

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

E. HICKS
General Manager

G. A. CUNNINGHAM
General Superintendent

W. O. HORNE,
Superintendent

Railroad Watches

2 (R). Operating Rules 2, 2 (A) and 2 (B) are cancelled.
 Employes listed below must, while on duty, have a reliable railroad grade watch* which must not vary more than 30 seconds from correct time.

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

Safety Representatives	Flagmen
Trainmasters	Firemen
Assistant Trainmasters	Hostlers
Traveling Conductors	Outside 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 may be designated
Brakemen	

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

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

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

Watch Comparison

3 (R). Conductors and engineers of westward C. R. I. & P. trains who have made and registered watch comparison at Phillipsburg or Goodland will not be required to make or register watch comparison at Limon.

3 (S). At Sharon Springs and Hugo, conductor on Train 9 or 10 need not compare time with engineer as required by Operating Rule 3 (C).

Signals

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

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

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

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

Reduce and Resume Speed Signs

10 (R). Operating Rule 10 (H) is changed to read:
 "Reduce Speed sign showing by figures the maximum speed permitted, placed on engineer's side of track, indicates that the track 2500 feet distant is in condition for a speed of not more than indicated by the sign. Example: 60-40-25 will indicate maximum speed of 60 MPH for streamline trains, 40 MPH for DE-Psgr. and Psgr. trains, 25 MPH for freight trains.

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

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

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

10 (S). Operating Rule 10 (G) is changed as follows:
 Yellow signals will be placed one and one-fourth miles instead of one mile from the beginning of the slow track.

10 (T). Referring to Special Rule 10 (R), signs are located on engineer's side of track, except as follows:

Location	Direction	Sign	Located
MP 39.5 to 39.9	Westward	Reduce Speed	North of Leavenworth Branch track, Lawrence.
MP 104.6 to 105.0	Eastward	Resume Speed	South of siding, Wamego.
MP 132.5 to 132.7	Westward	Reduce Speed	On fireman's side.
MP 132.5 to 132.7	Westward	Resume Speed	North of running track, Funston.
MP 133.7 to 137.1	Westward	Reduce Speed	North of running track, Funston.
MP 173.3 to 173.5	Westward	Reduce Speed	North of siding, Solomon.
MP 238.4 to 239.5	Eastward	Reduce Speed	On fireman's side.
MP 323.3 to 324.0	Westward	Reduce Speed	North of siding, Wakeeney.
MP 424.9 to 425.0	Eastward	Reduce Speed	South of siding, Somena.

Radio

16 (R). Any interruptions or failures of radio equipment used in yard operation must be reported by engine foremen to yardmasters, who will promptly furnish manager of telegraph office complete information concerning such interruptions or failures.

Any interruptions or failures of radio equipment used in train operation must be reported by conductor to chief dispatcher and manager of telegraph office at point where chief dispatcher is located, from first open telegraph office, such report to contain complete information concerning such interruptions or failures.

Headlights

17 (R). The following will govern use of oscillating red headlight:
 When train becomes disabled or makes sudden stop due to unusual occurrence, or when an adjacent track is obstructed or there is possibility of it being obstructed, if red headlight is not set in motion automatically, engineer must immediately set it in motion by manual operation.

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

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

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

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

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

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

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

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

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

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

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

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

Markers and Rear End Lights

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

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 Operating Rule 99 nor any other rule.

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

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

19 (T). Between West Abilene and East Salina, A. T. & S. F. trains will display yellow instead of green lights in markers.

Classification Signals

21 (R). When a train is equipped with indicators, white flags will not be displayed by extra trains.

Switch Lights

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

27 (S). Switch lights will not be used on:

- Leavenworth Branch;
- Manhattan Branch, between Marysville and Manhattan;
- Highland Branch;
- Solomon Branch;
- McPherson Branch;
- U. S. Hospital Branch.

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

Stopping Trains at Stations

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

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

Train Register

83 (R). C. R. I. & P. trains entering or leaving C. R. I. & P. yard at Kaw Jct. will register by registering ticket.

83 (S). All trains may register by registering ticket at Topeka passenger depot.

Information required by Operating Rule S-83 at Topeka will be given to U. P. westward freight trains by train order at West Topeka.

83 (T). Solomon is registering station for Nos. 165 and 166 only. East Salina is registering station for Nos. 79, 159, 165 and 565 only. Hastings passenger depot is registering station for Nos. 543 and 544 only.

83 (U). Sandown Jct. is registering station only for C. R. I. & P. trains operating between Sandown Junction and D. & R. G. W. north-west yard. Conductors of such trains may register by registering ticket.

83 (V). Information contained in train register at 36th Street may be accepted as applying at Pullman.

83 (W). Trains which do not originate at 36th Street need not receive information required by Operating Rules S-83 or D-83 at that station and conductors of such trains may register by registering ticket.

83 (X). At Hiawatha, before fouling Missouri Pacific tracks by movement through a cross-over, flag protection as required by Operating Rule 99 must be provided. In addition, information required by Operating Rule S-83 and written line-up must be obtained from Missouri Pacific train dispatcher.

Departing Kansas City Union Station

84 (R). At Kansas City Union Station, conductors must comply with K. C. T. time-table Rule 6 before departing, unless release is received from U. P. passenger agent when he is on platform.

Clearing Trains—Rule 251 Operation

86 (R). Where Operating Rule 251 is in effect, Operating Rule 86 is modified as follows:

When instructed by train dispatcher to clear a train, the time of such train must be cleared not less than ten minutes.

Movements in Yards

93 (R). When making movement between Sable and Bunell, engines must move expecting to find track occupied by U. S. Government engines:

Clearances

96 (R). Clearance must be received as follows:

Union Station —all westward trains;
 Terminal Jct. —all westward trains;
 Topeka passenger depot —all westward U. P. passenger trains and all eastward C. R. I. & P. passenger trains;

Topeka C. R. I. & P. tower —all eastward C. R. I. & P. freight trains;

West Topeka —all trains except westward passenger trains;

Junction City —all trains;

Abilene C. R. I. & P. depot —all westward C. R. I. & P. trains;

Abilene A. T. & S. F. depot —all westward A. T. & S. F. trains;

Salina passenger depot —all trains;

Ellis —all trains;

Hugo —all trains;

36th Street —all second-class and extra trains going to Kansas Division;

Concordia —all eastward trains;

Plainville —all trains;

Colby —all trains between 7 A. M. and 7 P. M. Monday through Friday, incl., and between 7 A. M. and 3 P. M. Saturdays and holidays.

Hastings passenger depot —all first-class trains;

Hastings yard office —all trains except first-class trains;

Marysville —all trains;

Troy —all westward trains;

Leavenworth —all westward trains.

