

OTTO C. PERRY
#3 FOX STREET
DENVER 9, COLO.

UNION PACIFIC RAILROAD COMPANY

Eastern District

Nebraska Division

Special Rules No. 10

Effective Thursday, February 1, 1951

Superseding Special Rules No. 9

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

H. E. SHUMWAY,
General Manager

E. H. BAILEY,
General Superintendent

J. E. MULICK,
Superintendent

Railroad Watches

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

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

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

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

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

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

Watch Comparison

3 (R). Conductors and engineers of C. B. & Q. trains who have made and registered watch comparison at C. B. & Q. initial station will not be required to make or register watch comparison at Sterling or Union.

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.

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 pos-

—Continued Opposite Side.

17 (R). Continued.

sibility 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, 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). At North Platte, when a train on belt track is clear of the main track, at night the markers must display green lights to the front and side, a green light to the rear on the side next to the main track, and a red light to the rear on the opposite side.

Classification Signals

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

Indicators

24 (R). Referring to Operating Rule 24: On subdivisions where operation by Operating Rule 251 is in effect, helper engines to be added to or cut off trains between terminals will display engine number instead of train number in indicators.

Switch Lights

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

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

- Sears Branch;
- Lyman Branch;
- Gering Branch;
- Ord Branch, between Cotesfield and Ord;
- Loup City Branch, between Boelus and Loup City;
- Kearney Branch, between Oconto and Stapleton.

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

Conditional Stops

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

Train Register

83 (R). At Union, eastward Union Pacific trains which have not ascertained that C. B. & Q. trains due have arrived or left, must approach C. B. & Q. junction switch at restricted speed, but if operator is located west of C. B. & Q. junction switch and gives proceed signal and delivers train order check on C. B. & Q. trains, and if block signals indicate Proceed, eastward trains may proceed.

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

Where Operating 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.

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 or trains, the following will govern:

The time of Nos. 101, 102, 103, 104, 105, 106, 111 and 112 must be cleared not less than five minutes by first-class trains and not less than fifteen minutes by second-class and extra trains; the time of other first-class trains must be cleared not less than ten minutes by second-class and extra trains.

Movements in Yards

93 (R). Where Operating Rule 251 is in effect, time on first-class trains issued orally or by message by train dispatcher, may be used within yard limits where there are continuous block signals, in determining when necessary to protect against first-class trains.

93 (S). At Cheyenne, between west wye switch and Tower A, all trains and engines must approach cross-over switches in main tracks carefully, expecting to find tracks in vicinity of passenger station occupied by trains or cars, and switches lined for other than main track movement.

Eastward trains and engines approaching west end Cheyenne passenger station must be prepared to stop clear of cross-over unless proceed signal is received from yardman in charge of switches.

Westward trains and engines approaching east end Cheyenne passenger station must be prepared to stop clear of cross-overs at east end of passenger yard tracks unless proceed signal is received from yardman in charge of switches.

Trains leaving Cheyenne passenger station must not foul lead or cross-overs until proceed signal is received from yardman in charge of switches.

Proceed signal must be answered.

At Cheyenne, trains and engines using First Subdivision main track between Tower A and passenger station must move expecting to find the track occupied, and a speed of 20 MPH must not be exceeded under any circumstances.

All eastward trains must approach west end of Cheyenne yard prepared to stop unless it can be seen that the lead is clear and switch is properly lined for their head-in track. When view is obscured or lead occupied, trainman must precede movement and know that switches are properly lined and lead clear before giving proceed signal.

Sections

95 (R). Where Operating 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.

Clearances

96 (R). A clearance must be received as follows:
 Omaha Union Station—by all westward Union Pacific passenger trains;
 Gilmore Junction —by all westward Union Pacific trains;
 Grand Island —by all trains;
 Sidney —by all trains;
 Sterling —by all trains.

96 (S). Trains are not required to receive a clearance, per Operating Rule 96, as follows:

Summit—All westward passenger trains;
 Gilmore—All westward trains;
 Oconee —All trains.

96 (T).

A Clearance Received At	By	Will Confer the Same Authority on	As When Received at
Omaha	Westward first-class trains.	First Subdivision.	Summit.
Gilmore Junction	Westward trains.	Old Main Line.	Gilmore.
Gilmore Junction	Westward trains.	First Subdivision.	Lane.
Columbus	Westward trains going to Albion Branch.	Albion Branch.	Oconee.
Columbus	Westward trains going to Cedar Rapids Branch.	Cedar Rapids Branch.	Genoa.
Spalding	Eastward trains.	Albion or Norfolk Branches.	Genoa or Oconee.
Albion	Eastward trains.	Norfolk Branch.	Oconee.
Grand Island	Any train.	First Subdivision.	Initial Station.
Sidney	Any train.	Second Subdivision.	Initial Station.
Sterling	The only section of a regular train.	Third Subdivision.	Initial Station.

