

SECTION 15

HANDLING OF AUTOMOBILES OR OTHER SELF-PROPELLED VEHICLES IN CARS OR ON THE PREMISES OF THE COMPANY

- 1.1 Automobiles, trucks, motorcycles, tractors, internal combustion engines, etc., for the operation of various mechanical appliances, etc., (except boats, canoes and launches, which must have oil and gasoline tanks empty in accordance with Canadian Freight Classification No. 20 and Supplements), must have oil and gasoline tanks in good condition and securely closed prior to delivery on Company's premises. All plugs and covers must be closed in such a manner as to prevent any danger of fire and shippers must certify in bills of lading that tanks are not leaking and in good condition. Such machines will then be accepted for shipment without gasoline being drained from tanks. If a leak is found, shipment must be refused. Shipper should inflate tires to a pressure ten pounds greater than that recommended. One battery cable should be disconnected and secured away from the battery, and windows should be closed with trunk lids and doors firmly latched. Agent should carefully inspect vehicle and note any visible damage or missing parts.
- 1.2 Only where special loading or unloading platforms have been erected will automobiles, trucks, etc., be permitted to move from the ground to the platform, or from the platform to the ground under their own power. All such vehicles must be loaded from the platform into the cars and unloaded from the cars to the platform by hand; power must not be used. In freight sheds and on attached platforms, or platforms where merchandise is handl-

ed, automobiles, trucks, etc., may be moved from the ground to the warehouse or platform, or from the freight shed and platform to the ground (when facilities are adequate) under their own power when authorized by railway representative in charge, providing gasoline and oil tanks are in good condition, securely closed and free from leaking either gasoline or oil

- 1.3 Under no circumstances must the fuel tank of these vehicles be filled or drained while on railway platforms (this does not include manufacturers' special platforms or railway platforms assigned for exclusive handling of automobiles) in cars or railway buildings, or on railway premises within twenty feet of cars, buildings or stored combustible material.
- 1.4 Cap to gasoline storage tank must be tightly closed and there must be no leakage of gasoline at any point.
- 1.5 Lanterns or any other open flame lights must not be used during the movement of such vehicles to or from cars; when light is necessary, electric flash lights or incandescent electric lights must be used.
- 1.6 Smoking or using lighted matches in cars or warehouses containing automobiles is prohibited.
- 1.7 To avoid freezing, water tanks and engine block should be emptied during the season from September 1st to May 1st, unless cooling system contains antifreeze solution and owner assumes risk of freezing per Tariff Rule, proper notation of which should be made on the bill of lading.
- 1.8 In the event of a shipment of automobiles or trucks being refused by the consignee, every possible effort should be made to secure immediate disposition. If the property remains on hand an unusual

length of time and it is desired to release the equipment, authority must be obtained from the Freight Claims Agent before placing in storage, and if such authority is given the machines must not be handled under their own power. Where it becomes necessary to handle through the street to the point of storage, they must be handled either by an independent truck or team and any expense connected therewith charged against the property, which amount can be cleared when the shipment is delivered or returned to the consignor.

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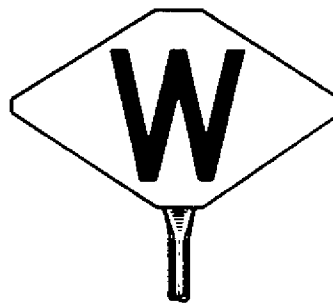
SECTION 16

TRACK SIGNS

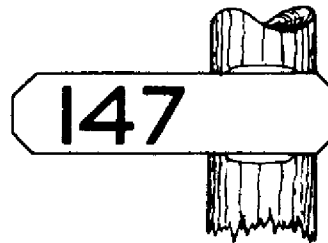
Note:

Signs illustrated in this section are in accordance with current standards. Signs of older types still in service convey the same meanings.

WHISTLE POST

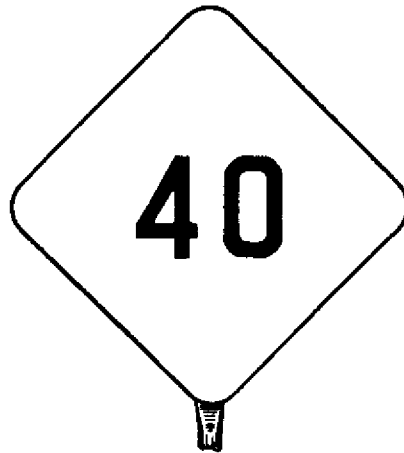


MILE POST



Located at one mile intervals to designate subdivision mileage.

SPEED



Black Figures on Yellow Background.

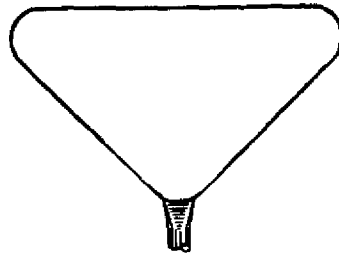
To call attention to a permanent slow order specified in the time table or special instructions. When two speeds are shown on the sign, the upper speed will apply to passenger trains and the lower speed to freight trains.

When one speed is shown on the sign it will apply to passenger trains and also to other trains which are otherwise authorized to operate at higher speeds.

Located as follows:

- a) For a speed zone preceded by unrestricted speed territory or a higher speed zone: At a sufficient distance from the beginning of the speed zone to enable required speed reduction to be made.
- b) For a speed zone preceded by a lower speed zone:
 - At the beginning of the higher speed zone.

RESUME SPEED



Green Target.

Located at exit from speed zone to indicate that after entire train has passed the sign, maximum authorized speed may be resumed.

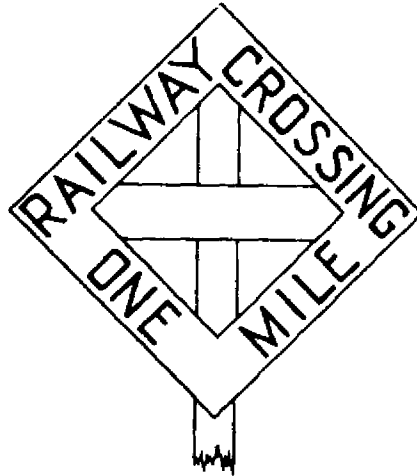
STOP



Black Letters on Red Background.

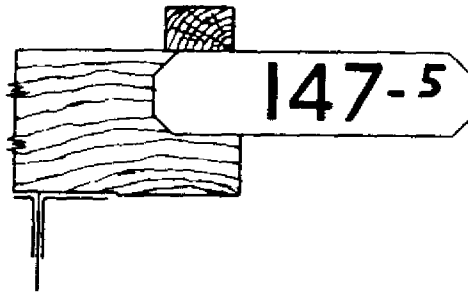
Located 500 ft. from non-interlocked railway crossings at grade, non-interlocked drawbridges, and at other locations where its use is required.