96 (S). At Pullman, trains are not required to receive clearance as per Operating Rule 96.

96 (T).

A Clearance Received At	By	Will Confer the Same Authority On	As When Received At
Junction City.	Westward trains.	First Subdivision.	Terminal Jct.
Junction City.	Eastward trains.	First Subdivision.	Salina.
Abilene C.R.I.& P. depot.	Westward C.R.I. & P. trains.	First Subdivision.	West Abilene.
Abilene A.T.& S.F. depot.	Westward A.T.& S.F. trains.	First Subdivision.	West Abilene.
Salina passenger depot.	Eastward C.R.I. & P. and A.T. & S.F. trains.	First Subdivision.	East Salina.
Ellis.	Westward trains.	Second Subdivision.	Salina.
Ellis.	Eastward trains.	Second Subdivision.	Sharon Springs.
Hugo.	Westward trains.	Wyoming Division.	Pullman.
Hugo.	Westward trains.	Third Subdivision.	Sharon Springs.
Hugo.	Eastward trains.	Third Subdivision.	Pullman.
Limon.	Westward C.R.I. & P. trains.	Wyoming Division.	Pullman.
36th Street.	Trains going to Kansas Division.	Kansas Division.	Pullman.
Denver.	Trains going to Kansas Division.	Kansas Division.	Pullman.
Marysville.	Westward trains.	Fourth Subdivision.	Menoken or Upland.
Marysville.	Eastward St. Joseph Branch trains.	St. Joseph Branch.	Upland.
Leavenworth.	Westward trains.	Leavenworth Branch.	Cochrane.
Concordia.	Eastward trains.	Junction City Branch.	Miltonvale.

Railroad Crossings and Junctions

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

Location	Railroad Crossed, or Junction With	Trains Which Have Precedence	How Governed
11th & Santa Fe Sts., Kansas City, Mo.	St.L.&S.F.		Stop. Operating Rules 98 and 98 (A).
Santa Fe St., Block 29, Kansas City, Mo.	M.P.		Stop. Operating Rules 98 and 98 (A).
Between Eighth & Ninth Sts., Kansas City, Mo.	St.L.&S.F.		Stop. Operating Rules 98 and 98 (A).
11th & Mulberry Sts., Kansas City, Mo.	C.B.&Q.		Stop. Operating Rules 98 and 98 (A).
State Line Yard, Kansas City, Mo.	Yard track crosses yard tracks and M.P.		All movements stop clear of crossing unless proceed signal is received from switchtender and it is known that the crossing is clear.
Berger Ave. & Railroad St., Kansas City, Kans.	C.R.I.&P.		Stop. Operating Rules 98 and 98 (A).
Minnesota Ave. & M.P. Bridge, Kansas City, Kans.	M.P.		Interlocking.
Minnesota Ave. & Second St., Kansas City, Kans.	M.P.		Stop. Operating Rules 98 and 98 (A).
State Ave., East Block 16, Kansas City, Kans.	M.P.		Gates normally set against U.P.
State Ave. South, Opposite Block 16, Kansas City, Kans.	M.P.		Stop. Operating Rules 98 and 98 (A).
North City Limits, Kansas City, Kans.	M.P.		Stop. Operating Rules 98 and 98 (A).
Terminal Jct. (M. P. 3.3)	W. Psgr. Line Crosses E. Frt. Line		Block signals, instructions and signal from telegrapher-switchtender. Special Rule 98 (S).
Kaw Jct.	C.R.I.&P.		Special Rule 98 (T).
Sunflower. (Cement Plant Lead)	K.C.K.V. & W.		Stop. Operating Rules 98 and 98 (A).
Topeka. (M. P. 68.2)	C.R.I.&P.	U.P.	Manually controlled signals. Special Rule 98 (U).
Manhattan. (M. P. 119.4)	C.R.I.&P.	U.P.	Stop, send member of crew to crossing to give proceed signal when safe to proceed.
Salina. (M. P. 187.2)	A.T.&S.F.	U.P.	Block signals and gate.
Limon. (M. P. 550.5)	C.R.I.&P.	U.P.	Non-operative block signal displaying Stop indication.
Limon Jct. (M. P. 550.6)	C.R.I.&P.	U.P.	Dwarf signal.

98 (R). Continued.

Location	Railroad Crossed, or Junction With	Trains Which Have Precedence	How Governed
Sandown Jct. (M. P. 634.0)	C.R.I.&P.		Automatic block signals. Special Rule 98 (V).
Pullman. (M. P. 2.2)	Outbound main track.	Wyoming Division.	Block Signals. Special Rule 98 (Y).
36th Street. (M. P. 1.8)	Outbound main track.	Westward.	Block Signals. Special Rule 98 (Y).
Choctaw & Main Sts., Leavenworth.	L.T.&B. Co.		Interlocking.
Choctaw St. & Mo. River Bridge, Leavenworth.	L.T.&B. Co. C.G.W.		Interlocking.
Frankfort. (M. P. 58.3)	M.P.		Automatic Interlocking and C.T.C. Special Rule 98 (W).
Irving. (M. P. 152.7)	M.P.	M.P.	Stop, send member of crew to crossing to give proceed signal when safe to proceed.
Beatrice. (M. P. 97.2)	C.R.I.&P.	U.P.	Stop. Operating Rules 98 and 98 (A).
Concordia.	A.T.&S.F.	A.T.&S.F.	Gate.
Minneapolis. (M. P. 23.7)	A.T.&S.F.	U.P.	Stop. Operating Rules 98 and 98 (A).
Beloit. (M. P. 57.2)	M.P.	M.P.	Stop. Operating Rules 98 and 98 (A).
Salina (M. P. 0.5), McPherson Branch.	A.T.&S.F.	U.P.	Stop. Operating Rules 98 and 98 (A).
Salina (M. P. 0.6), McPherson Branch.	C.R.I.&P.	U.P.	Stop. Operating Rules 98 and 98 (A).
Salina (M. P. 0.6), McPherson Branch.	M.P.	U.P.	Stop. Operating Rules 98 and 98 (A).
Lindsborg. (M. P. 20.7)	M.P.	M.P.	Stop at switch target until gate has been set up against M.P. When entire train has passed the target on opposite side of crossing, the gate must be set against U.P.
McPherson. (M. P. 35.1)	A.T.&S.F.	A.T.&S.F.	Stop. Operating Rules 98 and 98 (A).
Lincoln Center. (M. P. 33.8)	A.T.&S.F.	U.P.	Gate.
St. Joseph, Mo.	U.T.R.R.		Stop. Operating Rules 98 and 98 (A).
Fairbury. (M. P. 152.7)	C.R.I.&P.	U.P.	Non-operative block signal displaying Stop indication.
Belt Line Crossing. (M. P. 249.6)	Belt Line.	U.P.	Semaphore and gate.