Exception: A clearance must be received at Genoa by all Cedar Rapids Branch trains when there is an operator on duty.

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
Summit. (M.P. 5.1)	C. G. W., C. & N. W. cross-overs between Tracks 1, 2, 3, and 4.		Interlocking and signal from switchtender when making movement to south running track and Track 4.
Lane. (M.P. 17.1)	Old Main Line crosses eastward track.		Block signals. Special Rule 509 (U).
Fremont. (M.P. 38.2)	F. S. Y. & L. Co.	U. P.	Cabin Interlocking. Special Rule 98 (S).
Fremont, on Canning Factory Spur.	C. B. & Q. crosses Canning Factory Spur.	U. P.	Gate.
Central City. (M.P. 124.3)	C. B. & Q.		Semi-Automatic Interlocking. Operating Rule 616.
Central City. (M.P. 124.6)	Stromsburg Branch crosses eastward track from eastward siding.		Westward Stromsburg Branch trains will contact Train Dispatcher and cross over under block signal protection. If an eastward train is seen approaching, switch must not be opened or cross-over occupied until approaching train has stopped.
Gibbon. (M.P. 175.92)	Hastings Branch crosses eastward track from eastward siding.		Interlocking. Special Rule 509 (T).
O'Fallons. (M.P. 300.7)	North Platte Branch.		Under flag protection.

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Location	Railroad Crossed, or Junction With	Trains Which Have Precedence	How Governed
Egbert. (M.P. 477.7)	North Platte Cut-Off.		Under flag protection.
Cheyenne. (M.P. 508.4)	Westward freight trains cross eastward track.		Where there is not an eastward first-class train due, westward freight trains will cross over at east switch Cheyenne yard under block signal protection. If an eastward first-class train is due, they must not cross over without permission from the train dispatcher, and, if an eastward train is seen approaching on eastward track, switch must not be opened nor cross-over occupied until approaching train has stopped.
Union. (M.P. 81.0)	C. B. & Q.		Block signals. Special Rule 83 (R).
Wahoo. (M.P. 19.6)	C. & N. W.	U. P.	Stop signs.
Wahoo. (M.P. 19.6)	C. B. & Q.	U. P.	Stop signs.
Beatrice. (M.P. 97.2)	C. R. I. & P.	U. P.	Stop signs.
Beatrice. (M.P. 97.6)	C. B. & Q.	U. P.	Stop signs.
Humphrey. (M.P. 25.1)	C. & N. W.	U. P.	Stop signs.
Norfolk. (M.P. 48.7)	C. & N. W.	C. & N. W.	Semi-Automatic Interlocking. Special Rule 616 (R).
Norfolk. (M.P. 50.2)	C. & N. W.	C. & N. W.	Stop signs.
Brainard. (M.P. 15.0)	C. & N. W.	U. P.	Stop signs.
David City. (M.P. 23.5)	C. B. & Q.	U. P.	Stop signs.
Ord. (M.P. 60.6)	C. B. & Q.	U. P.	Stop signs.

98 (S). At F. S. Y. & L. Co. crossing, Fremont, a train stopped by Stop indication of signal governing movement over crossing, may proceed when signal changes to Proceed or Approach indication.

If signal continues to display Stop indication, flagman must be sent to crossing to ascertain that derails on C. & N. W. track are in derailing position, and if no conflicting movement is evident and if other conditions permit, flagman will signal his train to proceed over crossing.

Trains heading out of the extreme east end of the eastward siding at Fremont, must flag over F. S. Y. & L. Co. crossing, and know that it is clear before using it.

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 on North Platte Cut-Off and all branch lines.

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 on 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 Grand Island, continuous main track movements between east yard and west stock yard, and between east yard and sugar plant.

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 will govern trains and engines at the public crossings named below:

Stop At—	After stopping, proceed only as follows:
South Sixth St., Beatrice.	Following flagman.
Court St., Beatrice.	Following flagman.
Norfolk Ave., Norfolk.	Following flagman, except when it is known that the crossing is protected by flagman.