**RAILWAY CROSSING
AND DRAWBRIDGE**



Located one mile from non-interlocked railway crossings at grade and non-interlocked drawbridges.

STRUCTURE NUMBER BOARD



To designate to nearest tenth of a mile the location of certain structures such as bridges, tunnels and snowsheds.

STATION MILE BOARD

HAVELOCK



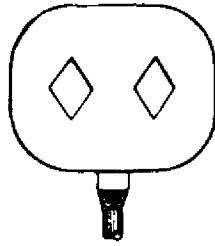
Located one mile from station, siding switch, outer main track switch where freight train time applies, or junction switch, whichever is the most outlying in each direction.

STATION NAME BOARD

PÔRTAGE LA PRAIRIE

Located at each end of station building. Where no station building exists; at mileage shown in time table, parallel to main track.

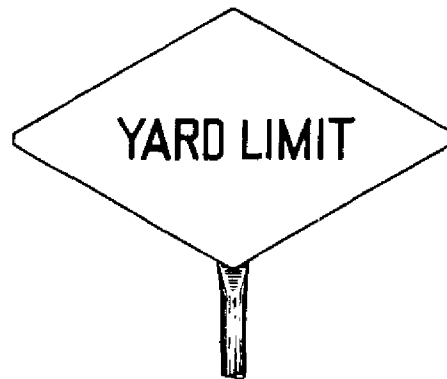
RESTRICTED CLEARANCE



Two Diamond Shaped Holes on Yellow Background.

To call attention to restricted side or overhead clearance, or both, where men must not ride sides or tops of cars as case may be.

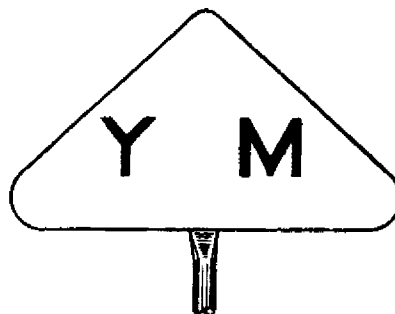
YARD LIMIT



Black Letters on Yellow Background.

To define yard limits.

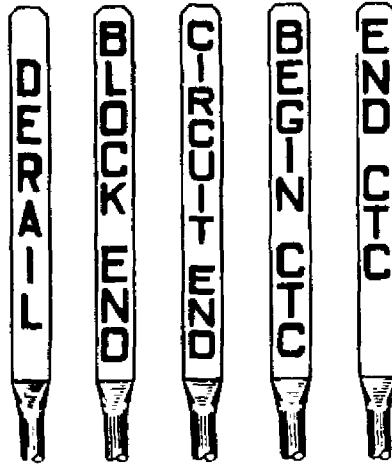
YARD LIMIT APPROACH



Black Letters on Yellow Background.

Located one mile from yard limit sign, except in automatic block signal system territory.

**DERAIL, BLOCK & CIRCUIT
END, BEGIN & END C.T.C.**



Derails — Black letters on yellow background.

Others — Black letters on white background.

DERAIL — Indicates location of derail.

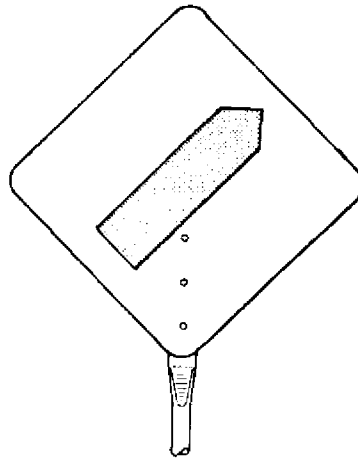
BLOCK END — Indicates end of track circuit controlling an automatic block or station protection signal.

CIRCUIT END — Indicates end of special track circuit controlling interlocking, automatic block or highway crossing protection signal at locations specified in timetable.

BEGIN C.T.C. — Indicates beginning of centralized traffic control system territory.

END C.T.C. — Indicates end of centralized traffic control system territory.

APPROACH TO S.P.S.



Yellow on White Background.

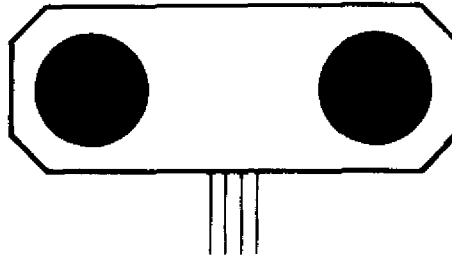
Located one mile from station protection signal not provided with approach signal.

Indication: Proceed, preparing to stop at the Station Protection Signal. Trains exceeding medium speed must at once reduce to that speed and reduction to medium speed must commence before passing the "Approach to S.P.S." sign.

Exception: This requirement does not apply when track is seen to be clear to the signal equipped with a marker displaying the letters SPS and such signal indicates proceed.

Name: APPROACH TO S.P.S.

SNOW PLOW AND FLANGER SIGN



Black discs on white background.

To call attention of snow plow and flanger operators to an obstruction to the operation of their equipment.

SECTION 17

OPERATION OF TRACK SCALES

1.0 Electronic Scales

- 1.1 All weighing must be performed by competent and properly instructed employees.
- 1.2 The operation of electronic scales is to be in accordance with local instructions.
- 1.3 Allowances for weight of snow, ice or other foreign matter on carloads, or manure in stock cars, must be estimated and registered on the prescribed form.
See Table in item 2.24 as a general guide to assist in arriving at snow allowances.
- 1.4 Cars should not be stopped violently on scale.
- 1.5 Sand must not be used while engines are on or passing over scale.
- 1.6 When a scale is suspected of malfunction in any way, the maintenance employee designated in the local instructions is to be notified promptly.
- 1.7 When making check weighings of cars previously weighed on other scales, report results and weight discrepancies promptly to Superintendent so that a third weighing may be obtained if required.
- 1.8 When weighing a car empty (not cleaned) for actual tare weight and unreasonable difference shown between tare weight stencilled on car and actual tare weight obtained, car must be inspected and notation made on prescribed form describing material found in car accounting for the difference, or any other reason noticeable at time of inspection.

