THE PENNSYLVANIA RAILROAD

SUPPLEMENTAL INSTRUCTIONS
TO OPERATING, SIGNAL AND
INTERLOCKING RULES
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INTERLOCKING RULES

EFFECTIVE SEPTEMBER 26, 1948
THE PENNSYLVANIA RAILROAD

The instructions herein set forth govern the railroads operated by The Pennsylvania Railroad and must be observed by all employes whose duties are in any way affected thereby. They take effect September 26, 1948, superseding all previous instructions inconsistent therewith.

New instructions, annulments and changes in instructions approved for system practice, will be made effective by general order accompanied by sticker coupons which employes must insert in their copy of Supplemental Instructions to Operating, Signal and Interlocking Rules.

H. L. NANCARROW,
General Manager, Eastern Region.

W. W. PATCHELL,
General Manager, Central Region.

J. P. NEWELL,
General Manager, Western Region.

J. B. JONES,
General Manager, New York Zone.

F. G. GRIMSHAW,
Works Manager.
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EMPLOYEES—DUTIES AND RESPONSIBILITIES

General

4001. Employees whose duties are prescribed by these instructions must provide themselves with a copy which they must have with them while on duty. They must devote themselves exclusively to the Company’s service while on duty, be conversant with and obey the instructions. If in doubt as to their meaning, they must apply to the proper authority for an explanation.

Conductors

4006. Conductors report to and receive their instructions from the train master or his designated representative. They must obey the instructions of station masters, station agents, yard masters, operators and signalmen, within their jurisdiction, and from officers of other departments on matters pertaining to those departments.

Conductors have general charge of the trains to which assigned and all persons employed thereon are subject to their instructions. They are responsible for the prompt movement, safety and care of their respective trains and the passengers and commodities carried thereon in accordance with the rules, operating instructions, special instructions and train orders; for the vigilance and conduct of the men employed thereon and for the prompt reporting to the Superintendent of conditions that interfere with the prompt and safe movement of trains.

Conductors of freight trains must not permit any person, except division staff officers, their assistants and trainmen in discharge of their duty, to enter cars, handle freight or ride upon the train, without proper authority.

Trainmen

4007. Trainmen report to and receive their instructions from the train master or his designated representative. They must obey the instructions of their conductor and of others with proper authority, and from officers of other departments on matters pertaining to those departments.

They are responsible for the display of train signals, the proper protection of trains, the handling of switches, the coupling and uncoupling of cars and engines, the manipulation of brakes and for assisting the conductor or engineman in all things requisite for the prompt and safe movement of their train.
When assigned as ticket collector they must assist the conductor in the collection of transportation.

When assigned as train baggageman they must receive, take care of and correctly deliver baggage, mail, express, etc., placed in their charge.

**Enginemen**

**4009.** Enginemen report to and receive their instructions from the road foreman of engines or his designated representative. They must obey the instructions of the train master or his designated representative. They must obey the instructions of station masters, station agents, yard masters, operators and signalmen, within their jurisdiction, and the conductor in charge of their train as to general management of their train, unless by so doing they endanger the safety of the train or require violation of the rules. They must comply with the instructions from officers of other departments on matters pertaining to those departments. Within enginehouse territory they will comply with the instructions of the enginehouse foreman or his representative.

They must not leave the engine during a trip except in case of necessity.

They must exercise discretion, care and vigilance in moving the engine in their charge, with or without cars attached, to prevent damage to property and injuries to persons and to avoid collisions and derailments.

When acting as pilots, they will operate the engine of train to which assigned, unless otherwise instructed.

They must not permit any person except division staff officers, their assistants and trainmen in discharge of their duty, to ride on the engine without proper authority.

**Firemen**

**4010.** Firemen report to and receive their instructions from the road foreman of engines or his designated representative. They must obey the instructions of their engineman and of others with proper authority.

They are responsible for maintaining the prescribed pressure of steam in boiler of engine to which assigned and for assisting the engineman in all things requisite for the safe and prompt movement of their train.

**Drivers of Track Cars**

**4011.** Drivers of track cars must obey the instructions of yard masters, operators and signalmen, within their jurisdiction, and of others with proper authority.
Yard Masters

4012. Yard masters report to and receive their instructions from the train master or his designated representative. Within assigned districts and as directed, they have charge of yards, of employes, movement of trains and engines and distribution and movement of cars therein, except on main, secondary tracks or sidings, unless otherwise specified.

Assistant yard masters in the districts assigned them are governed by these instructions.

Switch Tenders

4013. Switch tenders report to and receive their instructions from the train master or his designated representative. They must obey the instructions of station masters, yard masters, train dispatchers, train directors, operators and signalmen, within their jurisdiction.

Station Masters

4014. Station masters report to and receive their instructions from the train master or from such officer as the Superintendent may designate. They are in charge of the passenger stations where located and, unless otherwise provided, of the persons employed therein.

Station masters are responsible for the preservation of order in and about their stations, the care of patrons, the expeditious handling of baggage, mail and express, the publication and announcements of information for use of passengers with respect to location of trains, time of their arrival and departure, the making up of trains and their dispatching at the times advertised, the reporting for duty at appointed times of passenger trainmen in presentable uniforms and equipped with necessary signals and other appliances, and for the performance of duty by employes under their direction.

Assistant station masters in the districts assigned them are governed by these instructions.

Station Agents

4015. Station agents report to and receive their instructions from the supervising agent, or from such officer as the Superintendent may designate. They must comply with instructions from officers of other departments on matters pertaining to those departments.

They have charge of the Company’s books and papers and of the buildings, tracks (except main, secondary
tracks, and sidings) and grounds at their stations and, unless otherwise provided, of persons employed at them. They are responsible for the preservation of order in and about their station; the prompt handling, safety and care of passengers, baggage, mail, express and freight; the prompt loading, unloading and forwarding of cars; the sale of tickets and the collection of charges for services rendered by the railroad; the keeping of accounts and records and the making of reports and remittances in connection therewith; the vigilance and conduct of employees in their charge; and for the prompt reporting of all matters that may affect the interest of the Company.

Assistant station agents, in the districts assigned them, are governed by these instructions.

Train Dispatchers

4016. Train dispatchers report to and receive their instructions from the Superintendent or from such officer as he may designate. They must be familiar with the physical characteristics of the portion of the division in their charge. They are responsible for issuing train orders in the name of the Superintendent, transmitting and recording train orders as prescribed by the rules; for issuing such other instructions as are required for the safe and efficient movement of trains; for maintaining the prescribed record of train movements; for having available, when relieved, a written memorandum of all train orders then in effect and other information relative to existing conditions the relieving dispatcher should know and for being assured that they are understood. They must also be conversant with the requirements of the current issue of C. E. 223, Special Instructions Governing Construction and Maintenance of Signals and Interlockings, in so far as their duties are concerned.

Operators—Signalmen

4017. Operators and signalmen report to and receive their instructions from the division operator, unless otherwise provided.

They must obey the instructions of the train dispatcher and train director.

They are responsible for the delivery of train orders and messages to the persons addressed, for arranging the use of blocks, tracks, interlockings, switches and signals and prompt movement of trains in accordance with the rules, train orders and special instructions.
They must maintain the prescribed record of train movements and when practicable, observe passing trains for defects and proper display of markers.

They must not absent themselves from duty until relieved and must notify the train dispatcher promptly should their relief fail to report at the prescribed time.

They must not permit visitors or other unauthorized persons to enter and loiter in their offices.

They must report the weather as required, and in case of sudden change, storm or fog, promptly advise the train dispatcher.

When required, they will operate hand-operated switches, crossing gates, drawbridges and other devices as may be designated.

They must be conversant with the requirements of the current issue of C. E. 223, Special Instructions Governing Construction and Maintenance of Signals and Interlockings, in so far as their duties are concerned.

In electrified territory they will operate power control boards and such other devices as directed by the power director.

Train directors, their assistants and levermen, in the duties assigned them, are governed by these instructions.

Crossing Watchmen

4018. (a) Crossing watchmen report to and receive their instructions from the division engineer, unless otherwise provided. They must obey the instructions of the supervisor-track and foreman-track.

(b) They must not absent themselves from duty until relieved.

(c) They must provide themselves with proper appliances and keep them in good order and ready for immediate use.

The signal appliances for each watchman will be—

A standard stop sign.

A red lamp approved as standard for the purpose.

A red flag.

A white lamp.

Fusees.

A whistle.

Standard gate lamps for crossing gates, where used.

(d) They must be on the lookout at all times for movements in either direction on the tracks across the highway, and must not depend upon the schedules of
trains nor upon warning appliances for warning of the approach of trains.

(e) While on duty, they must not sleep nor assume an attitude of sleeping or inattention, nor must they read anything except as required in line of duty. They must not engage in unnecessary conversation nor permit visitors or unauthorized persons to enter or loiter about cabins or towers. They must not use intoxicants nor narcotics while available for, or while on duty.

(f) At crossings not protected by gates, they must station themselves in the middle of the highway near the track before each movement is made on a track across the highway and remain there until it is safe for vehicles and pedestrians to cross the track. While so stationed, they must display:

By day: A stop sign, in upright position, with the flat side visible to persons approaching on the highway.

By night, and when day signals cannot be plainly seen: A red light towards the highway in both directions, swung across the direction of highway traffic.

A red light must not be displayed in the direction of movements on the tracks, except when necessary to stop such movements.