103 (W). At Valley, cars must not be left within 60 feet of the first street crossing west of the depot.

At Norfolk, cars must not be left closer than 15 feet from the outside edge of the sidewalk.

103 (X). At Grand Island, all trains must be governed by signals received from traffic director at Pine Street.

At Central City, while standing, freight trains must keep all crossings clear between the hours of 6:00 a.m. and 11:00 p.m.

At Pine Bluffs, while standing, freight trains must keep crossing just east of depot clear.

At Hillsdale, while standing, freight trains must keep crossing at depot clear between the hours of 8:30 a.m. and 10:00 a.m.

103 (Y). At Kearney, when Signal 1890 displays Stop indication, eastward trains on main track must stop clear of Fifth Avenue crossing. When Signal 1890 displays Stop indication and track occupancy indicator indicates siding is occupied, eastward trains to use siding must remain clear of Fifth Avenue crossing.

103 (Z). At Ogallala, when engine is to be cut off an eastward train on main track, train must be left west of aluminum painted pole located 150 feet west of public crossing.

Trains or cars must not be left standing on eastward siding between public crossing and yellow painted joint bars located 150 feet west of crossing.

Switches

104 (R). Switches equipped with No. 14 turnouts are indicated by a figure "14" on switch target.

104 (S). Switches will be set normally:

Gilmore —at end of double track, for eastward track;
Oconee —for Norfolk Branch;
Genoa —for Cedar Rapids Branch;
Yoder —for main track to South Torrington.

Track Occupancy Indicators

105 (R). At Kearney and Gothenburg, when an illuminated letter "O" is displayed on track occupancy indicator, it indicates siding is not occupied. When no light is displayed, it indicates siding is occupied. Indications displayed by these indicators do not modify requirements of Operating Rule 105.

Trains at Stations

107 (R). At Fremont, Columbus and Kearney, eastward and westward freight trains must not pass in front of passenger station at the same time. When trains approach those points at the same time from opposite directions, the westward train will have precedence.

At Valley, passengers will be discharged from westward trains on south side of track.

At Fremont, Columbus, Kearney and Julesburg, passengers will be discharged from eastward trains on north side of track.

Movements Against Current of Traffic

D-151 (R). At points shown below, trains and engines may move against the current of traffic within yard limits without being preceded by a flagman, except when a first-class train is due or when view is obscured:

At Grand Island —Between C.B. & Q. Crossing and Clark St.
At North Platte —Between extreme east and west switches;
At Sidney —Between extreme east and west switches;
At Cheyenne —Between M.P. 509.2 and Tower A.

D-151 (S). Except as provided in Special Rule D-151 (R), where Operating Rule 251 is in effect no movement against the 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 the 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 the current of traffic.

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."

Cross-over Movements—Cheyenne

D-152 (R). At Cheyenne, movements through cross-over just east of east leg of the wye, may be made under block signal protection. If a train or engine is seen approaching, switch must not be opened nor cross-over occupied until approaching train or engine has stopped.

Movement of Trains by Block Signals

251 (R). Where Operating Rule 251 is in effect, the movement of trains will be supervised by the train dispatcher, and oral and message instructions issued by him must be complied with, except that when necessary to provide single track operation on double track, or for operation of trains against the current of traffic, or for operation of work trains, train order authority must be obtained.

Electric Locked Switches

494 (R). When authority to operate an electric locked switch has been received, following will govern:

Switch operating lever must be left in its socket and no attempt made to operate switch until indicator at the lock shows lock released. This indication is given in one of the following ways:

Indicator changes to Clear position;
The word "Clear" or "Unlocked" appears;
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 and switch may be operated and train or engine may proceed without waiting three minutes as required by Operating Rule 517.

Lifting, or attempting to move switch operating lever before lock has released will result in binding of the lock rod, which will prevent movement of lock lever.

494 (S). In using electric lock when communication has failed, or electric lock is out of order, mechanical release seal on lock so equipped may be broken. After high lock has been released by moving crank to left or, on low lock, by removing padlock and releasing electric lock with switch key, member of crew must wait three minutes before lining switch; after which, train or engine may proceed as required by Operating Rule 509.

After using the switch or derail equipped with high electric lock, switch and derail must be returned to normal position and locked; crank on electric lock must be restored to normal position against stop block. Door of case must be locked and, except when communication has failed, dispatcher notified.

494 (T). Where electric switch locks are in service, instructions for operating lock are inside of case.