- 1.9 When light-weighing cars (clean) for restencilling, they must be uncoupled at both ends to comply with A.A.R. Rules.
- 1.10 All cars weighed must be reported on prescribed forms and all information called for must be properly filled in.
- 1.11 Weighbridge assembly must be kept clear of foreign matter to ensure there is no binding between "floating" components of weighbridge and pit walls.
- 1.12 Gaps between scale live rails and approach rails must be kept clear of foreign matter to ensure there is no binding.
- 1.13 Scaling of cars longer than scale and multicar loads must be performed in accordance with instructions contained in Items 2.4, 2.5, 2.6 and 2.7 pertaining to mechanical scales.

2.0 Mechanical Scales

ALWAYS BALANCE BEAM BEFORE WEIGHING

- 2.1 All weighing must be performed by competent and properly instructed employees.
- 2.2 Be careful to record stencilled tare.
- 2.3 Weighbeam must be balanced before weighing and balance checked after weighing. If after weighing balance is materially changed, cars affected must be reweighed. (Illustrations 5, 6 and 7)
- 2.4 When scale rails and approaches, on either side of the scale rails, are on grade for distance of seventy feet, loaded cars may be weighed coupled at one end and free at the other. Otherwise cars must be free at both ends while being weighed, with all wheels occupying live rail, clear of rail ends.
- 2.5 The exception to the above is double or triple loads which must be weighed coupled.

- 2.6 Cars too long for scale should be weighed one end at a time. Add the two gross weights and deduct one tare weight. (See Illustration 3)

When two or more cars are scaled in this manner, total the gross weights obtained and deduct the sum of the tare weight.

When weighing double or triple loads, weigh each car separately, where possible. Add the gross weights and deduct the sum of the tare weights. (Illustrations 1 and 4).

Whenever possible, the weighing of double or triple loads should be performed on scales which have level approaches.

- 2.7 When gross weight of car is greater than the capacity of the scale, weigh one end of car at a time, add the two gross weights and deduct the tare weight. Where necessary, car must be run around scale to prevent over-loading of scale.
- 2.8 Keep the weigh beam locked by means of latch at tip when cars are passing on or off scale.
- 2.9 Handle of type registering device must not be operated unless scale ticket is inserted; otherwise damage will occur to brass type.
- 2.10 To prevent damage to type bar or mechanism, the registering device for printing weight must be used carefully. To avoid damaging the beam notches, main poise handle must be fully depressed before moving main poise. When printing ticket the printing lever must be squeezed, not banged with the hand.
- 2.11 Scale tickets must be carefully filled out with all information using ball-point pen, or indelible pencil. Weighman must personally read tares stenciled on cars.

- 2.12 Allowances from track scale weights: Weight of snow, ice, or other foreign matter on carloads, or manure in stock cars, must be carefully estimated. Allowances must be shown on scale ticket.
See table in item 2.24 as a general guide to assist weighman in arriving at snow allowances.
- 2.13 a) When coupling cars on scale, impact must not occur at speed in excess of two (2) miles per hour. Cars must not be run over live rail of static scales at speed in excess of four (4) miles per hour. Cars must not be stopped violently on scale, or left standing on live rail except when weighing. Air brakes or blocking under car wheels must not be used to stop cars on scale
- b) Engines must not pass over live rails of track scales of less than 150 ton capacity, or of 150 ton capacity scales installed prior to 1945.
After weighing string of cars on scale equipped with dead rail, crews must not pull entire string of cars over scale track. Dead rail track must be utilized.
- c) Sand must not be used while engines are on or passing over scale. Switches must be set at all times for dead rail except when scale is being used for weighing.
- 2.14 When scale cannot be balanced or kept in balance, or for any other reason is not operating freely or properly, employee in charge must advise Superintendent, giving full explanation of existing conditions and any repairs required.
- 2.15 When making check weighings of cars previously weighed on other scales, report results and weight discrepancies promptly to Superintendent so that a third weighing may be obtained if required.

- 2.16 When weighing a car empty (not cleaned) for actual tare weight and unreasonable difference shown between tare weight stencilled on car and actual tare weight obtained, car must be inspected and notation made on back of scale ticket describing material found in car accounting for the difference, or any other reason noticeable at time of inspection.
- 2.17 When light-weighing cars (clean) for restencilling, they must be uncoupled at both ends to comply with AAR Rules.
- 2.18 All cars weighed, loaded or empty, for whatever reasons, must be reported on prescribed forms and all information called for must be properly filled in.
- 2.19 Heating equipment and heating area must be kept clean and not used for storage of tools or other materials. Pit must be kept free of water and pump set for operating at all times. Scale house must be kept locked except when actually in use for weighing. Scale rails should be level with approach rails and remain so under load.
- 2.20 Platform (or deck) of scale must be kept clear of foreign matter so that there will be no interference between deck and copings or the weatherguards along the rail or around rail stands. Check to see that there is proper clearance between scale live rail ends and approach rail ends, never more than three-quarters ($\frac{3}{4}$) or less than one quarter ($\frac{1}{4}$) of an inch.
- 2.21 Ensure that no foreign material is placed on or against the weigh beam and/or connecting levers.
- 2.22 Where standard scale house is provided having rear windows, protected by gratings, windows should remain open during summer months to ventilate pit.

2.23 Weighmen should avail themselves of the visits of travelling scale inspectors to learn as much as possible of the scale mechanism in order that they may be qualified to detect anything wrong with the scale and to be able to give an intelligent report of repairs required when necessary.

2.24 SNOW ALLOWANCES

	Allowance per inch of depth						
	36'	40'	48'	50'	52'	60'	70'
	Car	Car	Car	Car	Car	Car	Car
Fresh Fallen Snow							
Light fluffy snow — Temp. below 20°F.	110	120	150	155	160	180	210 lbs.
Average snowfall — Temp. between 20° — 30°F.	150	160	190	200	210	240	280 lbs.
Heavy snow — Temp. above 30°F.	200	220	260	280	300	340	390 lbs.
Old Snow on Cars							
Dry average snow — any temperature	250	280	340	350	370	420	490 lbs.
Very wet packed snow any temperature	700	800	900	1000	1050	1200	1400 lbs.
For odd length cars use nearest length shown above.							