98 (S). At Terminal Jct., for movement to or from C. R. I. & P. yard, permission must first be obtained from telegrapher-switchtender and after switches are properly lined, trains must be governed by indication of signals.

Eastward trains and engines on old ice dock track must not pass Stop sign near east end of that track without permission from telegrapher-switchtender.

A westward train stopped by a dwarf signal, or an eastward train stopped by Signal 34, must not proceed until signal changes to Proceed indication or a proceed signal is received from telegrapher-switchtender.

98 (T). At Kaw Jct., when dwarf signal governing westward movement from C. R. I. & P. yard, or lower unit of Signal 52, displays Stop indication, train or engine may proceed only on hand signal received from telegrapher-switchtender and after verbal explanation has been given by telegrapher-switchtender to trainman or engineer. This movement must be made at restricted speed.

98 (U). At C. R. I. & P. Crossing, M. P. 68.2, Topeka, manually controlled signals are under control of C. T. C. operator at West Topeka.

When signal governing route to be used displays Stop indication, member of crew must communicate with C.T.C. operator for instructions. If movement is verbally authorized by operator, member of crew must proceed to the crossing, and if conditions permit and no conflicting movement is evident, he will signal his engineer to proceed.

Eastward high signal west of crossing governs movement over C. R. I. & P. crossing and main track movement. Dwarf signal at base of this high signal governs movement over C. R. I. & P. crossing and through cross-over to south running track.

98 (V). When an automatic block signal governing movement at Sandown Jct. displays Stop indication, train or engine must not proceed until proceed signal given with yellow flag or yellow light is received from telegrapher-switchtender, and in proceeding train or engine must be governed by Operating Rule 509.

98 (W). For movement over M. P. Crossing, Frankfort (M. P. 58.3), the following will govern:

When a westward train is stopped by C.T.C. signal east of crossing, in addition to complying with Operating Rules 267, 526 and 527, Operating Rule 612 will govern.

When an eastward train is stopped by automatic interlocking signal west of crossing, Operating Rule 612 will govern.

98 (X). At Hanover, Davenport, Edgar and Hastings, when dwarf signal displays Stop indication, or when light is not burning on dwarf signal, train or engine must stop, member of crew must be sent to crossing to give proceed signal when safe to proceed, and train or engine must be governed by Operating Rule 509.

98 (Y). All first-class trains must stop clear of cross-over at 36th Street unless proceed signal is received from switchtender and it is known that the switches are properly lined.

All Wyoming Division first-class trains and trains moving to or from Kansas Division must stop clear of cross-over at Pullman, unless proceed signal is received from switchtender and it is known that the switches are properly lined.

Flag Protection

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

Last paragraph of Operating Rule 99 is changed to read: "Night signals—A white light, not less than ten torpedoes and six red fuseses."

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

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

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

99 (T). Trains may be relieved from protecting against following extra trains by the use of Example (7) of train order Form E, only as follows:

Second Subdivision, between Ellis and Sharon Springs;
Third Subdivision, between Sharon Springs and Hugo;
Fourth Subdivision, between Hastings and Grand Island;
St. Joseph Branch,
between Troy and Home;
Manhattan Branch;
Leavenworth Branch;
Junction City Branch;
Solomon Branch;
McPherson Branch;
Plainville Branch;
Highland Branch.

Dead Engines

101 (R). In handling dead engine, it must be placed 12 cars behind the road engine, and if a second dead engine is in the train, the second dead engine should be 25 cars behind the road engine. In handling three dead engines in train, 15 cars must be placed between each engine.

Cars or Train Left Behind

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

Riding Ends of Engines

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

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

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

At Kansas City, continuous movements between Fairfax District and main running track at Armstrong;
At Junction City, main track movements;
At Salina, movements in train yard between Santa Fe and Ohio Streets;
At Ellis, main track movements;
Between Denver and Pullman, continuous main track movements;
At Marysville, between train yard and Elm Street;
At Hastings, between train yard and freight house yard.

Public Crossings

103 (U). 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 (V). The following instructions apply at public crossings protected by automatic crossing signals or automatic crossing gates where a crossing watchman is not on duty:

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

Switches

104 (R). No. 14 turnouts are installed at all power operated switches in C.T.C. territory except those at C. R. I. & P. Junction, Topeka, and at west cross-over switches at west end of Menoken.

Other switches equipped with No. 14 turnouts are indicated by a figure "14" on switch target.

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

Manhattan, Manhattan Branch main track switch just north of Poyntz Ave.—for passenger station;
Miltonvale, junction switch—for A. T. & S. F. main track;
Concordia, junction switch—for A. T. & S. F. main track;
Troy, junction switch—for C. R. I. & P. main track;
Stout, west end of siding—for Highland Branch main track.

Use of Sidings and Running Tracks

105 (R). Movements on Fort Riley siding and on Funston running track between west switch at East Funston and east switch at Fort Riley are governed by dwarf signals. All movements on these tracks must be made at restricted speed.

When a lunar light is displayed on governing dwarf signal, train or engine may proceed.

When a red light is displayed on governing dwarf signal or when dwarf signal is not visible, trains or engines must not enter these tracks, or move on these tracks, unless preceded by flagman.

Trains must not use Funston running track unless authorized by train dispatcher.

Speed Restrictions

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

Centralized Traffic Control System

266 (R). Clearance Form B need not be received by trains or engines entering C.T.C. territory between Topeka and Menoken, nor by St. Joseph Branch trains entering C.T.C. territory at Marysville or Upland, but must be governed by signal indication and instructions from dispatcher or operator.

266 (S). At Topeka, main track between C. R. I. & P. Junction and M. P. 69.1 must not be fouled or occupied by trains or engines without permission of C.T.C. operator.

267 (R). At Topeka, when C.T.C. Signal 688 or 693 displays Stop indication, member of crew must communicate with C.T.C. operator for instructions. If movement is verbally authorized by operator, flagman must be sent ahead to next signal and movement made at restricted speed.

267 (S). Between C. R. I. & P. Junction, Topeka, and West Topeka, yard engines need not receive Clearance Form C as authority to proceed from a Stop indication as required by Operating Rule 267, but must be governed by verbal instructions from C.T.C. operator.

272 (R). Protection of rear of train as required by Operating Rule 99 is not required between C.T.C. Stop signals at West Topeka and C.T.C. Stop signals at C. R. I. & P. Junction, M. P. 68, when rear of train is standing between those signals.