Siding Indicator

501 (R). Referring to Operating Rule 501 (AA):

Fixed signal with which Siding Indicator is connected may display either Stop or Approach indication.

Block Signals

509 (R). At Summit, when Signal 49-3 displays Stop indication, a train or engine which is to enter Summit yard from main track 3, may pass this signal without stopping, provided switch is set for movement and proper hand signal is received from man in charge of switch.

At Q Street, South Omaha, when Signal A-68 displays Stop indication, a switching movement which is to enter yard from main track 2 may pass this signal without stopping, provided switch is set for movement and proper hand signal is received from man in charge of switch. This rule does not apply to train movements.

At Q Street, South Omaha, when Signal A-67 displays Stop indication, a train or engine which is to enter yard may pass this signal without stopping, provided switch is set for movement and proper hand signal is received from man in charge of switch.

At Sidney, when Signal 4075 or Signal 4086 displays Stop indication, a train which is to enter east yard or west yard may pass these signals without stopping, provided switch is set for movement and proper hand signal is received from man in charge of switch.

509 (S). At Cheyenne, when dwarf signal located between eastward and westward main tracks 525 feet west of M.P. 509 or dwarf signals at the fouling point on C. B. & Q. transfer track, old ice house track and old shop track or Signals 5083 or 5089 display Stop indication, a flagman must be sent ahead to next signal or to "End of Block" sign. Lower unit on Signal 5083 will govern cross-over movements from westward main track to freight yard.

509 (T). Upper unit of Signal H-273 on Hastings Branch at Gibbon governs westward movements on eastward siding to interlocking dwarf signal. When upper unit displays Stop indication, trains from Hastings Branch must not use eastward siding without permission from the operator.

Lower unit governs westward movements from Hastings Branch to westward main track. When yellow indication displayed by lower unit after switches have been lined for movement, movement may be made at once.

509 (U). At Lane, cross-over movements to and from Old Main Line are governed by automatic block signals. Operating Rule 520 will govern.

Switch indicators and electric switch locks are located at junction switch of eastward main track and at main track switch at west end of cross-over from Old Main Line to westward main track. When switch indicators display Main Track Occupied indication, door of high electric lock must not be opened or padlock removed from hasp on electric lock.

Indicator lamp at the lock will light when door of high electric lock is open or when padlock is removed from hasp on low electric lock. See Special Rule 494 (S).

If electric lock has not released when door of case is opened or when padlock is removed, time-element relay will automatically start operating and after approximately four minutes electric lock will release and switch can be operated.

Continued on page 6.

509 (U). Continued.

When making movement from eastward main track to Old Main Line, trains must stop after rear of train passes sign bearing the words "Release Section", but not over 300 feet from junction switch.

When Signal A-249 displays Approach indication, westward trains and engines must stop to clear Center street and member of crew must communicate with train dispatcher and be governed by his instructions.

Dual Control Switches

Definition: A Dual Control Switch is a power operated switch which is also equipped for hand operation.

513 (R). Where dual control switches are installed, in addition to Operating Rules 513 and 514, the following Special Rules 513 (S) to 513 (X) must be complied with.

513 (S). Before a train or engine may, under any condition, pass a Stop indication of a signal governing movement over dual control switches, selector lever on dual control switches over which movement is to be made must be moved to HAND position. After any part of train or engine has passed signal, selector lever must be restored to MOTOR position, and, except when communication has failed, operator notified.

513 (T). After passing a signal governing movement over a dual control switch, if train or engine stops before passing next opposing signal and makes a reverse movement out of that block, no forward movement may be made into that block without authority from operator, or until selector lever on dual control switch has been placed in HAND position.

513 (U). If a train or engine over-runs a signal displaying Stop indication governing movement over a dual control switch, member of crew must communicate with operator at once and be governed by his instructions. Front of train must be protected immediately.

513 (V). Dual control switches must not be hand-operated without authority from operator, except when communication fails.

Authority to use a dual control switch for switching movements must be given verbally to member of crew by operator. Time the switch or track may be used and designated limits must be clearly stated and understood.

513 (W). To hand-operate a dual control switch, following will govern:

After engineer has been informed that switch is to be hand-operated, selector lever must be moved to HAND position and left in that position during hand operation. Indications of signals governing movement over that switch may be considered suspended during hand operation.

When communication fails, switch must not be hand-operated until three minutes after selector lever has been placed in HAND position.

513 (X). When a member of crew of a train or engine which is switching or standing observes a white light burning on relay house or telephone booth, he must communicate at once with operator.