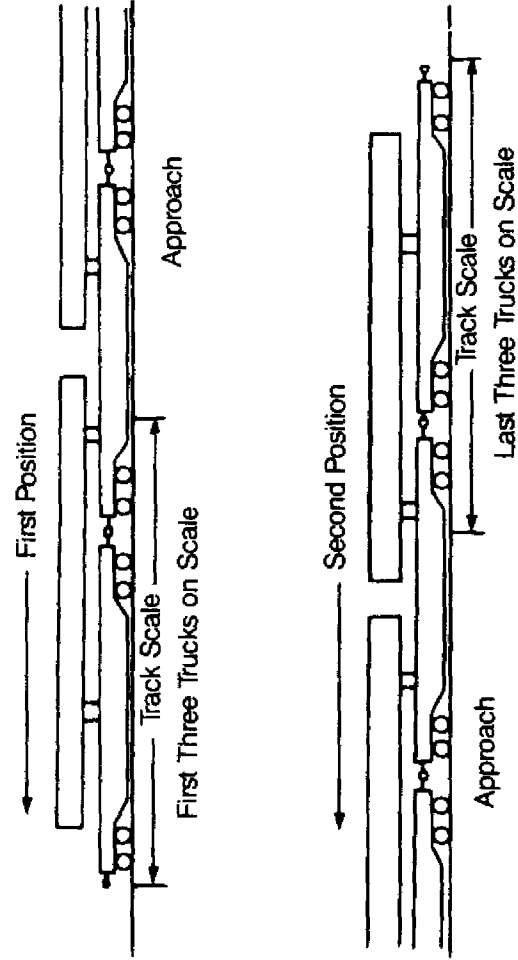
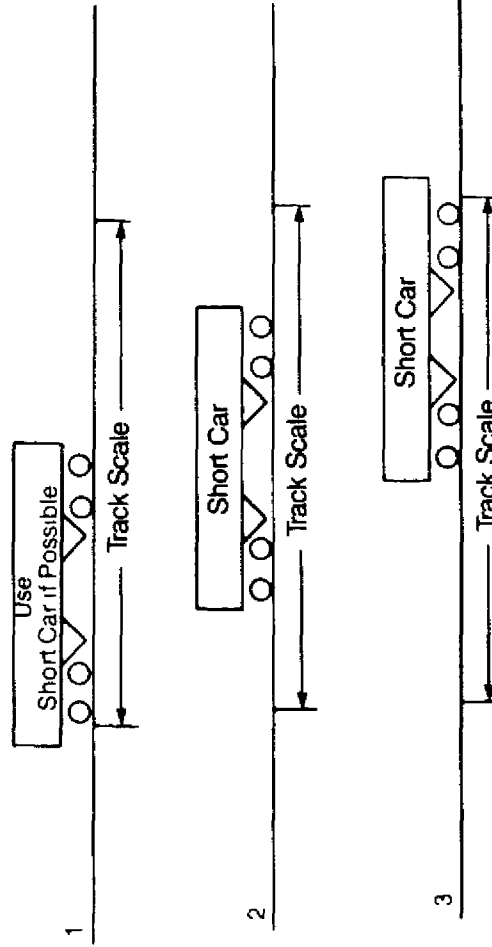


Illustration 2

Weekly Three Spot Testing

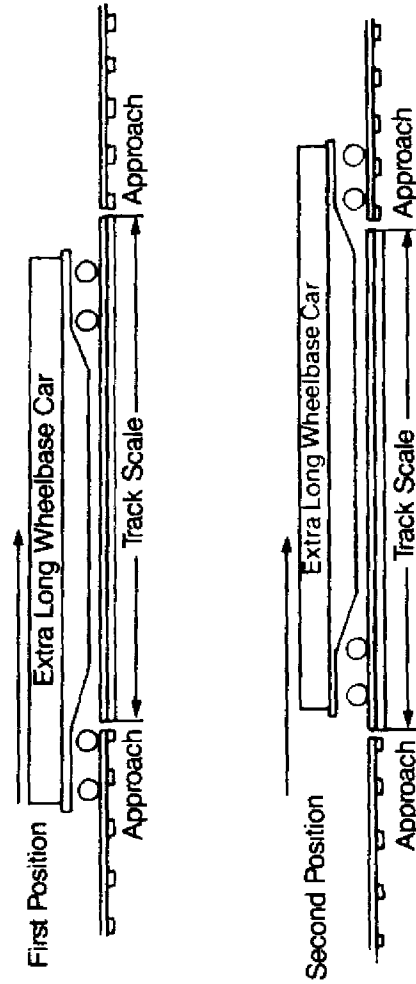


Balance Scale. Move car to each position as shown, the car to be carefully weighed at each position, print a ticket for each position, mark each ticket, check balance.

Double Weighing of Long Cars on Track Scales

Illustration 3

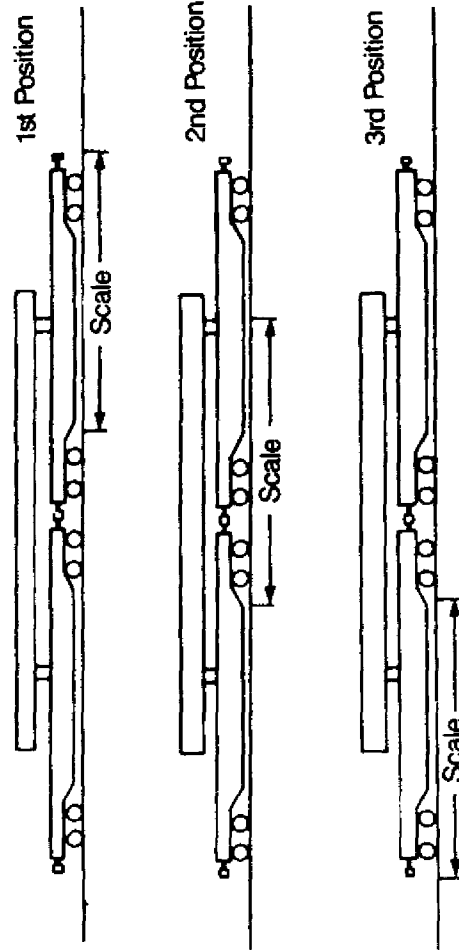
SEC. 17



Move car onto scale until second or rear truck is nearly on scale and first or leading truck is on scale as shown above, weigh, then move car until second truck is on scale and first truck off scale as shown above in second position. This ensures car is level and free of drag. All scales do not have long level approaches.