(g) Where there are two or more tracks, when practicable, they will take a position near the track opposite from the one on which the movement is being made, where they can best protect the public from trains or engines approaching on other tracks.

(h) When it is safe for vehicles or pedestrians to cross the track, crossing watchmen will so indicate by saying "all right" and beckoning to cross.

(i) Where gates are in use, they must be lowered on both sides of the track before each movement is made on a track across the highway and kept lowered until it is safe for vehicles and pedestrians to cross the track. Except when gates have been lowered, they must be kept in vertical position and the operating handles blocked with holding devices. At night and when day signals cannot be plainly seen, lighted gate lamps showing red toward the highway must be attached to the gate arms.
Where normally the gates are kept in lowered position, they must not be raised except when it is safe for vehicles and pedestrians to cross the tracks;

(j) When gates are out of order, the crossing must be protected in the manner prescribed by these instructions for crossings not protected by gates.

(k) They must be especially careful and cooperate with the train crew in the safe movement of pedestrians or vehicles over the track when a train is shifting over a crossing or when a train has stopped and has been cut so as to avoid blocking crossing.

(l) They shall be responsible to see that proper permission is secured to protect the movement of heavy machinery, implements or buildings across tracks at highway crossings.

(m) They must promptly report all accidents involving personal injury and must endeavor to obtain the name and address of the person or persons injured and of as many witnesses as possible. They will also obtain the license numbers of vehicles involved. They must obtain the same information, as far as possible, in regard to persons driving recklessly or carelessly over the crossing.

(n) They must promptly report all accidents, defects in track, bridges, signals, or any unusual conditions in the vicinity of the crossing, which may affect train movements, and where practicable they will take such action as may be necessary to afford full protection to the movements involved. When the crossing is obstructed or unsafe for train movements, they must use a red flag by day; a red light by night and when day signals cannot be plainly seen, and when necessary, in addition, display lighted fuses to stop movements on the tracks obstructed or unsafe.

(o) They must observe passing trains for defects, and should there be any indication of conditions endangering the train, they must take necessary measures for its protection; where practicable, hand signals will be exchanged with train and engine crews. They must comply with Supplemental Instruction to Operating, Signal and Interlocking Rules, 4055.

(p) They must report to supervisor-track any infractions of highway regulations by highway users that may affect the safety of trains or highway movements over the crossing.
(q) They must keep their cabins, towers and surroundings clean, and keep foot-walks at crossing and the flangeways between the rails and crossing planks or flangeway guard rails clear of snow, ice and other obstructions, doing this work at such times as will not interfere with the proper protection of the crossing.

**Maintenance of Equipment Employes**

4019. The general outline of duties and responsibilities of certain Maintenance of Equipment Employes is prescribed in current instructions No. 201.

**Maintenance of Way Employes**

4020. The general outline of duties and responsibilities of certain Maintenance of Way Employes is prescribed in current issue of C. E. 81.

**Glasses and Goggles**

4026. (a) Employes who require the use of glasses and whose duties require them to distinguish the position or color of signals must have with them the proper glasses while on duty and in the performance of their duties such glasses must be worn. Proper glasses for employees whose duties require them to distinguish position or color of signals are:

- For reading only, one pair of glasses (any type), but if of the nose glass variety, they must be attached to the person by proper guard;
- For distant vision, two pairs of spectacles;
- For both distant vision and reading, two pairs of distant vision spectacles and one pair of reading glasses or two pairs of bi-focal spectacles.

(b) Goggles with corrective lenses will be regarded the same as spectacles within the meaning of paragraph (a) of these instructions and must be of the rigid type frame.

(c) The use of spectacles with colored glass by employes whose duties require them to distinguish the position or color of signals is prohibited.

**Examinations**

**Sight and Color Sense**

4027. (a) Employes whose vision requires the use of glasses will be examined or re-examined only while
wearing the proper glasses. Those whose duties require them to distinguish the position or color of signals and whose vision requires the use of glasses will not be examined or re-examined unless they have with them at the time of such examination or re-examination the proper number of pairs of glasses as prescribed in these instructions.

(b) Employes promoted or transferred to positions requiring ability to observe or know the color of signals must pass a satisfactory examination at the time of promotion or transfer.

Operating, Signal and Interlocking Rules, Special Instructions and Supplemental Instructions to Operating, Signal and Interlocking Rules

4028. Employes whose duties require them to be familiar with Operating, Signal and Interlocking Rules, Special Instructions and Supplemental Instructions to Operating, Signal and Interlocking Rules, must pass a satisfactory examination within six months after entering service and be re-examined at least once every three years or at more frequent intervals where required by law, or by proper authority.

Checking Employes' Book of Rules, etc.

4029. At each change of timetable or not less frequently than once a year, employes who are furnished with a copy of the Book of Rules and Supplemental Instructions to Operating, Signal and Interlocking Rules must present them to the person designated by the Superintendent for checking.

Rules Referred To By Number

4030. In Special Instructions, Supplemental Instructions to Operating, Signal and Interlocking Rules, general orders, general notices and all other instructions relating to operations, references to rules by number shall be restricted to rules contained in Operating, Signal and Interlocking Rules.

Standard Time

4031. Drivers of track cars must use reliable watches and comply with Rule 3.
Color Signals

Switch Lamp—End of Two Main Tracks

4034. At the end of two main tracks where switch is not interlocked nor spring switch is in service, when the switch is set for trains to move in normal direction, switch lamp will display white disc (green light at night). When the switch is set against train movement in normal direction, switch lamp will display red disc (red light at night).

Note—Normal position of switches designated in time-table special instructions.

Slow Orders

4035. A yellow flag or light placed to the right of track indicates the approach to a portion of track covered by a slow order and is located a sufficient distance ahead of the obstruction to permit the speed of train to be reduced from maximum authorized speed to the speed required.

The end of the restricted territory will be indicated by a green flag or light.

Hand, Flag and Lamp Signals

Communicating Signals

4042. When communicating signal is inoperative and cannot be put in working condition without detention, train may proceed after conductor and engineman have an understanding as to how train is to be operated.

Train Signals

Search or Flood Lights

4044. Search or flood lights located under platform of business cars and electrically illuminated signs, may be displayed on rear of trains.

Use of Signals

Engine and Train Crews Calling Signal Indication to Each Other by Name

4045. Referring to Rule 106, all members of engine and train crews must, when practicable, communicate to each other by its name the indication of each signal affecting the movement of their train or engine.
**Fusees**

4046. When a pusher engine is assisting a train, coupled behind the cabin car, and the flagman that protects the rear end of the train is riding in the cabin car, the requirements as to the use of fusees should be met by dropping them off between the cabin car and pusher engine on the track the train is using, and not between that track and an adjacent track.

**Flag Stops**

4047. At stations where trains are scheduled to stop on signal to receive passengers, and flag stop signals (Rule 10 (d)) are not in use, conductors and enginemen of such trains must assure themselves there are no passengers to board train before passing station.

**Employes' Registers**

4050. At points where there is no designated employe on duty to witness signatures as required by Rule 75b, conductor or engineman must witness the signatures of all members of his crew.

**Observation of Trains for Defects**

4055. Referring to Rule 77, a train must be stopped when it is observed with any of the following defects or other indications of conditions endangering the train:

- Hot Journal
- Sliding Wheels
- Broken Wheels
- Defective Truck
- Dragging Brake Connection
- Lading Shifted over Side or End of Car
- Swinging Car Door

**Movement of Track Cars**

**Spring Switches**

4058. Track cars will not operate spring switches.

**One-Man Track Cars**

4059. Signalmen will not admit a one-man track car to a block which is occupied by an approaching train, nor permit any train to enter a block which is occupied by a
one-man track car without instructions from the Superintendent.

**Movement of Detector Cars, Burro Cranes, etc.**

4060. Unless otherwise provided, rules, special instructions and Supplemental Instructions to Operating, Signal and Interlocking Rules applying to movement of track cars will apply to detector cars (device for detecting defective rails), burro cranes or cars of similar type or construction, except that detector cars will display markers in accordance with Rules 19 and 19a, and will not be required to conform to speed for track cars.

Detector cars will be designated as Detector car extra, burro cranes as Burro crane extra and other cars in a like manner.

When detector cars are testing rail in manual block system territory, Rule 316 will apply to following movements.

**Movement of Trains**

**Contact by Telephone**

4061. A member of the crew of a train to be met or passed by another train or trains, must be placed within hearing distance of a telephone.

**Four-Wheel Cabin Cars**

4063. Four-wheel cabin cars must not be permitted to stand in an automatic block unless the block is occupied by other cars or engine. Such cabin cars must not be permitted to stand alone between the signals of a block station or interlocking without permission of signalman.

**Dragging Equipment Detector**

4064. After each actuation of a dragging equipment detector, the train crew must examine the entire train and advise the signalman when this has been done before proceeding.

**Rail Motor Cars**

4065. (a) Rail motor cars must not use sand in automatic block system territory, except to avoid accidents.

(b) When these cars are used as trailers or are being towed, they must be placed only at rear of train. If handled by passenger train, the train should not consist of more than 15 cars. If handled by freight train, the train should not consist of more than 35 cars.
(c) The diesel rail motor cars are passenger carrying cars and must not be used to handle freight cars.

**Backward Movements—Trains Carrying Passengers**

**4066.** When cars or trains occupied by passengers are being backed or pushed by an engine, the passengers, except occupants of business cars, must be prohibited from riding on the front platform of the leading car.