Block Signals

509 (R). An eastward train leaving Pullman or a westward train leaving Roydale will cause block signals between Pullman and Roydale to display restrictive indication. Trains using siding at Sandown should clear main track in sufficient time to avoid holding Stop signal against other trains.

Spring Switches

517 (R). Spring switch at Hastings is equipped with facing point lock. See Operating Rule 517.

Interlocking

605 (R) To indicate the route to be used, the following whistle signals will be used:

At Kaw Jct.:	
C. R. I. & P. eastward trains, for diverging track.	— o
At Bonner Springs, over A. T. & S. F. Crossing:	
For switch for eastward trains to enter siding.	— o
At Topeka, over A. T. & S. F. Crossing:	
For main track switch to east yard and rip track.	— o
For Rock Island—Curtis Street connection.	o o — o
For Golden Belt Elevator tracks.	o o — o
For Santa Fe interchange tracks.	— o — o
For cross-over, 700 feet east of crossing.	— o — o
At Hastings (M. P. 227.2):	
For main track.	—
For diverging track.	— o

Exchanging Signals and Inspection of Trains

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

Terminal Junction	Monument
Kaw Junction	Page City
St. Joseph, Mo. River	Frankfort
Drawbridge Control House	

713 (S). Referring to Operating Rules 713, 713 (A) and 713 (B). The following additional requirements must be observed in the operation of streamline trains:

Trainmen and enginemen, in addition to exchanging signals with operators or other employees at train order stations, must look their train over on curves, at stations where train order signals are located, when passing through yard limits and, in addition, they must inspect train on curves, as follows:

Continued on Opposite Side.

713 (S). Continued.

M. P. 23.6 and M. P. 23.9	M. P. 295.8 and M. P. 296.0
M. P. 39.5 and M. P. 39.9	M. P. 324.3 and M. P. 324.8
M. P. 42.4 and M. P. 43.0	M. P. 363.0 and M. P. 363.6
M. P. 58.5 and M. P. 59.1	M. P. 401.3 and M. P. 401.8
M. P. 82.1 and M. P. 82.5	M. P. 450.8 and M. P. 451.1
M. P. 99.6 and M. P. 99.9	M. P. 500.0 and M. P. 500.3
M. P. 123.1 and M. P. 123.5	M. P. 543.9 and M. P. 544.8
M. P. 167.9 and M. P. 168.3	M. P. 568.6 and M. P. 569.2
M. P. 221.9 and M. P. 222.4	M. P. 598.4 and M. P. 598.8
M. P. 256.4 and M. P. 256.9	

On curves indicated above, at train order stations, and after passing through yard limits, a trainman at rear of the train must exchange signals with a member of the engine crew in cab of locomotive, such signals to indicate whether or not train is running properly.

Any exceptions noted by either trainmen or enginemen must be promptly investigated and condition known to be safe before permitting train to proceed.

Passengers on Freight Trains

719 (R). Passengers with tickets may be carried on freight trains between stations at which the trains stop, except trains consisting mostly of stock.

Within the State of Kansas, on freight trains, passengers under 15 years of age must be accompanied by parent, guardian or other competent person.

Outfit Cars

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

Carbon Monoxide Fumes

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

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

Trains Stopped in Tunnels

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

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

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

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

Shutting Off Diesel Propulsion Engines

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

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

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

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

Power Transmission Wires

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

Diesel-Electric Locomotives

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

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

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

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

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

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

Cars Partly Loaded or Unloaded

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

Handling of Explosives and Inflammables

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

Placards on Cars

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

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

Switching Cars Containing Explosives or Poison Gas

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

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

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

Switching of Cars Containing Dangerous Articles

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

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

802 (S). Continued.

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

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

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

BE 589 (f). At all terminals or other places where trains are made up by crews other than road 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 (g). In a freight train or a mixed train either standing or during transportation thereof, a car placarded "Explosives" shall, when length of train permits, be placed not nearer than the sixteenth car from both the engine or occupied caboose, except:

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

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

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

Separating Cars Placarded "Explosives" From Other Cars in Train

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

1. Occupied passenger car, other than car occupied by gas handlers or military personnel accompanying shipments.
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 paragraph (1) of this section.

Position in Train of Loaded Placarded Tank Car

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

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

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

Continued on Page 8

802 (S). Continued.

Separating Loaded Tank Cars Placarded "Dangerous" from Other Cars in Train

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

1. Occupied passenger car, other than gas handlers accompanying shipment.
2. Occupied combination car, other than gas handlers accompanying shipment.
3. Any car placarded "Explosives."
4. Engine (except when train consists only of placarded loaded tank cars).
5. Any car placarded "Poison Gas."
6. Wooden 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).

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

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

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

BE 589 (l). A car placarded "Poison Gas" or containing poison liquids Class A in drums, tanks or bombs, or a car placarded both "Explosives" and "Poison Gas" shall at all times be next to and ahead of the car occupied by gas handling crews, when accompanying such car.

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

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

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

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

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

Position in Train of Cars Containing Class D Poison

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

Empty Tank Cars

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

Track Scales

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

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

—Continued one Side.

802 (T). Continued.

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

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

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

Movements at Stations

802 (U). At Manhattan, before using cross-over from middle track south of Poyntz Avenue, it must be known that cross-over is not blocked by cars in process of unloading.

802 (V). At Russell, before making switch movements, it must be known that cars on dock spur and house track do not foul north elevator track; also that cars on south side cross-over switch do not foul east end of south elevator track.

Handling Cars Ahead of Engine

802 (W). Cars may be handled ahead of locomotive when necessary, between Stout and Highland.

Cars with Roller Bearings

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

Switching Cars with Air Brakes Cut in

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

Pushing Streamline Trains

805 (R). Operating Rule 805 is cancelled.

Position of Cars in Trains

807 (R). Open top or flat cars loaded with pipe, rail, lumber, poles or other lading which has tendency to shift, must be handled in head end of train, but must not be entrained immediately behind Diesel-electric locomotive.

Exception: Open top cars containing shipments of creosoted lumber, piling, etc., handled by coal burning locomotive, must be entrained in rear portion of train.

807 (S). Open top or flat cars loaded with glass shipments, packed with straw or excelsior, handled by coal burning locomotive, must be entrained next to caboose.

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

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

Running Locomotives Backward

808 (S). Operating Rule 808 (A) is changed to read: "Steam locomotives and Diesel-electric locomotives other than Diesel road-switch and switch locomotives must not be run backward in road service where wye tracks or turntables are available, except in an emergency. When back-up movement is necessary, engineer must secure authority from train dispatcher."