Illustration 4

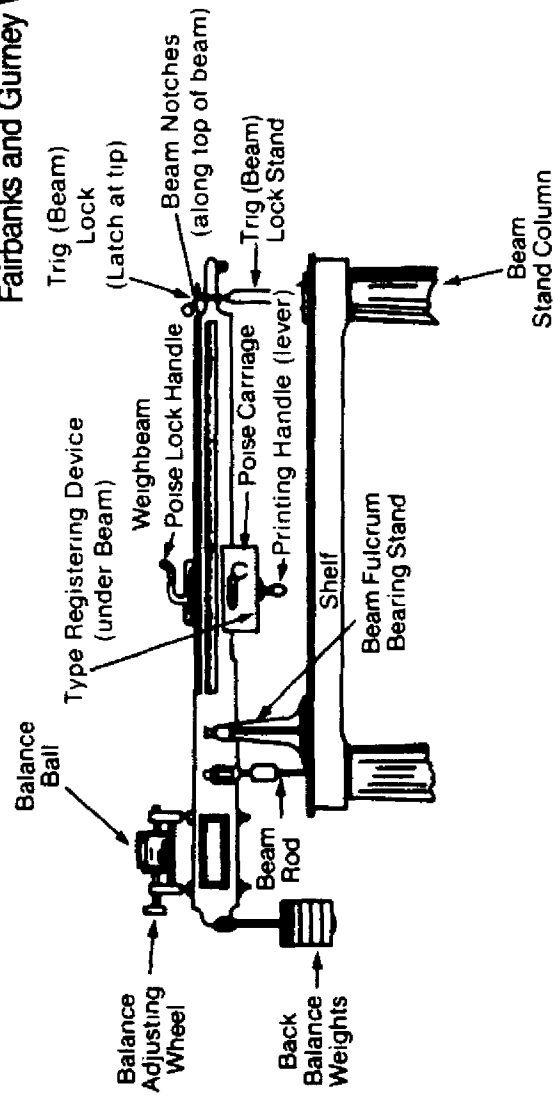
Weighing of Shipment Loaded on Two or More Cars



Note: If cars are of a length that each car can be weighed separately, do so. If more than two cars, weighing to be performed along same lines as shown above for two cars.

Illustration 5

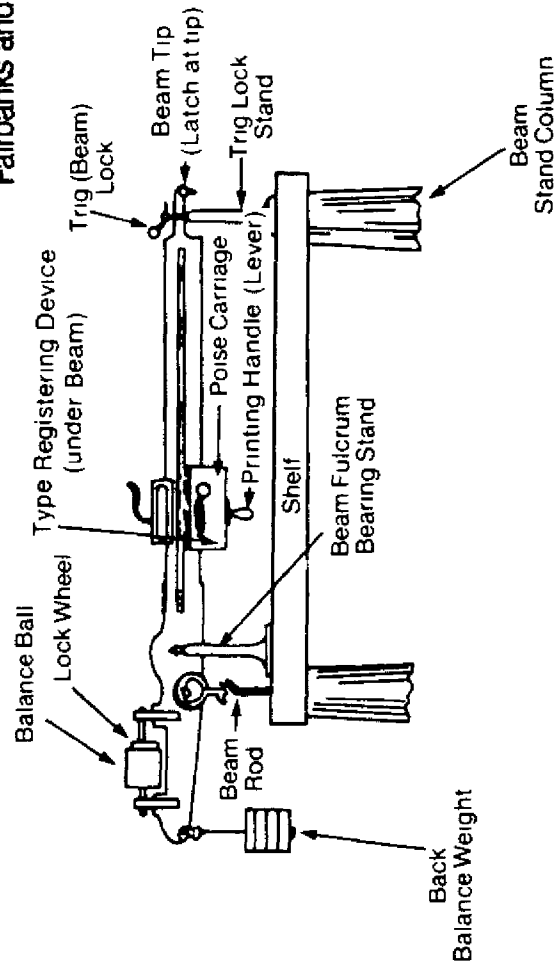
Fairbanks and Gurney Weighbeam



Note: Weighbeam with fixed type of balance ball found on both Fairbanks and Gurney makes of track scales of latest types. Balance by turning balance adjusting wheel, turn wheel away from you to lower tip, turn toward you to raise tip, until beam is in balance.

Illustration 6

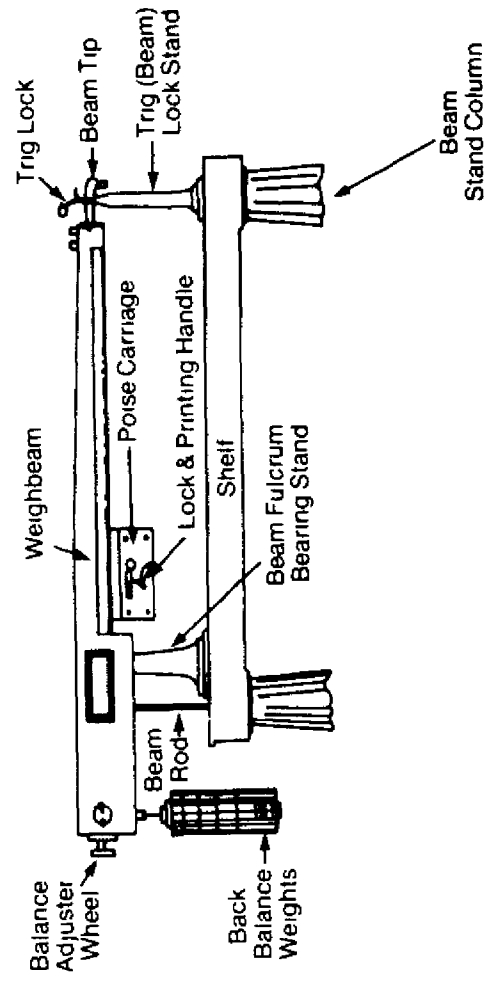
Fairbanks and Gurney Weighbeam



Note: Weighbeams with this type of balance ball are adjusted by turning balance ball and lock wheel together, turn to you to lower tip, turn away from you to raise tip, keep locking wheel tight to ball so that vibration will not cause ball to turn.

Illustration 7

Fairbanks Type "S" Weighbeam



Note: This type of weighbeam balance is adjusted by pressing in the centre of balance adjusting wheel, then turning wheel away from you to lower tip and turning toward you to raise tip until beam is in balance.

SECTION 18

INSTRUCTIONS FOR OPERATION OF HOT BOX DETECTOR SYSTEMS

1.0 General

These instructions do not relieve employees of complying with the requirements of UCOR Rule 111.

Note:

Wherever the term “detector operator” appears herein, it applies to the employee performing the duties.

- 1.1 Detectors measure the temperature difference between the outside air temperatures and heat radiating parts in the area of the journal box and wheel centre. Sources of heat which can cause alarms are overheated journals, overheated engine suspension bearings, sticking or dragging brakes and set hand brakes.

To avoid abnormal heat indication from a source other than defective equipment, the engineman should avoid, when practicable, prolonged use of train brakes approaching a detector, and any application of brakes while a portion of the train is passing the detector location.

Hot box detector systems are equipped with a dragging equipment detector, and actuation will also indicate an alarm.