**Automatic Highway Crossing Signals**

**4067.** Electric light indicators are in service on or adjacent to instrument cases of flashing light signals and crossing bells protecting highway crossings.

Indicator light will be displayed when train is operating the flashing light signals or crossing bells. Absence of indicator light indicates normal source of power has failed and that signals or bells will be entirely dependent upon storage battery.

If indicator light is not displayed as train approaches crossing, prompt report must be made to Superintendent.

**Spring Switches**

**4068.** A spring switch is marked by disc with white background and black letters SS. Switch lamp will display green light in both directions when switch is in normal position and red light in both directions when switch is in reverse position or not properly set.

When trailing movement through spring switch (in springing position) is stopped before movement is completed, slack must not be taken or reverse movement made until switch has been reversed by hand.

After passing with proper authority a Stop-signal, Rule 292; a Stop-and-proceed signal, Rule 291; a Caution signal, Rule 285-A, or a yellow distant switch indicator protecting a spring switch; movement shall not be made over the switch until it has been operated by hand to the proper position and switch points have been examined by a member of the crew, unless a green light is displayed on the switch lamp.

The switch, if operated by hand, must be restored to normal position after movement is completed.

**Train Delays**

**4069.** (a) When a train is stopped by a Stop-signal, Rule 292, the conductor or engineman must immediately ascertain the cause.
(b) When a train is stopped or delayed from any other cause, the conductor, engineman, or member of their crew, when authorized by the conductor or engineman must, as soon as the safety of their train will permit, ascertain the cause and, when practicable, communicate with the nearest block or interlocking station.

**Drawbridge Protection—Use of Clearance Card (Form C) or Train Order**

**4070.** Before a Clearance Card (Form C) or train order is issued with signal in stop position, or a hand signal is given to a train having received such train order, for a movement over a drawbridge, the signalman or bridge tender must personally examine or have knowledge from an authorized maintainer or M. W. representative that the drawbridge is in place, with rails lining up properly, locked and safe for train movements and where smashboards are used that they are secured in vertical position. Train must then not exceed a speed of four miles per hour over drawbridge with any part of train.

When drawbridges are not a part of an interlocking, they will be listed on the station page of the time-table and, when necessary, instructions governing movement over such drawbridge will be indicated by time-table special instructions.

**Rails Marked with Yellow Stripe**

**4071.** A yellow stripe about 10 inches wide painted on the inside and outside of head, web and base of both rails in a track indicates:

(a) Fouling point when track is connected with main track.

(b) The limits of track circuits used for operation of automatic highway crossing signals.

**MOVEMENT BY TRAIN ORDERS**

**Regular Trains**

**4072.** Train orders will be issued covering the meeting of regular trains on single track at scheduled meeting points, except where Rules 261, 262 and 263 are in effect.

**Additional Engines**

**4073.** The engineman of each engine taken on at a point where no train orders are delivered to the train,
must be advised by the conductor or train engineman of all train orders, previously received, affecting the train in the territory covered by the additional engine.

**Typewritten Train Orders**

4074. When train orders are typewritten, CAPITAL LETTERS must be used.

**Train Orders—Telephone**

4075. Train orders received by telephone, after being fulfilled, must be retained and turned in with time cards at end of trip or day to be forwarded to the division operator or other designated officer.

**Message Form C. T. 1250**

4076. In the application of Rule 221a, message form C. T. 1250 will be used.

**Rule 294, Fig. B.**

4077. While train order signal (Rule 294, Fig. B) is displayed in the direction of an approaching train or trains, it must not be passed by any such train on any track except as provided in Rule 221a.

**Form G Train Orders—Single Track**

4078. In the application of Form G, Train Orders, examples (1), (2), (3) and (4), give the extra no right to occupy the main track between the switches of a siding at the station last named.

When it is desired that the extra continue beyond the entrance switch to the siding at the station last named, the specific point must be designated in the train order.

**Numbered Switches**

4079. Where switch numbers are used, only those main track switches of sidings will be numbered, No. 1 being the most eastward or northward switch, with the numbers increasing towards the westward or southward.
When switch numbers are used in train orders, the word "Switch . . ." will precede the name of the station.

Train Orders Used for Slow Orders—Re-issuing, etc.

4080. Train orders used for slow orders or similar instruction shall be in effect only a sufficient length of time to prepare general order unless the length of time the restriction will be in effect is known and it would be impracticable to provide a general order.

During the time such train orders are used, they should be re-issued each day, as soon as practicable after 12 A. M.

Forms of Train Orders

Combining Forms of Train Orders

4083. In combining forms of train orders the following is example of combination which may properly be used:

Form G and S-A

Eng 99 run extra A to F extra 99 west meet extra 98 east at D

The train in the superior time-table direction will be the first named train in the meet order.

Track Cars

4084. In application of forms of train orders to track cars, the designation TC extra shall be used in lieu of the word extra.

Fixed Signals

4090. Referring to note under Rule 291, the engineer must be notified as to tonnage and number of cars in train before leaving terminals and when consist is changed enroute.

Cab Signals

Departure Tests

4091. (a) Required departure tests of engines and
trains must be made before entering territory in which the use of cab signals is prescribed. Testing sections, in addition to those at terminals, located as specified on timetable.

(b) Departure test of cab signals on engines equipped for forward and backward running will be made from both ends. When two or more electric engines are coupled in multiple, departure test will be made from front end of leading engine and rear end of trailing engine. All cab signals and warning whistles should be operative on all engines.

(c) When two or more engines are coupled and it becomes necessary enroute to operate one of the engines from an end from which departure test of cab signals has not been made, the engine must be considered as not equipped.

(d) When test circuits are not available at points where engine crews go on duty, departure test will be made at engine terminal by engine crew or hostler who delivers engine to road crew.

Form M.P. 61 stating "cab signal tested properly" must be made out by engine crew or hostler making the test, and show engine number, point at which test was made, date and signature of person making the test, and delivered to the road engineman when taking charge of engine.

Road engineman shall have possession of this record and personally note that equipment is energized and that the warning whistle will sound by making an operation of the acknowledging switch, before moving to enter cab signal territory.

The above record must accompany engine throughout interdivisional runs.

Cab Signal Flips

4092. When cab signal indication "flips" (indication changes to more restrictive momentarily), engineman, as soon thereafter as will not cause delay to the train, will file a message reporting the occurrences to the Superintendent in the following manner:
Cab signal flipped on No...... track (state indication) to (state indication) at signal bridge or mile post....... (state number) and ........, state whether they were acknowledged.

The engineman must also report the occurrences on form M.P. 62, M.P. 62-E, M.P. 62-DE, M.P. 217 or other prescribed form for reporting engine defects, on arrival at engine terminal.

**Cab Signal and Fixed Signal Indications, Confliction of**

**4093.** (a) When cab signal and fixed signal indications conflict, the engineman, in addition to being governed by Rules 298 and 516, will file a message to the Superintendent as soon thereafter as will not cause delay to the train, giving locations and track on which confictions occurred.

(b) If cab signal displays a more favorable indication than the fixed signal, the engineman, in addition to being governed by Rules 298 and 516, will report to Superintendent from next point of communication and also verbally advise the enginehouse foreman or his representative on arrival at engine terminal so that the engine may be withheld from service and equipment will not be disturbed.

(c) The engineman must also report the above occurrences on form M.P. 62, M. P. 62-E, M.P. 62-DE, M.P. 217 or other prescribed form for reporting engine defects, on arrival at engine terminal.

**Warning Whistle**

**4094.** If the cab signal warning whistle fails to sound when cab signal changes to a more restrictive indication it constitutes a failure and must be reported the same as when cab signal and fixed signal indications conflict.

**Engines Not Equipped with Cab Signals, etc.**

**4095.** Referring to Rule 515, Form C. T. 1400-B must be used to authorize the movement of an engine or train not equipped with cab signal apparatus including whistle and acknowledger in operative condition for the direction in which it is to move.
THE PENNSYLVANIA RAILROAD
CAB SIGNAL MESSAGE FORM

Superintendent's Office ........................................... 19

Conductor and Engineman, Train .................................. Engine

At ........................................................................

You are authorized to operate without cab signals—

From ......................................................... To ..........................................................

Complying with Rule 516.

Superintendent.

Operator ............................................................. Time .................................. M.

Message must be filled out by train dispatcher as he transmits it. When delivered by telephone, the operator will show on his office copy the name of the person to whom delivered.

NOTE—This Form is for use only:

(a) When necessary to dispatch an engine or train not equipped for operation in cab signal territory.

(b) When the cab signal apparatus of an engine or train is not in operative condition when dispatched.

(c) To permit an equipped engine or train to enter cab signal territory when it is known that cab signals have failed after engine or train has been dispatched from its terminal with cab signals in operative condition.

When Form C. T. 1400-B is used the requirements of Rule 516 must also be complied with.
Failures Enroute

4096. When it is known that the cab signal apparatus of an engine has failed, it shall be considered a non-equipped engine for the remainder of its trip.

Note—In so far as this instruction is concerned, a trip is that portion of the railroad over which an engine operates until cut off for repairs and tests.

Manual Block System

Movements against Current of Traffic

4098. In Automatic Block System territory where movements against the current of traffic are governed by manual block system rules, the block stations named on the time-table indicate the limits of the manual blocks, except as otherwise provided by Rule 310.