Inspection of Trains

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

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

811 (T). In addition to making inspection of train as often as practicable as per Operating Rule 811, every freight and mixed train must stop and must be inspected at Kit Carson and at either Agate, Deer Trail, Peoria or Byers. At least one standing inspection must be made of every U. P. freight train between Bonner Springs and Frankfort and between Bonner Springs and Fort Riley.

Freight, mixed and extra passenger trains designated by symbol "MI," "MTX," "Main" or "WMB" must be given thorough inspection of entire train at Topeka, Carleton, Oakley, Kit Carson and Deer Trail. If in the judgment of train crews on such trains, due to adverse weather or other conditions, an additional inspection is necessary, it should be made at whatever location conductor considers advisable.

Hot Boxes

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

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

When car is set out account hot box, packing must be removed, fire extinguished and dirt, gravel or snow placed on top of box at back end over top of dust guard opening, after which lid on journal box must be closed. Thorough inspection must be made of car after attending to hot box to insure no fire on car body, and in all such cases, two members of crew must make this inspection, one of whom must be the conductor.

Closing Doors on Freight Cars

855 (R). Referring to Operating Rule 855:

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

Duties of Engine Men

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

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

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

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

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

Movement of Diesel Locomotives

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

Duties of Employes on Diesel Locomotives

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

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

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

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

Continued on Opposite Side.

874 (R). Continued.

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

This applies to the following trains:

Nos.	Between
9-10	Kansas City and Denver
37-38	Kansas City and Denver
69-70	Kansas City and Salina

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

When a fireman is required by this rule to remain in control cab at all times while train is in motion, his patrol of engine rooms will be made at initial stations and at other stops when time will permit. At points where firemen change, incoming fireman will assist outgoing fireman in making patrol.

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

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

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

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

Oil-Burning Engines

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

Leaving Locomotives Unattended

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

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

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

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

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

875 (T). Where engine crews with 3800 and 3900 class locomotives eat at intermediate stations, one member of crew must stay with engine at all times.

Fireman Handling Locomotive

876 (R). Operating 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.

Diesel Motors Cut Out

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

Speedometers

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

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

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

Inspecting Locomotives

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

800 Class Locomotives

889 (R). 800 class locomotives must not be worked with less than 33% cut-off to avoid hot main pins.

Movements Around Fueling Stations, etc.

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

Track Restrictions

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

(Exception: Tracks which may be used by 0-6-0 or heavier engines may be used by Diesel-electric switch locomotives.)

Location	Track	Heaviest Engine Permitted
Armstrong.....	7 stub radial tracks adjacent to turntable..... Wye track (Armourdale).....	Consolidation. 2-10-2.
Muncie.....	Sand spur, over bridge..... Business track..... Sand spur, east of bridge.....	None permitted. Consolidation. Heavy MacArthur, but must not exceed 5 MPH.
Forest Lake.....	Alongside high sand piles on sand spur.....	None permitted.
Sunflower.....	Tracks Nos. 5 and 6 and gypsum track..... Any track, except lead track, at Lone Star Cement Company plant.....	None permitted. Consolidation.
Bonner Springs.....	Business track.....	Heavy MacArthur.
Loring.....	Quarry tracks.....	Heavy MacArthur.
Lenape.....	Business track.....	Heavy MacArthur.
Linwood.....	Business track..... Tudhope track.....	Heavy MacArthur. Heavy MacArthur.
Lawrence.....	River tracks.....	Consolidation.
Midland.....	Business track.....	Heavy MacArthur.
Topeka.....	No. 1 track in east yard..... Enginehouse tracks, east of cinder pit..... Coach track.....	Consolidation. Light MacArthur. Light MacArthur.
St. Marys.....	College spur, over hopper hole north of street crossing..... College spur.....	None permitted. Light MacArthur, but with Light MacArthur movement must be made with engine backing up only, and any engine must not exceed 5 MPH.

Continued on Opposite Side.

896 (R). Continued.

Location	Track	Heaviest Engine Permitted
Wamego.....	Mill spur.....	Consolidation.
Manhattan.....	Ramey spur, beyond clearance point..... Hollenbeck spur..... Ice plant spur..... Perry Packing & Wholesale Company spur..... Team spur at freight house..... House spur..... Middle track, around curve near Poyntz Avenue..... Any side track east of C. R. I. & P. crossing on north side of main track..... Manhattan Branch main track to Blue Valley track switch..... West end of freight house track..... Middle track from west switch to Houston Street.....	None permitted. None permitted. Consolidation. Consolidation. Light MacArthur. Light MacArthur. Light MacArthur. Heavy MacArthur. 2-10-2. 2-10-2. 2-10-2.
Fort Riley.....	House track..... West hill track.....	Light MacArthur. Light MacArthur.
Junction City.....	Hogan Mill spur..... Baby wye track.....	Consolidation. Consolidation.
Abilene.....	Security Mill track.....	400 Class Consolidation.
Solomon.....	Wye Track.....	9000 Class, but must not exceed 5 MPH, except 400 Class Consolidation or lighter engines must not exceed 15 MPH.
Salina.....	Wissing and International spur, west of 9th Street..... Industry track between Second and Third Streets from Elm to Ash Streets..... Rip tracks Nos. 3 and 4..... No. 10 track..... Old ice house track..... Coal chute track, curve at west end..... East leg of McPherson Branch wye south of Shellabarger Mill track switch..... Softener track..... No. 7 turn-outs to repair and caboose tracks..... McPherson Branch wye track..... East lead to roundhouse.....	0-6-0. 400 class Consolidation. Light MacArthur. Light MacArthur. Light MacArthur. Light MacArthur. Light MacArthur. Light MacArthur. Heavy MacArthur. 2-10-2. 2-10-2. 2-10-2.
Kanopolis.....	Wye track.....	2-10-2.
Ellsworth.....	Old creamery spur..... Weber Mill spur..... St. L. & S. F. connection.....	None permitted. 5000 class, but must not exceed 5 MPH. Heavy MacArthur.
Black Wolf.....	Elevator track.....	2-10-2.
Bunker Hill.....	Stock track.....	2-10-2.
Homer.....	Elevator track.....	2-10-2.
Balta.....	Elevator track.....	2-10-2.
Victoria.....	Stock track.....	2-10-2.
Toulon.....	Elevator track.....	2-10-2.

Continued on Page 11.

896 (R). Continued.