Except as prescribed in item 4.9, locomotive radio should not be operated when within 150 feet of the detector location. Unless otherwise indicated in timetable footnotes, detector systems operate for trains in either direction on the track in which they are installed.

- 1.2 Location of detector systems, type, inspection points, set off points and other train inspection information is contained in timetable special instructions, footnotes or Superintendents' bulletins.
- 1.3 When the detector system indicates a defect and the defect is visible to the crew, stop for inspection must be made immediately. If there is no defect visible to the crew, the train may proceed at SLOW SPEED until the inspection point is reached. When no inspection point is designated trains must be stopped immediately.

Cars must be set out at the set-off point if any doubt exists as to the safety of their continued operation.
- 1.4 If, on inspection, the defect is not found at the indicated location, four cars on each side of the indicated location must be inspected.
- 1.5 Inspection for suspected overheating must be done by:
 - opening journal box covers and testing journal heat.
 - checking heat indicators.
 - feeling roller bearing housing using back of hand.
 - feeling the hub of the wheel using back of hand.
 - checking for sticking brakes and set hand brakes.
- 1.6 Location of the indicated defect must be found by counting the actual axles from the rear of the train. Care must be taken to ensure that cars and engines with other than four axles are not counted as having four axles.
- 1.7 When a train is stopped for inspection, the Conductor must advise the train dispatcher, or detector operator where employed, at the first oppor-

tunity the car number of the defective or suspected defective equipment, the condition found, the type of defective journal(s), if applicable, and action taken.

The train dispatcher, or detector operator where employed, will advise the mechanical personnel accordingly. At crew change terminals where no mechanical personnel is employed to inspect trains, the incoming conductor will advise the relieving conductor accordingly.

1.8 Except as prescribed by Item 1.9 trains need not stop at hot box detector systems which are observed or known to be inoperative or which are withdrawn from service.

1.9 If a hot box detector is withdrawn from service or is otherwise observed or known to be inoperative, or if any part of the movement past the hot box detector is made at 8 MPH or less and the detector is one that is identified with double asterisks (**) in timetable special instructions, footnotes or Superintendents' bulletins, timetable special instruction 'AA' applies at the location of that detector, as follows:

A train or a terminal transfer carrying one or more full carloads, containerloads or trailerloads of Special Dangerous Commodities must, within one mile of the mileage shown by subdivision footnote at which this instruction applies, arrange a pull-by or standing inspection from the front of the train to and including the second car behind the last full carload, containerload or trailerload of a Special Dangerous Commodity.

1.10 Conductors must submit the Hot Box Detector Report Form HBDR-100 when their train is stopped by a hot box detector or when a detector is observ-

ed to be defective or inoperative. Form 1124 must also be submitted as required. (See Section 1 item 2.0)

- 1.11 Train dispatcher or detector operator must promptly relay reports of defective detector systems to the signal maintainer.

2.0 Remote Readout System

- 2.1 When a train passes a detector location, the train test information will be automatically transmitted to the detector operator who will determine if an inspection is necessary.

When an inspection is necessary, the detector operator will stop the train and provide information as to the location of the defect or defects in terms of cars or axles from the head end or rear of the train.



Car journals must also be inspected when dragging equipment is indicated because a dragging equipment indication may hide an overheated journal on readout tape.

2.2 Train Stop Controlled by Train Stop Indicator

The train stop indicator is a white light mounted on a mast at locations designated in timetable footnotes. This indicator is NOT a block signal.

The train stop indicator must not be cleared by the detector operator until he has determined there are no defects detected by the hot box detector.

In circumstances where the train stop indicator is cleared after the engine has passed such indicator, the indication observed by the crew on the rear of the train applies.

DISPLAY	INDICATION	ACTION REQUIRED
 Flashing	Proceed indication	Proceed
 Steady lighted or unlighted	Defect indication	Train must not pass inspection point until detector operator contacted. If communication fails, a standing train inspection must be performed.

2.3 Train Stop Controlled by Block Signal

The block signal at the inspection point must not be cleared by the train dispatcher until it has been determined there are no defects identified by the hot box detector. Crews, stopped by the stop signal at the inspection point, must immediately contact the train dispatcher.

2.4 Train Stop Controlled by Radio

Trains must not pass the inspection point until instructions have been received by radio from the detector operator. If communication fails, a standing train inspection must be performed.

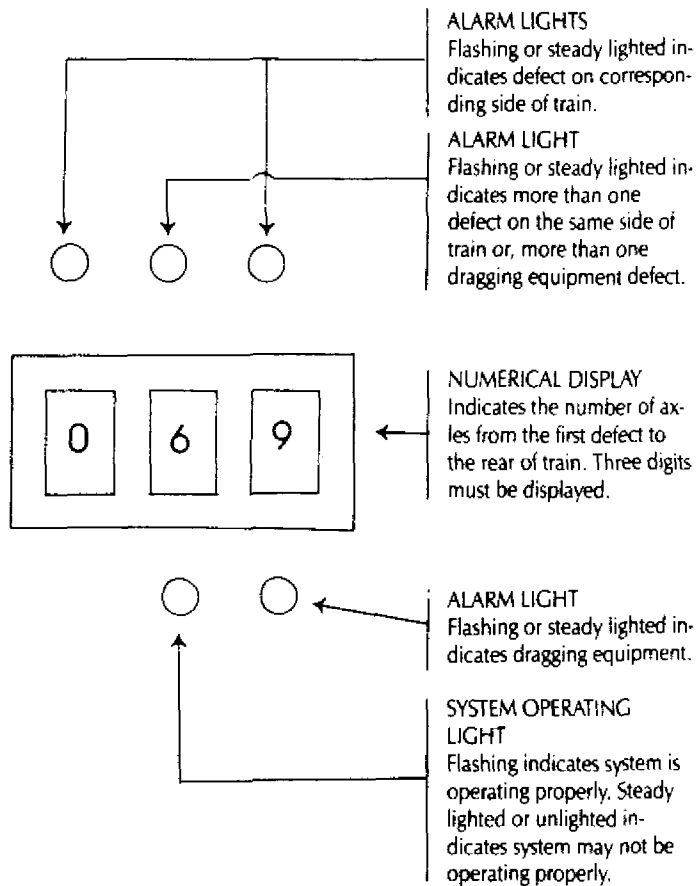
2.5 Detector System Inoperative

When the detector system is inoperative the detector operator will advise crews who will be governed by Item 1.9.

3.0 Display Board System

3.1 The display board, which is located at the hot box detector location, consists of a three digit

numerical display, four alarm lights and a system operating light, arranged as shown in the following diagram:



NORMAL DISPLAYS

ALARM LIGHTS



Flashing or steady lighted



Unlighted.