Use of Clearance Card (Form K)

4099. When a Clearance Card (Form K) is issued to an extra train, the direction for which the movement is authorized must be shown immediately following the engine number.

Interlocking Instructions

Equipment Restrictions

Passenger—Mail—Express—Troop Trains

4106. The following restrictions must be observed with reference to physical condition of foreign railroad cars received for movement over our lines:

(a) Passenger equipment cars of all-wood construction must not be operated in passenger, mail or express trains nor accepted from foreign railroads for movement in such trains.

(b) Cars having steel underframe with wood superstructure or having steel underframe with composite superstructure and wood sheathing must not be used for transporting passengers.

(c) Baggage or kitchen cars with steel underframe and wood superstructure assigned in troop movement, may be moved in troop trains or exclusive express trains to any point on line except when required to operate through East and North River Tunnels, New York Division.
(d) Passenger refrigerator cars with steel underframe and wood or composite superstructure, without lights or heating stoves, will be accepted for movement through East and North River Tunnels, New York Division.

(e) Passenger equipment cars with trucks having wood side and end members, with or without plates bolted thereto, must not be operated in passenger, mail, express or troop trains nor accepted from foreign railroads for movement in such trains.

(f) Cabin cars, other than all-steel construction equipped with four-wheel trucks, must not be moved in passenger, mail or express trains.

(g) Cars with cast iron wheels must not be operated in passenger trains. Mail, express or troop trains having such cars must be operated at freight train speed.

Cars offered for movement in violation of clearances or any of these physical restrictions must not be accepted for movement over our lines.

Folding Steps

4107. Folding steps which operate in conjunction with vestibule trap doors on passenger cars are not within the established clearance limits, unless in fully closed position or fully open position. Vestibule traps of cars equipped with folding steps must not be opened or closed while cars are in motion.

Steam Suburban Cars

4108. The following classes of P. R. R. and Long Island Railroad passenger cars must not be hauled between heavier steel cars or between heavier steel cars and the engine:

<table>
<thead>
<tr>
<th>Coaches</th>
<th>Combined Passenger and Baggage</th>
<th>Passenger—Baggage and Mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-54</td>
<td>PB-54</td>
<td>MPBM-54</td>
</tr>
<tr>
<td>MP-54</td>
<td>MP-54</td>
<td>MBM-62</td>
</tr>
<tr>
<td>MP-54c</td>
<td>MP-54b</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MP-54c</td>
<td></td>
</tr>
</tbody>
</table>

Note—For purpose of identification, P.R.R. suburban cars of MP-54 and MBM-62 types are shorter than the through service cars and are not equipped with buffer diaphragms.

Long Island Railroad suburban cars of P-54 type are shorter than the through service cars, but are equipped with buffer diaphragms and may be identified by means of the description on board located in toilet.
Reading Company Passenger Cars

4108 A. Reading Company passenger train equipment cars, all types, must not be handled between heavier steel cars or between heavier steel cars and the engine.

Passenger Car Buffer Plates

4109. Passenger train cars having continuous buffer plates must not be coupled to freight cars having coupler release levers with a center projecting arm.

Cars Seventy Feet or More in Length

4110. Cars having a stenciled length of load space of seventy feet or more, or passenger-carrying cars of P-70 length or greater, must not be coupled to cabin cars of the 2-axle type. Such long cars, when equipped with swivel type couplers, may be coupled to cabin cars having 4-wheel trucks.

Note—All passenger cars are equipped with swivel type couplers. A long freight car equipped with swivel type coupler may be identified by looking underneath the car for a vertical swivel pin near the end of the coupler shank.

Cars Utilizing Compressed Inflammable Gas

4111. Cars utilizing acetylene, butane, propane or other compressed inflammable gas for cooking, lighting, or other purposes, must not be accepted for movement unless the pintsch or acetylene gases have been drained from the permanent containers on cars so equipped, or unless the portable containers with other types of gases have been removed.

Operation of Engines in Territory Where Adjacent Tracks Must Be Clear

4112. When an engine of a class that must not be operated between specified points unless adjacent tracks are clear (as indicated on the time-table); is to move over such portions of the railroad, the master mechanic must advise the train dispatcher the class of engine and the restriction involved. If the restriction applies also on a division over which inter-divisional crews operate, the train dispatcher of the originating division, after having been so notified, will arrange to notify the train dispatchers of the connecting divisions.

Dead or Disabled Engines, etc.

4113. Dead engines of a design having two or three pairs of drivers and no trucks, may be moved only at
speeds not exceeding 20 miles per hour. Dead engines of a design having four pairs of drivers and no trucks shall be restricted to speeds not exceeding 25 miles per hour.

Two or more such dead engines in the same train shall be separated by one or more cars.

A dead freight or passenger engine with engine truck removed must not be handled in freight trains, but with the exception of the D-16-sb may be hauled in a work train at a speed not exceeding 15 miles per hour, to the nearest terminal where repairs can be made.

A freight or passenger engine, except the D-16-sb, with the engine truck removed, may be moved under steam or in a work train at a speed not exceeding 15 miles per hour to the nearest terminal where the repairs can be made. A D-16-sb engine cannot be moved on its own wheels, either dead or under steam, with the engine truck removed.

All engines equipped with side rods must have them applied when hauled dead in trains. Suitable washers of wooden blocks clamped together with bolts must be used on main rod bearings when necessary to keep the side rods in place.

All engines and tenders hauled dead in trains must have the air brakes cut in and operative.

The presence of an attendant (furnished by the consignor or consignee), whose duties are those of caretaker, does not relieve the train crew or inspectors of any responsibility in connection with the movement of the engine or detached tender. The same attention and inspection must be given as is required for any other equipment in the train.

The Hours of Service Law does not apply to engine attendants.

Engines shall be equipped with hand brakes or accompanied by a car equipped with hand brakes. Otherwise the attendant must carry with him chains or suitable blocking for the purpose of securing engine and tender while standing alone.

When necessary to clear the main track, engines with any main or side rods disconnected may be moved to a terminal at not exceeding the following speeds:

30
If engines with any main or side rods disconnected while on the main track, have interference between crossheads or guide and front crank pin, on account of front wheels getting out of register, engineman must notify the Superintendent and receive instructions for further movement.

When it is necessary to move a light engine with any main or side rods disconnected, from a terminal to another point, the master mechanic or road foreman of engines will notify the Superintendent the speed permitted before the engine is dispatched and the latter will then issue the necessary instructions.

**Movement of Detached Tenders in Train:**

When detached tenders are moved in train pusher engine or engines shall not be used.

Tenders must be equipped with brake pipe line. Tenders with inoperative air brakes, must be placed back of cars having operative brakes, as specified in Instruction 4, third paragraph of the 99-C-1, Brake and Train Air Signal Instructions.

Not more than two tenders should be moved on the rear of any train.

**Movement of Diesel Engines Dead in Trains:**

The following instructions are intended to cover several types of diesel engines and may not apply in every detail to all such engines.

1. The reversing lever on the master controller stand must be moved to the “Off” position and the handle locked in position or removed. Reversers shall be centered and locked in position. Isolation switches shall be placed in “Start” position. Motor cut out switches and
battery switch shall be opened. The high capacity starting fuse shall be removed. The transition lever must be moved to the “Off” position before the control push button is pulled out.

2. On all “A” units.

(a) Place the dead engine cock on the control valve in “Dead” position.

(b) Close double heading cock (Handle vertical).

(c) Place Independent Brake Valve handle in “Release” position and remove handle.

(d) Place Automatic Brake Valve handle in “Running” position and remove handle.

(e) When so equipped, the safety control cock on brake valve must be in “OUT” position (Handle up).

(f) Place the Rotair Valve handle on “Pass” position on all leading units, and on all trailing units place the handle in “Lap” or “Pass Lap” position.

(g) The safety valve on Control Valve must be set to limit brake cylinder pressure to 30 pounds.

(h) The brake pipe branch pipe cut-out cock must be open.

(i) The Shifter Lever on Brake Valve must be in “AU” position.

3. On all “B” units.

(a) Place the dead engine cock on Control Valve in “Dead” position.

(b) When so equipped, the controlled emergency cock on Control Valve must be placed in Passenger, “P” position.

(c) The cut-out cock to NS-1 Reducing Valve must be closed.

(d) Either remove or secure the hostler’s brake valve handle in “Release” position.
(e) Open cut-out cock in the Independent Application and Release pipe under hostler’s brake valve.

(f) The brake pipe branch pipe cut-out cock must be open.

(g) The safety valve on Control Valve must be set to limit brake cylinder pressure to 30 pounds.

(h) If “B” unit is not part of a locomotive and hauled singly, remove the pipe plugs from the dual connections and open the cut-out cocks of the “Independent Application and Release,” “Actuating” and “Straight Air” pipes at one end of unit to assure an atmospheric vent for these pipes.

4. Make certain all cocks are open on connecting hoses between all units of dead engines.

5. Brake cylinder piston travel must not be increased as this would result in rough handling of dead engines.

6. Water must be drained from the cooling and the heating systems when danger of freezing exists.

7. Road diesel engines hauled “dead” in train should be placed not closer than two cars, nor more than ten cars, from hauling engines. A new diesel engine, road or shifting, must not be moved at a speed greater than thirty miles per hour. This speed limit will also apply to diesel engines of foreign road ownership moving on P. R. R. unless accompanied by messenger, in which case speed will be governed by messenger’s instructions.