Spring Switches

519 (R). Spring switch west of coal chute, Hastings, is equipped with facing point lock. See Operating Rule 519.

Interlocking

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

At Julesburg:

- For movement from westward main track to Third Subdivision or from Third Subdivision to eastward main track..... - o
- For movement from westward main track to eastward main track or from eastward main track to westward main track or from Third Subdivision to westward main track..... o - o

At Tower A, Cheyenne:

- For movement from any track to—
- Stock yard..... - o -
- First Subdivision main track..... - o
- New yard south lead..... - - o
- Eastward main track..... o - o
- Westward main track..... o - o -

—Continued Opposite Side.

605 (R). Continued.

At Sterling:

- For main track..... -
- For diverging route..... - o
- For stockyards track..... o - o -

605 (S). At C. B. & Q. Hall Tower, Lincoln, a siren is in service, and signals by the siren indicate as follows:

Sound	Indication
-	All trains within interlocking limits stop immediately.
o o	Resume normal movement after receiving the proper signal or permission from the signalman.
o o o	Siren test.
o o o o	Call for signal maintainer.

616 (R). When semi-automatic interlocking at Norfolk is out of order, trains must not use the crossing until protected by flagman, in both directions on C. & N. W. Union Pacific chief dispatcher must be immediately notified by wire.

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 depots and towers. On freight trains, this trainman must be on rear platform of caboose.

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 employes 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:

- M.P. 22.2 and M.P. 22.6 (near Elkhorn)—reverse curves
- M.P. 103.2 (Near Silver Creek) —single curve
- M.P. 216.2 —single curve
- M.P. 258.1 and M.P. 258.5 —reverse curves
- M.P. 323.5 and M.P. 324.4 —reverse curves
- M.P. 355 —single curve
- M.P. 422.6 and M.P. 423.5 —reverse curve
- M.P. 486.2 and M.P. 487.6 —reverse curve

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, as follows: Trains Nos. 97, 98, 237, 238, 239, 240, 241, 242, 243, 244, 353 and 354.

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.

Spreaders and Snow Plows

732 (R). Spreaders and snowplows will not clear brick platforms at Cheyenne passenger station and must be moved carefully passing brick platforms at Kearney and Cozad account close clearance.

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 employes who in any way handle or care for explosives and other dangerous articles must familiarize themselves with the regulations and instructions governing the handling of them.

Placards on Cars

BE 589 (a). (1) A car requiring car certificates and "Explosives", "Dangerous" or "Poison Gas" placards under the provisions of these regulations shall not be transported unless such freight car is at all times placarded and certificated as required by these regulations. Placards lost in transit shall be replaced at next inspection point and those not required must be removed.

BE 589 (a). (2) At points where trains are inspected, cars placarded "Explosives" and adjacent cars shall be inspected; such cars shall continue in movement only when inspection shows them to be in condition for safe transportation.

Continued Opposite Side.

802 (S). Continued.

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:

(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.

Continued on page 8.

802 (S). Continued.

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).

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 gas handling crews, when accompanying such car.

BE 589(i). (2) A car or cars placarded "Explosives" shall at all times 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 (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.

—Continued Opposite Side.

802 (S). Continued.

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

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.

Explosives and Inflammables in Mixed Trains

802 (T). The cars designated below must not be handled in mixed trains:

- Cars containing highly inflammable commodities;
- Shipments of explosives, including merchandise cars placarded "Explosives".

Track Scales

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

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

Cars 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.

Retarder Yard—North Platte

802 (V). Switching movements handled by Car Retarder System are controlled by signal indications and verbal instructions over radio or loud speakers.

Hump signal, located at crest of the hump, governs eastward movements on hump lead. Hump signal repeaters repeat the same indications displayed by the hump signal. The indications of these signals are as follows:

Color	Indication
Red	—Stop
Yellow	—Proceed not exceeding 2 MPH
Green	—Proceed not exceeding 4 MPH
Flashing Red	—Back up.

Trimmer signal, located at crest of the hump, controls westward movements from west end of classification yard. Trimmer signal repeater repeats the same indications displayed by the trimmer signal.

The indications of these signals are as follows:

Color	Indication
Red	—Stop, and not proceed except on instructions from hump yardmaster.
Green	—Proceed.

Hump and trimmer signals are controlled by yardmaster, engine foreman or other designated employe.

An air whistle located on the compressor building will be controlled from hump yardmaster's office and Tower A. The following whistle signals will be used:

- 1 long blast —Humping operations are about to start.
- 2 short blasts —Call for maintainer.
- 3 short blasts —Call for section foreman.