SYSTEM OPERATING LIGHT



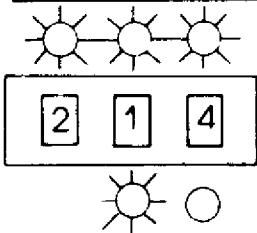
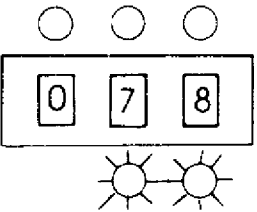
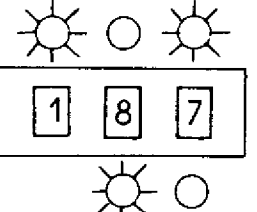
Flashing



Steady lighted or unlighted

Note: The following are *normal* displays which may be encountered in combination with each other.

DISPLAY	INDICATION	ACTION REQUIRED
	Proceed indication	Proceed
	Defect indication	Stop and inspect for overheating defect on corresponding side of train at the indicated location (123 axles from rear of train). If no defect found, inspect four cars on each side of indicated location.
	Defect indication	Stop and inspect for more than one overheating defect on all cars on corresponding side of train from four cars ahead of the indicated location (69 axles from rear of train) to the rear of the train.

DISPLAY	INDICATION	ACTION REQUIRED
	Defect indication	Stop and inspect for more than one overheating defect on all cars on both sides of train from four cars ahead of the indicated location (214 axles from rear of train) to the rear of the train
	Defect indication	Stop and inspect for dragging equipment at indicated location (78 axles from rear of train). If no defect found, inspect four cars on each side of indicated location
	Defect indication.	Stop and inspect for overheating defect on both sides of train from four cars ahead of the indicated location (187 axles from rear of train) to the rear of the train.

IMPERFECT DISPLAYS

ALARM LIGHTS



Flashing or
steady lighted



Unlighted

SYSTEM
OPERATING LIGHT



























Flashing



Steady lighted
or unlighted

The following are *imperfect* displays which may be encountered

DISPLAY	INDICATION	ACTION REQUIRED
	Defect indication (SYSTEM OPERATING LIGHT — flashing, steady lighted or unlighted)	Stop and inspect both sides of train from four cars ahead of the in- dicated location (108 axles from rear of train) to the rear of the train
	Defect indication (any or all ALARM LIGHTS — flashing or steady lighted and SYSTEM OPERATING LIGHT steady lighted or unlighted)	Stop and inspect both sides of train from four cars ahead of the in- dicated location (190 axles from rear of train) to the rear of the train.

DISPLAY	INDICATION	ACTION REQUIRED
       	Defect indication (any or ALL ALARM LIGHTS — flashing or steady lighted and SYSTEM OPERATING LIGHT flashing, steady lighted or unlighted)	Stop and inspect both sides of entire train
       		
       		

3.2 Numerical Display

The numerical display indicates the number of axles from the FIRST defect detected to the rear of the train. If no defect is detected, the number '000' will be displayed to the crew on the rear of the train. The numerical display is valid ONLY after the entire train has passed the display board.

3.3 Alarm Lights

The upper outer alarm lights, when flashing or steady lighted, indicate overheating on the corresponding side of the train.

The upper centre alarm light, when flashing or steady lighted together with one or more of the other alarm lights, indicates more than one defect has been detected. If only one of the upper outer alarm lights is flashing or steady lighted, together with the upper centre alarm light, all defects are on the corresponding side of the train.

The lower alarm light, when flashing or steady lighted indicates dragging equipment.

3.4 System Operating Light





The system operating light, when flashing, indicates the detector system is operating properly. It will begin flashing on the approach of a train and continue flashing until the entire train has passed the display board.

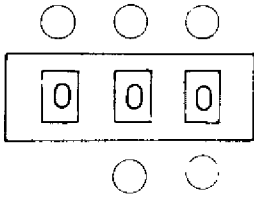
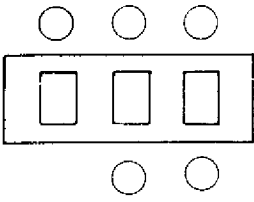
The system operating light, when steady lighted or unlighted, indicates the detector system may not be operating properly.

3.5 Crews on engines equipped with radio must alert the crew on the rear of the train when approaching a display board detector and advise whether or not the system is operating properly.

- 3.6 At display board detector location, except when the detector system is withdrawn from service or is otherwise observed or known to be inoperative, should the engineman fail to receive instructions from the crew on the rear of the train, he must stop the train before passing the inspection point and must not proceed until the proper signal is given by hand signal, radio or personal contact.
- 3.7 Should the display board indicate a defect while train speed is 8 mph. or less, while passing the detector, a standing train inspection of the entire train must be performed, except when the detector system is withdrawn from service or is otherwise observed or known to be inoperative.
- 3.8 Train speed must be regulated as required to enable the crew on the rear of the train to observe display board indications.

INOPERATIVE SYSTEM

ALARM LIGHTS		Flashing or steady lighted		Unlighted
SYSTEM OPERATING LIGHT		Flashing		Steady lighted or unlighted

DISPLAY	INDICATION	ACTION REQUIRED
	Detector system inoperative (SYSTEM OPERATING LIGHT — steady lighted or unlighted)	Proceed EXCEPT when affected by Item 1.9 of these instructions.
	Detector system inoperative (SYSTEM OPERATING LIGHT — flashing, steady lighted or unlighted)	

- 3.9 The detector system is inoperative only when:
1. a) The system operating light is steady lighted or unlighted, and
 - b) There are no alarm lights flashing or steady lighted, and
 - c) The numerical display is not lighted or displays '000'.

or

2. a) The system operating light is flashing, and
- b) There are no alarm lights flashing or steady lighted, and
- c) The numerical display is not lighted.

Train may proceed except when affected by item 1.9 of these instructions.

- 3.10 The conductor must advise the train dispatcher at the first opportunity and he in turn must advise maintenance personnel if:
- a) The system operating light or alarm lights are steady lighted, or
 - b) The system operating light is unlighted, or
 - c) The numerical display shows less than three digits or is unlighted, or
 - d) An indication is improperly displayed.

4.0 Talker System

- 4.1 The talker which is located at the hot box detector location, automatically transmits by train radio a recorded voice message on alarm data as described below.

Note:

the examples below refer to eastward and westward train movements i.e. north or south track, north or south rail. For northward and southward train movements, the terms east or west rail, east or west track will be used.