Cover exhaust stacks and close louvres to exclude dirt and water.

When necessary to tow a diesel engine designed for road service, the reverser drum must be locked in neutral position. All isolation switches must be placed in “start” position. If necessary to keep power units idling, the fuel pumps and control switches must be in closed position.

Diesel Engines in Service

4114. (a) Diesel engines with fuel oil dripping or otherwise leaking must not be dispatched nor leave a station or refueling station where repairs can be made.
(b) Diesel engines must not be stopped over burning fusees, burning switch heaters or other open flame lights or fires unless it cannot be avoided.

(c) In event the "Dead Man" safety control device on a road diesel engine fails, seal may be broken and device cut out after which train will proceed only when both members of the engine crew are in the operating cab. As soon thereafter as will not cause delay to the train, Diesel Teletype Message (Form M.P. 414), also a message reporting the occurrence to the Superintendent, must be sent.

(d) When flat spots on wheels of an engine develop enroute speed must be reduced to not exceeding 40 miles per hour and if in the judgment of the engineman it is necessary, a stop for inspection must be made at the nearest terminal or other point where inspectors are available.

As soon as practicable after flat spots develop or it is known a stop for inspection will be made, the Superintendent must be notified.

Roller Bearing Equipment

4116. Engines and cars equipped with roller bearing journals must not be operated through water, except in emergency when authorized by the Superintendent and then, only as specified below:

(a) Steam and electric engines and cars, other than MU cars and rail motor cars, may be run through water when its depth does not exceed 7 inches (measured from top of rail) at a speed not exceeding 2 miles per hour.

(b) MU cars, rail motor cars and diesel engines may be run through water when its depth does not exceed 2 inches (measured from top of rail), at a speed not exceeding 2 miles per hour.

TELEPHONES

Location of Telephones

4120.
Telephones connected with block stations are generally located in telephone boxes at automatic block signals,
home signals, remote controlled interlockings, main track switches and elsewhere to suit local conditions. Telephones in stations, yard offices, coaling stations, water stations, and other buildings are also available for communication with block stations.

Detailed instructions for operation of telephone shall be posted in each telephone box.

**Operation of Telephones in Telephone Boxes**

Telephone boxes shall be closed when telephone is not in use except when a call is expected on a telephone in a telephone box equipped with a door-operated cut-out switch. Where manual cut-out switches are provided they shall be used to disconnect telephone when not in use.

Telephone boxes at outlying points in the electrified territory may be equipped with three-way switches with telephone lines connected with:

1. Power Director.
2. Telephone Switch-board.
3. Block and Interlocking Station on each side of telephone.

**Power Emergency Call**

When necessary to clear any line to get the Power Director, the words "POWER EMERGENCY" will be used; all other persons using line at that time must yield the line at once.

**Defects in Telephone Boxes—Absence of Blank Forms**

Defects in telephone boxes and telephone equipment contained therein, and absence of blank forms specified to be maintained in telephone boxes shall be reported promptly to the block operator in charge.

**Location of Trainphones**

Trainphone equipped territory will be indicated on the time-table. Block stations equipped with trainphone will be shown on Station page of time-table.
Trainphone Operation

Trainphone consists of hand set telephones, loud speakers, control panels and associated apparatus installed on engines, cabin cars and in block stations for telephone communication between units so equipped.

The trainphone system has two talking channels—"High" and "Low", indicated by "H" and "L" respectively on the control panel.

The "H" channel is to be used normally for talking end-to-end of train and between trains; the "L" channel to be used for talking between trains and block stations.

In an emergency either channel may be used for calling and talking to any other trainphone unit. In case either channel is out of service, the other channel should be used.

The control panel consists of a push-to-talk hand set, switch marked "ON" and "OFF," with pilot lamp that remains lighted when set is in service, volume control buttons for hand set and loud speaker, noise suppressor buttons for each channel, ("H" and "L"), selector lever marked "S" for channel selection (below the case), calling lever "C" for sending calling signals (also below the case).

To turn trainphone "ON" and "OFF", operate switch on control panel. Should pilot lamp fail to light when in the "ON" position, a talking test should be made with another trainphone unit to determine whether or not the system is serviceable, as lamp may be burned out. Selector lever "S" is the channel selector and is pushed left to "H" or right to "L" to select the channel desired for transmission or reception on the hand set, and no conversation goes out unless this is operated. The hand set must be off the hook switch and the "S" lever pushed fully to the right or left position to select the desired channel which automatically locks on channel selected for conversation on hand set and returns to normal when hand set is hung up. (When selector lever is connected to either channel, do not try to throw it to other channel until first pressing down hook switch to release lever.)

Calling lever "C" is to be used only in EMERGENCY.
To Send Emergency Code Call

To send the EMERGENCY code call, keep selector lever "S" in normal position and push calling lever "C" from "L" to "H" twice which will send the call code over both channels.

To Talk—Remove hand set from hook; move selector lever "S" to "L" or "H" to connect hand set to proper channel for talking; hold hand set to ear and mouth as with regular telephone; hold down firmly the push-to-talk button and talk.

After talking, immediately release the talk button for reception, as no conversation can be heard from the other party as long as the push-to-talk button is pressed down.

While talking on one channel the loud speaker is on the other channel and any conversation coming in on it is heard.

In Calling—(Example)—Say "Engine (or cabin car) 6789 east (or west) calling Lewis on Low"; repeat at intervals of not less than five seconds until answered. In all cases a call from a train or from a block station must indicate what train or station is calling and what train or station is being called.

In Answering—(Example)—Say "Lewis answering engine (or cabin car) 6789 east (or west)." In all cases the answer from train or block station must indicate what train or station is answering and what train or station is being answered.

Emergency Calls

First send "EMERGENCY" code call, and then say "emergency" and make announcement in usual manner for any condition on track or train which might endanger the safety of a train, person, or structure along the right-of-way.

Emergency Broadcast

First send "EMERGENCY" code call, and then broadcast the emergency message to each channel separately, as may be required.
Answer to Emergency Calls

When “EMERGENCY” code call is heard, persons using trainphone will stop conversation immediately and listen for emergency call. Party called will answer at once.

Volume Controls

Hand set and loud speaker volume controls should be set just high enough for good reception, but not too loud to cause distortion or annoyance.

Crews, particularly on engines, should endeavor to talk in a normal manner and not attempt to raise voice above engine noises, as this serves to distort conversation.

There is no adjustment of output volume that can be made by the user.

A setting of 2 or 3 on panel usually would be satisfactory for volume on both the hand set and loud speaker.

Noise Suppressors

Noise suppressor controls on the “H” and “L” channels are for the purpose of adjusting receivers to the best operating position to eliminate noise. When necessary to adjust the noise suppressor, pick up hand set, push “S” lever to either “L” or “H” position as may be the case and starting from No. 1 position on the dial turn noise suppressor clockwise until noise in hand set disappears. DO NOT TURN BEYOND THAT POINT. The normal setting for the noise suppressor is about “2” and rarely beyond “3.”

Departure Test

Engine crews shall make a departure test between the locomotive and test sets located at terminals, checking calling signals and talking both ways on both channels.

After a freight locomotive with trainphone is attached to a train with a trainphone-equipped cabin car, an end-to-end test shall be made to check the signaling and talking both ways on both channels.
Trainphones in Service

Engine and cabin cars equipped with trainphone must have the apparatus in service at all times between initial and final terminals. When operating outside trainphone territory, it will be used for communicating end-to-end of train and with other trainphone equipped engines and cabin cars or trainphone equipped stations when provided, in emergencies.

On all trainphone equipped engines on passenger and freight trains in inter-divisional service, where engine crews are changed, engineman must advise the relieving engineman the condition of the trainphone.

Reporting Train, Track and Other Right-of-Way Conditions

The trainphone must be used by block operators, train and engine crews to report promptly any irregular or unsafe conditions observed on trains or along right-of-way that will benefit train operation, improve safety or prevent accidents.

Prompt Answering of All Calls

It is important that all trainphone calls be answered promptly, as seconds count, especially on moving trains where accidents or train delays may be avoided by such action.

Trainphone is to be used in train operations as follows:

A—When an engine or cabin car is equipped with trainphone, it may be used in connection with delays, defects on engine or train, and other matters relating to the operation of the train.

B—When both the engine and cabin car of a train are equipped with trainphone, it may also be used:

1. To advise engineman when flagman has returned to train.
2. For information in connection with testing brakes.
3. Regarding action to be taken when defects on train are noted and for other purposes of assistance in expediting the movement of the train.
C—It may be used for telephone communications incidental to Manual Block System operations within the limits specified on the time-table as "in service."

1. For the signalman in charge of a block-limit station to give a train approaching that block-limit station verbal permission to enter one block.

2. Permitting a train moving under a Permissive-block signal to proceed through the remainder of the block as though Clear-block signal were displayed, when the signalman knows that the portion of the block to be occupied by the train is clear.

3. Reporting clear of blocks at block-limit stations.

4. Reporting clear of main track.

5. Permitting train to enter a block or foul a main track, or cross from one main track to another.

D—A train approaching a block-limit station must not be given a more favorable block indication to pass that block-limit station than the indication under which it is operating.

E—A train being governed by a Clear-block signal must not be given permission to pass a block-limit station as though Permissive-block signal were displayed without stopping the train.