Location	Track	Heaviest Engine Permitted
Yocemento.....	Track serving stock yards and elevators, beyond west elevator..... Track serving stock yards and elevators.....	None permitted. Heavy MacArthur.
Ellis.....	Wrecker track..... Wye track..... Tracks 2 and 3 in old yard..... Stock track..... Elevator spur.....	Light MacArthur. 2-10-2. Heavy MacArthur, but must not exceed 5 MPH. Heavy MacArthur, but must not exceed 5 MPH. Heavy MacArthur, but must not exceed 5 MPH.
Voda.....	Industry track.....	Mountain, but Mountain type only must not exceed 5 MPH.
Oakley.....	Enginehouse tracks..... Wye track.....	Heavy MacArthur. 2-10-2.
Winona.....	Wye track.....	Mountain, but Mountain type only must not exceed 5 MPH.
Sharon Springs.....	House track..... West coal chute lead..... Wye track.....	Mountain, but Mountain type only must not exceed 5 MPH. 2-10-2. 2-10-2.
Kit Carson.....	Wye track.....	2-10-2.
Hugo.....	Yard tracks Nos. 1, 2 and 3..... Wye track.....	2-10-2. (If train with 800 class engine is required to take siding must use roundhouse lead.) 2-10-2.
Roydale.....	Wye track..... Trackage to Rocky Mountain Arsenal.....	Heavy MacArthur. Heavy MacArthur.
Denver.....	East end of wrecker track..... Stock car cleaning tracks..... Outside creamery track..... East end of repair tracks at 23rd Street viaduct..... Cross-over inbound to outswitches Nos. 36 and 36-A, Tower B..... All industry tracks including Blake and Market St. leads... Coach yard tracks..... Freight house tracks and leads and cross-overs leading there-to..... Stake and train yards..... All Pullman shop tracks except engine tracks leading to and from turntable and transfer table..... All coal storage tracks..... Summit track.....	Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur.
Beverly.....	House track.....	Consolidation, but must not exceed 5 MPH.
Wolf Creek.....	Spur track.....	Consolidation, but must not exceed 5 MPH.
Spica.....	House track.....	Consolidation, but must not exceed 5 MPH.

Continued on Opposite Side.

896 (R). Continued.

Location	Track	Heaviest Engine Permitted
Onaga.....	Old L. K. & W. house track.....	Heavy MacArthur, except may be used by 5000 and 9000 class engines not exceeding 5 MPH.
Frankfort.....	Missouri Pacific transfer.....	2-10-2.
Marysville.....	East leg of wye..... First track north side of roundhouse.....	Heavy MacArthur. Heavy MacArthur.
Bremen.....	East end of business track.....	2-10-2.
Hanover.....	West end of stock track..... No. 6 track and yard tracks south of passing track..... Turn-out of east switch of No. 6 track.....	Heavy MacArthur. Heavy MacArthur. 2-10-2.
Hollenberg.....	Business track.....	2-10-2.
Steele City.....	Business track.....	2-10-2.
Endicott.....	Business track.....	800 class, but 9000 and 800 class only must not exceed 5 MPH.
Fairbury.....	Mill track from Third Street west to west switch..... Loop track..... Beer spur..... Alfalfa spur..... City Light Plant spur..... Auto dock spur..... Business track from east switch to Fifth Street.....	Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur. Heavy MacArthur.
Belvidere.....	Business track.....	2-10-2.
Carleton.....	House track..... Between west stock track switch and stock chute on stock track.....	2-10-2. 2-10-2.
Davenport.....	West end of business track.....	2-10-2.
Edgar.....	Business track.....	2-10-2.
Fairfield.....	Freight house and business tracks.....	2-10-2, except that 9000 class engines may pick up stock from east end.
Anan.....	Business track.....	2-10-2.
Glenvil.....	Business track.....	2-10-2.
Level.....	Beyond gate on west leg of wye... Beyond sign on east leg of wye...	None permitted. None permitted.
Hastings.....	City Light Plant spur..... Freight house yard and storage tracks.....	Heavy MacArthur. 2-10-2.
Irving.....	Missouri Pacific transfer.....	Consolidation.
Blue Rapids.....	Plaster Mill tracks Nos. 2 and 3 beyond frog of No. 3 track switch.....	Light MacArthur.
Marietta.....	Business track.....	2-10-2.
Oketo.....	All tracks, except passing track.....	2-10-2.
Barneston.....	Business track.....	2-10-2.

Continued on Page 12.

896 (R). Continued.

Location	Track	Heaviest Engine Permitted
Blue Springs.....	Business track.....	2-10-2, but must not exceed 5 MPH.
	Lead to business track.....	9000 class may move only to point 600 feet west of Bridge 110.75-S.
Beatrice.....	Turn-out of east switch of spur at M. P. 97.6.....	2-10-2.

896 (S). Pennsylvania box cars, series 36987-37090, inclusive, when loaded to axle capacity, will have gross weight of 169,000 pounds for car and lading, and must not be moved over the following branch lines:

- Leavenworth Branch —Account rail;
- Junction City Branch —Account bridges;
- Solomon Branch —Account bridges;
- McPherson Branch —Account rail;
- Highland Branch —Account rail;
- Plainville Branch —Account rail.

They may be operated over main tracks and other branch lines, also sidings and yard tracks ordinarily used by through freight trains.

If necessary to operate these cars on outside spur tracks on curves at Kansas City passenger terminal, care must be exercised on account of close clearance of umbrella sheds adjacent thereto. They will clear bay window of Penn Avenue interlocking tower 3 inches vertically and 3 1/4 inches horizontally.

Close Clearances

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

Snow plows must not exceed 5 MPH on main track or siding by locations shown below account close clearance:

Location	Structure or Obstruction	Clearance of Engine or Car Is Close At—
At all stations.....	Mail cranes.....	Side.
First Subdivision.		
M. P. 0.88.....	Bridge.....	Sides and top on both tracks.
Kansas City, Kans.....	Standpipe.....	Side on westward track.
Kansas City, Kans.....	Tenth Street Viaduct.....	Top on both tracks.
M. P. 6.87.....	Bridge.....	Sides on both tracks.
M. P. 11.38.....	Bridge.....	Sides on both tracks.
M. P. 27.86.....	Bridge.....	Sides on both tracks.
M. P. 34.35.....	Bridge.....	Sides on both tracks.
M. P. 35.95.....	Bridge.....	Sides on both tracks.
Lawrence.....	Train order delivery crane.....	Side on westward track.
Lawrence.....	Standpipe east of depot.....	Side on eastward track.
M. P. 52.60.....	Bridge.....	Sides on both tracks.
M. P. 60.88.....	Bridge.....	Sides on both tracks.
M. P. 66.76.....	Bridge.....	Sides on both tracks.
Topeka.....	Standpipe east of passenger station.....	Side on eastward track.
West Topeka.....	Train order delivery crane.....	Side.
M. P. 84.29.....	Bridge.....	Sides.
M. P. 96.72.....	Bridge.....	Sides.
M. P. 97.13.....	Bridge.....	Sides.
M. P. 97.28.....	Bridge.....	Sides.
M. P. 99.66.....	Bridge.....	Sides and top.
Wamego.....	Standpipe west of depot.....	Side.
M. P. 117.61.....	Bridge.....	Sides.
M. P. 137.18.....	Bridge.....	Sides and top.
M. P. 151.55.....	Bridge.....	Sides.
Abilene.....	Standpipe west of depot.....	Side.
M. P. 173.62.....	Bridge.....	Sides and top.
M. P. 181.12.....	Bridge.....	Sides.
Salina.....	Standpipe.....	Side.
Salina.....	Coal chute.....	Side and top.