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.

Operative Air Brakes

804 (S). Air brakes must be cut in and operative on all cars being handled at the following points:

- Columbus —Between sand pit and train yard and between sand pit and C. B. & Q. Transfer;
- Grand Island —Between train yard and sugar factory;
- Grand Island —Between train yard and Webb Stockyard;
- North Platte —Between train yard and stockyard;
- Northport —Between depot and C. B. & Q. Transfer.

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.

807 (V). Cars must not be handled behind caboose between Lagrange and Albin.

Doubleheading

808 (R). Doubleheading of any engine with either a 5000 or 9000 class engine over Bridges 56.60 or 65.76, Beatrice Branch, is permitted only when the additional engine is lighter than a 5000 class engine.

800, 9000 and 3900 class engines must not be operated doublehead over Bridge 12.65, Old Main Line.

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, freight trains must stop and must be inspected at the following points:

Westward	Eastward
Columbus	Pine Bluffs
Kearney	Ogallala
Ogallala	Kearney
Pine Bluffs	Columbus

In addition to the above designated inspection points, crews will make additional inspection whenever and wherever in the judgment of the crew it is necessary to preclude any chance of accident. Irregular passenger trains handling military equipment, in addition to making close running inspection enroute between terminals, will make one stop between terminals to permit inspection of train by crew. Regular passenger trains will continue to make inspections where now required and will stop and make additional inspection if necessary to preclude any chance of accident.

Exception: When visibility is such as to permit close observation of train and there are no indications of hot boxes or other defects, eastward green fruit and stock trains need not stop for the purpose of inspecting train between Cheyenne and Summit.

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:

—Continued Opposite Side.

866 (R). Continued.

- 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 fuses, a red flag and equipment for train signals."

869 (S). Water must not be taken at Julesburg or Hardin except in emergency.

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

Movement of Diesel Locomotives

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

Duties of Employes on Diesel Locomotives

874 (R). Second paragraph of Operating Rule 874 is cancelled. On Diesel-electric locomotives in road service, not more than five men may ride in control cab.

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

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

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

This applies to the following trains:

Nos.	Between
1-6	Omaha and Cheyenne
101-102	Omaha and Cheyenne
103-104	Omaha and Cheyenne
105-106	Omaha and Cheyenne
111-112	Omaha and La Salle

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 room 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.

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)	Cheyenne to Sidney	Sidney to North Platte	North Platte to Grand Island	Grand Island to Council Bluffs	Gering to O'Fallons	South Tipton to Gering	Egbert to Yoder	Beatrice to Lincoln	Lincoln to Valparaiso	Valparaiso to Wahoo	Wahoo to Valley	Gibbon to Hastings	LaSalle to Julesburg
C 57	190 — 30	2800	4500	4500	2300	3500	2350	1750	2880	1600	1200	1600	4500	4500
C 57	162 — 172	1800	3000	4500	2000	3440	2140	1600	2440	1500	1050	1500	4500	3000
MacA 57	206 — 210	4500	4500	5000	3400	4100	2500	2000	2980	1910	1500	1910	5000	4500
MacA 63	212 — 228	4500	4500	5000	3800	4600	2900	2175	3330	1940	1600	1940	5000	5000
MacA 63	222 — 222	4800	4800	5000	3800	4700	2960	2275	3400	1950	1600	1950	5000	5000
TTT 63	286 — 311	5200	5200	5500	4800				4500	3400	2220	3400	5500	6000
UP 67	368 — 372	8000	8000	8500	5800				6000	4500	3000	4500	8500	6000
4-6-6-4 3	406 — 407	8000	8000	8500	5800									
4-8-4-1	540 — 545	9000	9000	9000	6800									
FEF 77	266 — 266	4170	4800	5500	4540				4500	3400	2200	3400	5500	6000
FEF 80	266 — 266	3000	4000	4500	3400	3650	2500	2000	2980	1900	1250	1900	4500	4500
P 77	163 — 193	2860 to 2899	2900 to 2911	3114 to 3138	3218 to 3227									
MT 73	256 — 261	7000 to 7038	7550 to 7869			4500	2960	2275	3300	1950	1550	1950	5000	5000

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

EXAMPLE: Consolidation locomotive having 57 inch drivers, cylinders 21 inch diameter and 30 inch stroke, and weighing 162,000 pounds on drivers:

C 57 — 162
 21 — 30