F—Should the delivery of Clearance Card (Form K) or written instructions, including train orders, be required, the train addressed must be stopped before effecting delivery by trainphone.

G—When a train with more than one engine on the front of train has one engine equipped with trainphone, the engineman of the engine so equipped will, as soon as practicable, inform the engineman of other engines on front of train of communications received regarding movement of the train.

**Failures of Trainphone Apparatus**

All failures of trainphone units in locomotives and cabin cars and instances of inability to communicate with another trainphone unit, occurring on each trip, shall be reported at end of trip by the engineman on form M.P. 62.
for steam locomotives and M.P. 62-D for diesel locomotives, and filed at the enginehouse at end of trip, and by the conductor on form M.P. 327 to be attached at control panel of trainphone unit in cabin car.

If trainphone fails enroute, occurrence must be reported to the Superintendent from the next point of communication where report can be made without delay to train.

Signalmen (operators) must report promptly to Superintendent all failures of the trainphone system to function properly as well as instances of inability to contact equipped locomotives or cabin cars.

**Use of Telephone and Trainphone in Train Operations**

Employes using telephones or trainphones in connection with train movements must satisfy themselves that they are in communication with the proper persons and must not consider conversation finished until the persons taking part are assured that they have heard all of the conversation and that it is understood.

Persons using telephones or trainphones must yield the line or trainphone channel promptly for train movements.

In the absence of railroad telephone and trainphone service, other means of communication will be used to avoid delay.

When used for block operations, transmitting train orders or making any arrangement pertaining to the movement of their trains, the conductor, engineman or driver TC must personally receive all orders on the telephone or trainphone and make all verbal arrangements pertaining to the movement of his train, but neither is relieved of any responsibility as prescribed by Rule 106.

Verbal arrangements and instructions in regard to trains being clear of, or desiring to occupy certain tracks, etc., must be repeated by the person receiving the information.
GENERAL INSTRUCTIONS

Diesel Engines—Articulated Trucks

4121. Diesel engines (Class "BP-1") are equipped with articulated trucks and must not be moved over humps.

Smoking Prohibited—Diesel Engines

4122. In order to avoid fire hazard smoking is prohibited in engine rooms of diesel engines. Smoking in operating cabs of diesel engines enroute is permitted.

Engine with Drop or Retractable Couplers

4123. Engines equipped with drop or retractable couplers when operating in road service must have the front coupler in drop or retracted position.

Track Troughs

4124. Track troughs in service will be marked:
   At entrance—By day: White target.
   By night: Lunar white light.
   At exit —By day: Yellow target.
   By night: Yellow light.
   At middle —Same as at entrance.
   (When used)
   Out of service—By day and night, all yellow targets and yellow lights.
   Enginemen must be notified when track troughs are out of service.
   Care must be used to prevent unnecessary overflow of tank.
   When passing over track troughs, the use of poker or scraper and the shaking of grates is prohibited.

Obstructing Public Highway Crossings

4125. When a train is delayed and obstructs a public highway crossing, action as may be necessary must be taken to avoid excessive delay to highway traffic.
**Obstructing Crossings at Stations**

4126. At stations not provided with overhead or underground crossings, trains other than passenger trains making station stops, must not obstruct crossings used by passengers or for handling mail, baggage or express.

**Cars Left Standing**

4127. A sufficient number of hand brakes must be applied on cars or cuts of cars left standing on any track to make them secure. When necessary and practicable, car wheels must be blocked.

**Tank Cars**

4128. Sign reading "STOP—TANK CAR CONNECTED," indicates tank cars are connected for loading or unloading and must not be coupled to or moved; also that other cars must not be placed on same track so as to obstruct view of sign without first notifying the person who placed the sign.

**Guards or Attendants Accompanying Shipments**

4129. Conductors of trains handling military equipment, circus equipment or other shipments accompanied by guards or attendants must notify person in charge that guards or attendants are not permitted on top of cars or high lading account of close overhead clearance.

**Attendants—Live Stock or Other Shipments**

4130. Conductors must carefully examine waybills for live stock or other shipments to see that persons who accompany them are entitled to be carried. If the names of the attendants are not shown on the waybill they should be secured from proper authority and shown thereon. When attendants desert shipments enroute or for any cause fail to accompany same to destination, place, date and time of such occurrence must be noted on the waybill.
Cars Consigned to "Order"

4131. Yard masters must not authorize, and conductors must not place on industrial, private or outlying station tracks, including non-agency points, cars consigned to "Order" except on instructions of Superintendent or station agent under whose jurisdiction track is located.

Rerailed Cars or Engines

4132. When train or engine crews reraill cars or engines they must inspect them for bent axles and other defects and, in addition, arrange for inspection by inspectors at the first opportunity.

Overheated Wheels—Cars

4133. Where wheels are overheated due to brakes sticking and after releasing and cutting out the brake, a thorough examination of the overheated wheels must be made and if any cracks are found in flange, tread, plate or hub, car must be set out of the train.

Disposition of Defective Parts of Equipment

4134. Defective parts of equipment must, when possible, be loaded on engines or cars from which removed, otherwise they must be placed a safe distance from track. Superintendent must be notified as to disposition.

Machinery of Rotary or Swinging Type

4135. Machinery of rotary or swinging type such as cranes, derricks, steam shovels, etc., whether loaded on cars or moving on own wheels, must not be moved in revenue trains unless form CT-310 covering the specific movement is attached, one to each side of the car on which it is loaded or one to each side of the machine when moving on own wheels, and form CT-310-A is attached to the billing.

When such shipments are set off for repairs that may affect the requirements of the A.A.R. Loading Rules, they must not again be moved except upon authority of the Superintendent, and not until proper inspection has been made and billing endorsed by agent or yard master "Re-
inspected at.................and loaded as per A.A.R. Loading Rules.” Conductors when setting off such shipments for repairs must notify the proper officer that it is rotary type machinery.

In all movements of such rotary or swinging type machinery on own wheels in revenue trains the boom end must trail, except that when necessary the Superintendent may authorize movement with boom end forward, in which event the authority will include any additional speed restrictions that may be required.

When cranes are shipped on their own wheels, all coal must be removed from the coal bunkers, and all water removed from the boilers and reservoirs. When boom is removed the light end of crane should trail. Where trucks are secured to body with keyed or nutted center pin, key or nut should be removed from pin on trailing end. All locking pins and hold-downs must be in secured position.

When pivoted machinery, equipped with swinging booms of which a part may swing or extend outward, is moved from one service point to another in work trains, boom anchors and cables must be in place and locking devices fastened. When such equipment is moved during the progress of work on or about main tracks, stops must be in use to prevent fouling adjacent tracks, and crane operator must be in cab.

Boom must be securely anchored, with center lock in place, and crane operator must be in cab while train movements are being made on adjacent tracks.

The movement of each car carrying complete large calibre guns (such as railway gun mounts) must be governed by instructions of the Superintendent.

Heavy Machinery, Implements or Buildings over Tracks at Highway Grade Crossings

4136. To provide against possible accident to railroad property, and insure the safe passage of heavy machinery, implements or buildings at highway grade crossings, special provision should be made to protect such movement over the tracks.

Station agents and foremen-track should keep closely in touch with such matters and give the supervisor-track advance information to enable him to make proper arrangements with the owners or those in charge of the equipment or buildings to insure that full protection is afforded while tracks are being crossed.

45
**Forest and Grass Fires**

4137. Employes must use every precaution to prevent forest and grass fires. The Superintendent must be notified promptly when such fires are observed on or near Company property or are likely to affect Company property.

Burning waste, hot cinders or other inflammable material must not be thrown or dropped from engines, and ash pans must not, except in emergency, be cleaned at other than designated points; if cleaned at other than designated points, hot cinders and live coals must be extinguished before proceeding.

Burning waste from journal boxes must be extinguished immediately.

**Track Fences**

4138. At stations equipped with track fences, gates must be kept closed and locked when not in use.

**Switch Keys**

4139. Switch keys will be furnished only to such employes as may be directed by the Superintendent. Employes entrusted with switch keys must sign receipt for them.

**Hours of Service**

4140. Referring to Rule Q, the hours of service law requires that no conductor, trainman, engineman, fireman, or driver of track car shall be permitted to be continuously on duty for more than 16 consecutive hours, nor permitted to be on duty more than 16 hours in the aggregate in any 24-hour period, except in case of casualty, unavoidable accident or Act of God. After being on duty 16 consecutive hours, such employe must not be required or permitted to again resume duty without having been off duty 10 consecutive hours, and, after being on duty 16 hours in the aggregate in any 24-hour period, must not be required or permitted to again go on duty without having at least 8 consecutive hours off duty.

Any such employe who may be ordered to report for duty before his legal rest period has expired must report the fact to the Superintendent before going on duty.

Unless otherwise provided on the time-table, any such employe when he has been on duty for 12 hours, con-
secutively or in the aggregate, must notify the Superintendent as to the time when his hours on duty will amount to 14 hours.

The time of employes performing more than one period of service within a 24-hour period will be considered consecutive unless given a complete release for a definite time of at least two consecutive hours off duty between any two periods of service.

For the purpose of determining hours of service under the law, an employe will be considered as being “on duty” from the time he is ordered to report and so reports until he is completely released from duty for a definite period of at least 2 consecutive hours.

Should such employes be on duty in excess of 16 hours in a 24-hour period, the conductor, engineman or driver of track car must submit a special detailed report of delays encountered, to the Superintendent.