Continued on Opposite Side.

900 (R). Continued.

Location	Structure or Obstruction	Clearance of Engine or Car Is Close At—
Second Subdivision.		
M. P. 187.12.....	Bridge.....	Sides.
M. P. 195.06.....	Bridge.....	Sides and top.
Brookville.....	Train order delivery crane.....	Side.
M. P. 201.94.....	Bridge.....	Sides.
M. P. 202.44.....	Bridge.....	Sides.
Dorrance.....	Coal chute.....	Side and top.
Dorrance.....	Standpipe.....	Side.
M. P. 274.01.....	Bridge.....	Sides.
M. P. 285.04.....	Bridge.....	Sides.
M. P. 290.62.....	Bridge.....	Sides and top.
Buffalo Park.....	Standpipe.....	Side.
Oakley.....	Standpipe west of depot.....	Side.
M. P. 405.61.....	Bridge.....	Sides.
M. P. 427.80.....	Bridge.....	Sides.
Sharon Springs.....	Standpipe east of depot.....	Side.
Third Subdivision.		
Sharon Springs.....	Standpipe west of depot.....	Side.
Cheyenne Wells.....	Standpipe.....	Side.
M. P. 514.94.....	Bridge.....	Sides.
M. P. 522.79.....	Bridge.....	Sides.
Clifford.....	Standpipe.....	Side.
M. P. 534.63.....	Bridge.....	Sides.
Hugo.....	Standpipe west of depot.....	Side.
Agate.....	Train order delivery crane.....	Side.
Deer Trail.....	Train order delivery crane.....	Side.
Deer Trail.....	Standpipe.....	Side.
M. P. 592.09.....	Bridge.....	Sides.
M. P. 602.15.....	Bridge.....	Sides.
Strasburg.....	Train order delivery crane.....	Side.
Strasburg.....	Standpipe.....	Side.
M. P. 607.80.....	Bridge.....	Sides.
Bennett.....	Train order delivery crane.....	Side.
Sable.....	Train order delivery crane.....	Side.
Denver.....	Signals 22 and 24.....	Side.
Fourth Subdivision.		
Menoken.....	Train order delivery crane.....	Side.
M. P. 7.09.....	Bridge.....	Sides and top.
M. P. 8.70.....	Bridge.....	Sides and top.
M. P. 20.51.....	Bridge.....	Sides.
Emmett.....	Train order delivery crane.....	Side.
M. P. 34.45.....	Bridge.....	Sides and top.
Onaga.....	Train order delivery crane.....	Side.
Marysville.....	Standpipe.....	Side.
Marysville.....	Coal chute.....	Sides.
M. P. 114.40.....	Bridge.....	Sides and top.
M. P. 117.75.....	Bridge.....	Sides.
Hanover.....	Water tank spout.....	Side.
Alexandria.....	Train order delivery crane.....	Side.
Edgar.....	Standpipe.....	Side.
Fairfield.....	Train order delivery crane.....	Side.
Hastings.....	Standpipe.....	Side.
St. Joseph Branch.		
Severance.....	Water tank spout.....	Side and top.
M. P. 25.74.....	Bridge.....	Sides and top.
Hiawatha.....	Standpipe.....	Side.
Sabetha.....	Standpipe.....	Side.
Sabetha.....	Coal chute.....	Side.
M. P. 76.22.....	Bridge.....	Sides.
Seneca.....	Standpipe.....	Side.
Leavenworth Branch.		
M. P. 7.79.....	Bridge.....	Sides.
M. P. 14.01.....	Bridge.....	Sides.
M. P. 16.89.....	Bridge.....	Sides.
M. P. 26.27.....	Bridge.....	Sides.
M. P. 31.01.....	Bridge.....	Sides.
M. P. 1.69 (between Corral and Knox).....	Overhead bridge.....	Top.

Continued on Page 13.

900 (R). Continued.

Location	Structure or Obstruction	Clearance of Engine or Car Is Close At—
Manhattan Branch.		
M. P. 100.50.....	Bridge.....	Sides.
M. P. 109.23.....	Bridge.....	Sides.
M. P. 123.26.....	Bridge.....	Sides.
M. P. 124.29.....	Bridge.....	Sides.
Marysville.....	Standpipe.....	Side.
Marysville.....	Coal chute.....	Side.
M. P. 135.10.....	Bridge.....	Sides.
M. P. 139.37.....	Bridge.....	Sides.
M. P. 146.03.....	Bridge.....	Sides.
M. P. 162.85.....	Bridge.....	Sides.
M. P. 167.97.....	Bridge.....	Sides.
Garrison.....	Standpipe.....	Side.
M. P. 179.68.....	Bridge.....	Sides.
M. P. 180.67.....	Bridge.....	Sides.
M. P. 187.79.....	Overhead bridge.....	Sides and top.
Junction City Branch.		
Wakefield.....	Water tank spout.....	Side and top.
M. P. 22.41.....	Bridge.....	Sides.
Clay Center.....	Water tank spout.....	Side.
M. P. 36.19.....	Bridge.....	Sides.
Solomon Branch.		
M. P. 23.65.....	Bridge.....	Sides and top.
McPherson Branch.		
Between 8 poles west of M. P. 3 and 4 poles east of M. P. 4.....	Anchor posts and tie wires west side of track.....	Side.
M. P. 21.42.....	Bridge.....	Top.
Plainville Branch.		
M. P. 1.16.....	Bridge.....	Sides.
M. P. 10.69.....	Bridge.....	Sides and top.
M. P. 33.36.....	Overhead bridge.....	Sides and top.
M. P. 33.45.....	Overhead bridge.....	Sides and top.
M. P. 33.66.....	Overhead bridge.....	Sides and top.
Bogue.....	Standpipe.....	Side.
M. P. 135.22.....	Bridge.....	Sides.
M. P. 139.67.....	Bridge.....	Sides.
M. P. 145.06.....	Bridge.....	Sides.
M. P. 145.91.....	Bridge.....	Sides.
M. P. 150.46.....	Bridge.....	Sides and top.
M. P. 151.49.....	Bridge.....	Sides and top.
M. P. 154.40.....	Bridge.....	Sides and top.
Hoxie.....	Standpipe.....	Side.
Colby.....	Standpipe.....	Side.