PERSONAL INJURIES

Employes Injured on Duty

4144. Personal injuries must be immediately reported to the head of department and, if medical service was rendered, the name of the attending physician included.

Injuries to Passengers or Other Persons on Trains

4145. A report of injuries to passengers, railroad employees, or other persons employed on trains, containing such information as available, must be made immediately to Superintendent, followed promptly by a full report on form C. T. 75-A. If medical service is rendered, name of attending physician must be stated in first report, when practical.

Emergency Calls—Treatment of Injured Persons

4146. Emergency calls for surgeons will have preference over other business, except train orders and power emergency calls.

Employes injured on Company property or while on company business, will be treated by the nearest physician
named on the time-table special instructions, without cost. If hospital attention is necessary, they should be sent, if practicable, to one of the hospitals named on the time-table special instructions.

Passengers or others injured on Company property will receive first attention by the medical examiner or Company surgeon, without cost; at points where it is impossible to obtain their services, the Company will be responsible for the cost of reasonable surgical attention by an outside surgeon for the first services rendered. Subsequent attention will be determined by direction of proper official.

PASSENGER AND MAIL SERVICE

Use of Public Address System on Passenger Trains

4149. 1. Station announcements—made by a member of train crew prior to arrival at stations.

2. Advice on unusual delays encountered, such as wrecks, etc.—given by a member of train crew.

3. Announcements by dining car steward as to meal service or such other announcements as may directly pertain to the service in the dining car.

4. Announcements by passenger representative or train crew to page passengers for delivery of telegrams or messages received enroute and such other emergencies as paging trains for doctors, nurses, etc.

5. Broadcasting of selected radio programs, election returns, world series ball games—handled by lounge car attendant.

Interruption—Train Service

4150. When passenger train service is interrupted or when unusual or serious delay occurs, passengers on trains must be fully informed as to probable delay or rerouting of trains and be given every assistance possible in making emergency arrangements for completion of trip. They must be given such opportunity as may be practica-
ble for transmitting telegrams and where dining car service is not available, special arrangements must be made for meal service. Station masters and station agents must be fully advised concerning interruptions, probable delay and rerouting of trains, and they must see that passengers at stations are fully informed and assist them in making emergency arrangements for reaching destination.

**Side and Trap Doors**

4151. Side and trap doors must not be opened except by employees in the discharge of their duties connected with the operation of the train, enroute or at stations, and at stations they must be opened on platform side only. When practicable, they must be closed when approaching and passing through tunnels, over bridges and trestles.

On passenger trains making infrequent stops, they must be kept closed between stations. Side and trap doors on Pullman cars opened by employees while in discharge of their duties must be closed by them.

Side and trap doors must be closed before arriving at stations with high platforms.

A vestibule car in service must not be permitted to leave a terminal or originating point with a side or trap door missing and if either becomes defective enroute, it must be closed and secured until car reaches destination.

**Gasoline Stoves and Gasoline in Troop Trains**

4152. In order to safeguard the movement, employees involved must see that Army instructions and regulations in connection with the installation and handling of gasoline stoves and gasoline are properly carried out. Operation of troop trains through East and North River Tunnels, New York Division, is prohibited unless:

Gasoline is removed from ranges before cars are dispatched through these tunnels. This should be done by removing burner units from the range and pouring the gasoline out through the filling holes. The reserve gasoline supply in the safety filling cans also must be drained. Gasoline must be drained into standard gasoline drums which must be provided at designated points to receive gasoline and such drums removed promptly from railroad property.

Transfer of gasoline into drums should be made at least 25 feet from buildings, cars, engines, yard switch lamps or other open flame lights and fires.
Smoking and the use of oil lamps or other open flame lights in vicinity is prohibited.

Conductors must know that these instructions have been complied with before cars are allowed to proceed through the tunnels.

Mail Matter, etc., from Moving Trains

4153. Mail matter or other articles must not be discharged from moving trains on station platforms or at any other locations where personal injury is liable to result.

Contagious or Infectious Diseases

4154. Passengers with known cases of contagious or infectious diseases must not be transported without authority of the Superintendent.

Dogs and other Animals in Passenger Trains

4155. Train service employees whose duties involve them in handling dogs and other animals in passenger trains, must provide themselves with a current copy of General Notice No. 220-A and supplements thereto (issued by Superintendents Passenger Transportation) "Instructions Governing Carrying of Dogs and Other Animals in Passenger Trains" and be governed thereby.

Lost Articles

4156. All lost articles found on Company's property must be delivered immediately to baggage agent at the station or to ticket agent where there is no baggage agent. When lost articles are found on trains they must be delivered to baggage agent at terminal station of train crew or to such other person as may be designated to receive lost articles. The baggage agent at the terminal station will be notified of finding of articles and delivery to custodian so that inquiries may be directed to proper office.

Articles found in Pullman cars must be turned over to the Pullman employes (conductor if one is on duty) in charge of car in which the articles are found, or deposited at the proper Pullman office in accordance with instructions issued by the Pullman Company. Information as to finding of such articles should also be given to the proper railroad representative at terminal in order that persons making inquiry may be directed to the Pullman

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office having custody of such articles.

Receipts will be furnished by the designated employe to persons delivering lost articles.

**Railroad Service Mail**

4157. Employes whose duties involve them in the handling of Railroad Service Mail must provide themselves with a current copy of General Notice No. 243-A and supplements thereto, (issued by Superintendents Passenger Transportation) "Regulations Governing Railroad Service Mail" and be governed thereby.

**Steam in Steam Line of Trains**

4158. (a) Steam must be kept in the steam line of trains:

1. On trains carrying twin-unit and lightweight diners, also on trains carrying Pullman-parlor-restaurant-lounge cars, or other cars, where steam is necessary for commissarial purposes.

2. Between the hours of 6.00 A.M. and 10.00 A.M. on trains carrying Pullman sleeping cars.

3. On trains carrying full RPO or RPO apartment cars, when such cars operate over more than one Division.

4. On trains with steam jet air-conditioned cars, or cars carrying live fish.

5. On all trains, when the outside temperature necessitates heating, in which case the following special heating instructions apply:

   Deadhead trains, heat in rear car for train crew.

   Deadhead trains, heat in one Pullman for Pullman personnel.

   Heat in mail cars for Mail Clerks.

(b) When cars requiring steam for the operation of air conditioning apparatus, steam tables, commissarial facilities or other similar special features are operated in passenger trains, the conductor must notify the engineman so that the necessary steam pressure in the steam line may be provided.
Tonnage Computation—Passenger Trains

4159. In computing tonnage for operation of passenger trains, use weights as shown in following table:

<table>
<thead>
<tr>
<th>Type of Car</th>
<th>Tons Loaded</th>
<th>Tons Loaded</th>
<th>Mail Service</th>
<th>Baggage and Express Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Empty</td>
<td>Loaded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-60, and foreign baggage</td>
<td>55</td>
<td>75</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>B-70</td>
<td>60</td>
<td>85</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>B-74</td>
<td>65</td>
<td></td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>BM-70</td>
<td>70</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M-70</td>
<td>65</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBM-62</td>
<td>50</td>
<td>60</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>R-50, R-60, and foreign refrigerator</td>
<td>50</td>
<td>70</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>X-29</td>
<td>25</td>
<td>50</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Car</th>
<th>Tons Loaded</th>
<th>Tons Loaded</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Empty</td>
<td>Loaded</td>
<td></td>
</tr>
<tr>
<td>PB-70, PBM-70, PDB-70</td>
<td>70</td>
<td>75</td>
<td>A</td>
</tr>
<tr>
<td>P-85b-R</td>
<td>70</td>
<td>75</td>
<td>B</td>
</tr>
<tr>
<td>Coach, observation</td>
<td>75</td>
<td>75</td>
<td>B</td>
</tr>
<tr>
<td>Coach, lightweight</td>
<td>55</td>
<td>60</td>
<td>B</td>
</tr>
<tr>
<td>Cafe, cafe-lounge</td>
<td>70</td>
<td>70</td>
<td>A</td>
</tr>
<tr>
<td>MP-54</td>
<td>45</td>
<td>45</td>
<td>C</td>
</tr>
<tr>
<td>MPB-54, MPBM-54</td>
<td>50</td>
<td>50</td>
<td>C</td>
</tr>
<tr>
<td>Coach, all other</td>
<td>65</td>
<td>70</td>
<td>A</td>
</tr>
<tr>
<td>Diner, twin-unit</td>
<td>180</td>
<td>180</td>
<td>B</td>
</tr>
<tr>
<td>Diner</td>
<td>95</td>
<td>95</td>
<td>B</td>
</tr>
<tr>
<td>Diner, lightweight</td>
<td>65</td>
<td>65</td>
<td>B</td>
</tr>
<tr>
<td>Business, 7525-7531</td>
<td>75</td>
<td>75</td>
<td>B</td>
</tr>
<tr>
<td>Business, all other</td>
<td>95</td>
<td>95</td>
<td>B</td>
</tr>
<tr>
<td>Pullman</td>
<td>90</td>
<td>90</td>
<td>B</td>
</tr>
<tr>
<td>Pullman, lightweight</td>
<td>65</td>
<td>65</td>
<td>B</td>
</tr>
</tbody>
</table>

Note—For air-conditioning:

A—When car is equipped, add 10 tons
B—Weight has been included
C—These cars are not equipped
Transportation of Cars or Equipment of Excessive Weight or Dimensions

4165. When routing instructions include any specific restrictions, speed limit, use of certain tracks passing designated points or other specified precautions, agents, yard masters, or others responsible must notify the train dispatcher, also furnish Form C. T.-2 (illustrated in the following) to conductor and engineman having such cars in their train. If a restriction is also on a division over which interdivisional crews operate, the train dispatcher of the originating division, after having been notified by the conductor, will arrange to notify the dispatchers of the connecting divisions.