900 (S). Following are maximum clearances through all tracks except Track 10 at Denver Union Station:

From car floor to 14 feet above top of rail, maximum width must not exceed 12 feet.

From 14 feet above top of rail to 14 1/2 feet above top of rail, maximum width must not exceed 10 feet.

From 14 1/2 feet above top of rail to 15 feet above top of rail, maximum width must not exceed 8 feet.

15 feet above top of rail is maximum height for any car or load to clear umbrella train sheds.

Cars or loads exceeding the above dimensions must be handled through Denver Union Station on Track 10.

900 (T). 3700 and 3800 class cabooses must not be moved under the following structures:

- Kansas City Union Station —train sheds;
- Kansas City Terminal —Main St. viaduct;
- Kansas City, Mo. —St. Louis Ave. viaduct;
- Denver Union Station —Umbrella sheds.

Air Brake Rules

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 use of calcium chloride solution by rail car.

1035 (R). On passenger trains, running air test must be made at the following points:

- M. P. 210.5 Second Subdivision —Westward;
- M. P. 216.7 Second Subdivision —Eastward;
- M. P. 75.5 Plainville Branch —Eastward and westward.

RATING OF 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)	Kansas City to Salina	Salina to Ellsworth	Ellsworth to Salina	Ellsworth to Ellis	Ellis to Denver	St. Joseph to Double	Double to Hamlin	Hamlin to Marysville	Menoken to Marysville	Marysville to Hanover	Hanover to Hastings	Marysville to Beatrice
C 57 $\frac{22}{30}$	201 to 358	3500	1800	1800	1500	1280	1520	1280	1430	2070	2690	2070	
C 57 $\frac{21}{30}$	400 to 498	2500	1500	1500	1350	1180	1400	1180	1300	1895	2455	1895	
MacA 57 $\frac{23\frac{1}{2}}{30}$	1900 to 1949	4200	1500	2000	2000				1600	2500	3000	2500	
MacA 63 $\frac{26}{28}$	2200 to 2320	4500	1700	2200	2000				1650	2600	3200	3400	
MacA 63 $\frac{26}{30}$	2480 to 2499	4800	1900	2400	2200				1800	2700	3300	2700	
SA-C 59 $\frac{23-23}{30}$	3500 to 3569				3500								
4-6-4 $\frac{3}{5}$ $\frac{21-21}{32}$	3930 to 3949				3200								
60 $\frac{4}{5}$ $\frac{32}{407}$	3950 to 3969				3200								
TTT 63 $\frac{29\frac{1}{2}}{30}$	5000 to 5089	5500	2400	3000	2700				2290	3400	4400	4500	
UP 67 $\frac{27}{31-32}$	9000 to 9087	6500			3200				3200	4500	5200	6800	
FEF 77 $\frac{24\frac{1}{2}}{32}$	800 to 819	5480	1900	3000	1940	2130	2130	1820	1940	2910	3530	2950	
FEF 80 $\frac{25}{32}$	820 to 844	3000	1050	1550					1100	1800	2000	1800	
P 77 $\frac{22}{28}$	2800 to 2859	3720	1220	1610	1250	1460	1460	1270	1340	1990	2400	2010	
MT 73 $\frac{29}{28}$	7000 to 7038	4770	1590	2080	1500	1870	1870	1640	1710	2550	3100	2580	

EXPLANATION

C.....Consolidation
 MacA.....MacArthur
 P.....Pacific
 TTT.....2-10-2
 UP.....4-12-2
 FEF.....4-8-4
 MT.....Mountain
 SA-C.....Mallet

EXAMPLE: Consolidation locomotive having 57-inch drivers, cylinders 21-inch diameter and 30-inch stroke, and weighing 162,000 pounds on drivers: C 57 $\frac{21}{30}$ —162

RATING OF 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)	Denver to Ellis	Ellsworth to Salina	Ellsworth to Salina	Salina to Kansas City	Marysville to Hiawatha	Hiawatha to Stout	Stout to Double	Double to St. Joseph	Hastings to Hanover	Hanover to Marysville	Marysville to Aikins	Aikins to Menoken	Beatrice to Marysville
C 57 $\frac{22}{30}$	201 to 358	1500	1300	1300	4500	1275	2280	1180	2040	3560	1410	2330	3900	2070
C 57 $\frac{21}{30}$	400 to 498	1350	1000	1000	3200	1175	2140	1090	1900	3250	1290	2140	3550	1895
MacA 57 $\frac{23\frac{1}{2}}{30}$	1900 to 1949	1800	1500	1500	4500					3960	1600	2575	4300	2500
MacA 63 $\frac{26}{28}$	2200 to 2320	2000	1800	1800	6500					4200	1650	2760	4300	3400
MacA 63 $\frac{26}{30}$	2480 to 2499	2200	2000	2000	5800					4500	1700	2900	4500	2800
SA-C 59 $\frac{23-23}{30}$	3500 to 3569	3500												
4-6-4 $\frac{3}{5}$ $\frac{21-21}{32}$	3930 to 3949													
60 $\frac{4}{5}$ $\frac{32}{407}$	3950 to 3969	3200												
TTT 63 $\frac{29\frac{1}{2}}{30}$	5000 to 5089	2700	2500	2500	8000					5500	2300	3800	4900	4500
UP 67 $\frac{27}{31-32}$	9000 to 9087	3200	8500		8500					6500	3200	4800	6000	6300
FEF 77 $\frac{24\frac{1}{2}}{32}$	800 to 819	1780	4500	2300	5480	1780	5160	1640	2130	6200	2080	2480	3400	2200
FEF 80 $\frac{25}{32}$	820 to 844		2600	1050	3700					3000	1100	2100	3300	1700
P 77 $\frac{22}{28}$	2800 to 2859		2700	1100	4000		3500	1120	1460	4250	1400	2300	3300	1800
MT 73 $\frac{29}{28}$	7000 to 7038	1650	4000	2000	4770	1590	4800	1460	1870	5410	1800	3200	3350	1920

EXPLANATION

C.....Consolidation
 MacA.....MacArthur
 P.....Pacific
 TTT.....2-10-2
 UP.....4-12-2
 FEF.....4-8-4
 MT.....Mountain
 SA-C.....Mallet

EXAMPLE: Consolidation locomotive having 57-inch drivers, cylinders 21-inch diameter and 30-inch stroke, and weighing 162,000 pounds on drivers: C 57 $\frac{21}{30}$ —162