THE PENNSYLVANIA RAILROAD
Restricted Train Run Movement

When manifest shows speed limit, use of certain tracks passing designated points or special precautions on account of weight or excessive dimensions in accordance with General Notice No. 207-A, Item 13, Page 5, Conductors must notify train dispatchers accordingly. If a restriction is also on a division over which inter-divisional crews operate, the train dispatcher of the originating division, after having been notified by the conductor, will arrange to notify the train dispatchers of the connecting division.

Conductor and Engineman.................Station or Yard........
Train ........................................Engine .......................Date .........

Initial and numbers of cars or other equipment............

Restrictions on your train run...........................................................................

.............................................................................................................
.............................................................................................................
.............................................................................................................

(Name and Title)

Note—To be filled out in triplicate, one copy to be given conductor, one to engineman, and one for file in yard office from which train was dispatched.
**Transportation of Explosives and Other Dangerous Articles**

4166. Employes whose duties involve them in the transportation of explosives and other dangerous articles must provide themselves with a current copy of General Notice No. 225-B and supplements thereto (issued by Superintendents Freight Transportation) "Regulations for the Transportation of Explosives and Other Dangerous Articles" and be governed thereby.

**Transportation of Live Stock**

4167. From May 1st to October 15th, inclusive, whenever the temperature reaches 70 degrees above zero or over, hogs must be drenched or sprayed enroute at points designated on time-table. Water should not be thrown direct on hogs. A notation must be made on billing showing points and time at which hogs were drenched.

Connecting divisions must be advised in advance and conductors must advise the Superintendent, as soon as practicable after leaving terminals, of all cars of live stock on short time, i.e., shipments nearing expiration of 28 or 36-hour time limit.

Placing of shipments of live stock at destinations that are non-agency stations, or at agency stations where agents are not on duty, must be regulated by instructions of the Superintendent.

**Picking Up Cars at Non-Agency Stations**

4168. Conductors picking up cars at non-agency stations must examine drain-pipes, hatch-plugs and ventilators, record conditions, and make report by wire to Superintendent covering any defects which they cannot correct.

**Scheduled Refrigerator Car Service**

4169. This means insulated car service established or operated by carriers on fixed days of the week from specified points to specified points for the handling of "Less than Carload" shipments of perishable freight, transported over a specific route which interested carriers have authorized. Conductors must wire proper officials when it is evident that scheduled cars will be inadequate and extra cars will be needed for the remainder of the schedule.
Shipments—Perishable Freight Accompanied by Caretakers

4170. Caretakers will have exclusive charge of heaters, if any, installed in cars, the fires therein, the ventilators and other openings. Caretakers must ride in cabin car while train is in motion. When caretakers abandon shipment at any point short of destination, they must remove heaters. In the event shipment is abandoned without heaters being removed, agent, yard master or conductor will see that fires are extinguished and make proper record on the waybill.

Caretakers must not be allowed to examine waybill for any cars not in their charge.

Adjustment of Ventilators of Cars under Ventilation

4171. Each conductor or other employe delegated to perform such duty, when first taking cars must ascertain and record the position of all vents and every time any change in position thereof is made, a separate record must be maintained.

Loading Cars Which Contain Lighted Heaters

4172. In loading cars which contain lighted heaters, and in placing such cars in trains, the standard instructions relative to the loading and handling of explosive, inflammable and dangerous articles must be strictly observed. Explosives, fireworks, inflammable liquids (red label), and inflammable gases (red label) must not be loaded in cars containing heaters.

Car Containing Lighted Stoves and Heaters—Guarding against Fire

4173. Trainmen, yard clerks, watchmen and other employees must understand that lighted stoves and heaters must be given the same care and attention as any other light or fire on railroad premises. Ashes from heaters should not be dumped on platforms or other woodwork nor in yards in close proximity to where a supply of oil or gasoline is kept.

Car Seals

4174. When a car contains freight for several stations, the agent at the station at which freight is unloaded or the conductor of the train must reseal the car.

Form C. T. 815, C. T. 815A or C. T. 815B must be used
by destination agents for recording impressions on seals and the condition of fastenings on side and end doors, covering all loaded cars received. The record must be distinct and accurate, so that in the case of a claim it may be used as evidence. When a loaded car arrives at destination with imperfect seals or without seals, the agent must check the lading before delivery to the consignee or when unloaded by consignee.

Form C. T. 143 must be prepared in duplicate by conductors to report the record of and condition of seals on cars delivered or received, where it is impracticable for the agent to obtain this record. The original must be delivered to the jurisdiction agent and a copy retained by the conductor. This report must be distinct and accurate and properly filed so as to be available as evidence in the case of a claim.

Conductors and trainmen must examine seals at intervals while cars are in their charge. When there is evidence of seals on cars having been tampered with, an examination of the contents of such cars should be made before they are sealed, and a report by wire immediately made to the Superintendent stating all facts. Form C. T. 865 must be prepared and left with the yard master or other employe designated by the Superintendent at the end of the run.

Car of All-Wood Construction—in Interchange

4175. No car of all-wood construction will be accepted in interchange.

Scales and Weighing

Weighing Cars

4176. Single cars must be uncoupled at both ends while they are being weighed. In the case of twin and tandem loads, the cars shall remain coupled, and such coupled cars may be weighed in one draft (or cut) if the scale is of sufficient length, or in more than one draft (or cut) if the approach rails are level with the weigh rails.

Heavily loaded or long wheelbase cars should not be weighed on a track scale of the 46-foot type. When it is necessary to weigh a long car on other types of track scales not long enough to accommodate the entire car, each truck of the car will be spotted in turn approximately at the center of the scale.
4177. The movement of engines or similar equipment over the weigh rails is prohibited except upon authority of the supervisor of scales and weighing. The unnecessary passing of cars over the weigh rails is prohibited. Weighed cars which have passed beyond the dead rail switch must not be returned over the weigh rails. Dead rail switches, and the relieving gear of scales so equipped, should be set for the dead track, except when cars are being weighed.

Cars should not be stopped on the scale by impact or obstruction on the rail. When a car which has been stopped for weighing or other purpose is moved from the scale, impact must not occur at a speed greater than 2 miles per hour. Under no circumstances should a car wheel be passed over any obstruction placed on the rail.

Cars on the weigh rails must not be moved by cars or engines on the dead rails or on an adjacent track, or vice versa. Cars must not be moved over the scale with one truck on the weigh rails and the other truck on the dead rails.

Speed of engines and non-weigh cuts of cars over the scale or dead rails should not exceed 8 miles per hour.

Engines and cars shall be so handled over the scales as to prevent oil, water, hot cinders, sand or lading of cars to drop upon the platform or scale parts. The slipping of engine drivers on the scale or dead rail is injurious to the structure, and only enough sand to provide the necessary traction should be applied.

Runaround tracks must be used for the passage of engines and cars not to be weighed.

Track scales with relieving gear must be equipped with signals at each end. At track scales where semaphore signals are in service, indications will be as follows:

Diagonal—Yellow light at night—scale is set to weigh, and engines must not be run over it.

Vertical—Green light at night—engines may run over the scale.

Where light signals are in use, indications will be:

No light—Scale is set to weigh and engines must not be run over it.

One green light—engines may run over the scale.
A relieving gear must not be operated when a load is on the weigh rails.

No equipment shall be allowed to stand on the dead rails, nor on the weigh rails, except while being weighed.

**Test Weight Cars**

**4178.** A test weight car is a car used for testing railway track scales.

A compartment test weight car is a car built of structural shapes and plates, used for the transportation of test weights in small units.

Test weight cars should be handled at rear of train just ahead of cabin car.

Non-truck, 4-wheel type cars must not be placed between pusher engine and other cars in yard or road movements.

Test weight cars of the non-truck, 4-wheel type must not be moved at speeds greater than 25 miles per hour when "weight" compartment is empty, nor more than 30 miles per hour when "weight" compartment is loaded to capacity. Scale inspectors or other employees issuing shipping instructions for test weight cars of the 4-wheel type will indicate in such instructions whether or not the "weight" compartment is empty and also the correct speed to which the movement is restricted. Agents, yard masters and car inspectors must see that Form C. T. 212 is endorsed to show such speed restrictions and that the Superintendent is notified.

Test weight cars should be promptly handled at destination by yard engines upon request of scale inspector to yard master. At locations where yard engines are not employed, arrangements will be made for road trains to handle cars at the track scales upon request of scale inspector to the train master or his representative. Yard engines and road trains assigned to assist scale inspector will handle cars in making tests of track scales as instructed by the scale inspector. Test weight cars must be handled carefully to avoid impact at speeds greater than 2 miles per hour. Brakes on cars with roller bearings uncoupled from other equipment in motion must be manned and carefully operated to prevent excessive speed, and must be firmly set when movement is stopped. When handling such cars, conductors must know that enginemen have been so advised.