- 4.2 As the head end of the train approaches the detector site, the voice talker system will turn on the radio transmitter and broadcast the following information:

One second tone, followed by:

“CP Detector
mileage, subdivision
north (or south) track
system operating
(or system not repeat not working)”

The message, not including the tone, will be repeated once after a two-second pause.

At detector locations designated in Timetable or Bulletin, a system operating light will replace the train approach voice message.

Flashing — indicates system is operating properly.

Steady lighted or unlighted — indicates system may not be operating properly.

- 4.3 As the train passes the detector, each time an alarm occurs a one-second-tone alert will be transmitted.

- 4.4 Immediately after the rear of the train has passed the detector site, and when no alarm has occurred, and when the train approach message, or system operating light, has indicated system operating, the voice talker system will broadcast the following information.

“CP Detector
mileage, subdivision
north (or south) track
total axles (number)
no alarms.”

This message shall be repeated once after a two-second pause, followed immediately by:

“Message complete, detector out.”

- 4.5 Immediately after the rear of the train has passed the detector site, and when no alarm has occurred, and when the train approach message, or system operating light, has indicated system not working, the voice talker will broadcast the following information:

“CP Detector
mileage, subdivision
north (or south) track
system not repeat not working.”

This message shall be repeated once after a two-second pause, followed immediately by:

“Message complete, detector out.”

- 4.6 If any alarms occurred while the train was passing the detector, a two-second tone alert will be transmitted on the radio immediately after the train has passed the detector and before the message in 4.7 or 4.8 is heard. The tone will not be transmitted in the repeat message.

- 4.7 After the train has passed the detector site, and six or less alarms have occurred on the train, the following message will be transmitted on the radio, with listed defects given in sequential order starting at the one farthest from the rear car. In all cases, the axle number will be from the rear of the train:

“CP Detector
mileage, subdivision
north (or south) track
total axles (number)
(number) alarms, (number) alarms
first alarm, hot box, north (or south) rail, axle
(number) second alarm, hot wheel, near axle
(number) third alarm, hot wheel,
near axle (number)

fourth alarm, dragging equipment, near axle (number) fifth alarm, hot box, north (or south) rail, axle (number) sixth alarm, dragging equipment, near axle (number)."

This message will be repeated once after a two-second pause, followed immediately by:

"Message complete, detector out."

- 4.8 After the train has passed the detector site, and more than six alarms have occurred on the train, the following message will be transmitted on the radio:

"CP Detector
mileage, subdivision
north (or south) track
total axles (number)
more than six alarms
first alarm, axle (number)
inspect entire train, both sides from first alarm to rear of train, or as instructed."

The message will be repeated once after a two-second pause, followed immediately by:

"Message complete, detector out."

- 4.9 Train crew should avoid use of radio system, when practicable, from one mile in advance of the detector until they have heard the report from the talker as to the results of the inspection.
- 4.10 Should the talker indicate a defect while train speed is 8 MPH or less while passing the detector, a standing train inspection of the entire train must be performed, except when the detector system is withdrawn from service or is otherwise observed or known to be inoperative.
- 4.11 Any defect reported by the talker MUST be inspected even if the detector reports "system not

repeat not working," or system operating light is steady lighted or unlighted.

4.12 Should the one-second-alert tone as described in 4.3 be heard, but location of the alarm is not heard, or is in doubt, the entire train must be inspected, except as in 4.13 below.

4.13 No inspection of the train is required if the talker reports "no alarms".

4.14 The talking detector is inoperative only when:

1. a) The talker does not report "system operating" or does report "system not repeat not working", or system operating light is steady lighted or unlighted, and
- b) There is no one-second-alert tone heard on the radio while train is being tested, and
- c) No defects are reported after the train has passed the detector.

or

2. a) The talker reports or system operating light indicates, system operating and
- b) There is no one-second-alert tone heard on the radio while train is being tested, and
- c) A report is not received after the train has passed the detector.

Train may proceed except when affected by item 1.9 of these instructions.

4.15 The conductor must advise the train dispatcher at the first opportunity and he in turn must advise maintenance personnel if:

- a) The talker does not give a report of "system operating", or
- b) The talker does report "system not repeat not working", or system operating light is steady lighted or unlighted, or

- c) The talker transmits a message to “inspect the entire train”, or
- d) The talker does not transmit any messages, or
- e) An improper message is transmitted, or
- f) Messages are difficult to hear or understand, or
- g) Total axle count does not appear to be correct.

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SECTION 19

DIMENSIONAL SHIPMENTS

1.0 General

- 1.1 A Dimensional Shipment is a car or a load which exceeds maximum standards of size, weight, or centre of gravity. These maximum standards are as follows:

SIZE:	Width – 10 ft. 8 inches
	Height – 15 ft. 1 inch
	Length – car floor length
	Cars which often exceed these standards are: Flat cars loaded with pipe, beams, or poles (Length) Flat cars loaded with large machinery, trailers, etc., (Width) Piggyback (T.O.F.C.) loads, high cube boxes, tri-level, and bi-level auto cars under load. These should be checked before shipment.
WEIGHT:	263,000 lbs. gross weight per car. Some subdivisions are further restricted as shown in timetable footnotes, under the heading "RESTRICTIONS".
CENTRE OF GRAVITY:	98 inches above top of rail (ATR) for combined car and load.

- 1.2 All dimensional shipments must be protected with notice (clearance) to all concerned.

Exception:

- a) Multi-level shipments cleared by authority of Chart 'A'.
- b) Piggyback trailers cleared by authority of Chart 'C'.
- c) Shipments not exceeding Plate C dimensions and terminating on our line.

Note:

Charts 'A' and 'C' are contained in Dimensional Shipment Manual available at Yard and dispatching offices. Reference to these charts will be made in Code 6 Notation of train consist.

- 1.3 Dimensional shipments are identified by Code 6 Notation following car number in train consist. Conductors must ensure protection notice (Clearance) is obtained before movement unless Code 6 Notation shows: "No restriction" or "Within Chart A or C measurements".
- 1.4 A copy of the protection notice (Clearance) is to be attached to the waybill and accompany the movement from the origin station.
- 1.5 All concerned must ensure that:
 - 1) Dimensional shipments do not move without authority of the Chief Dispatcher.
 - 2) Special handling instructions that apply to a shipment, as described in the protection notice, are given to train crews in the form of train orders.

- 1.6 Shipments are classified according to width as shown in Code 6 Notation of train consist.

CLASSIFICATION	RANGE
W-1	11'0" or Less
W-2	11'1" to 11'6"
W-3	11'7" to 12'0"
W-4	12'1" to 12'6"
W-5	12'7" to 13'0"
W-6	13'1" to 13'6"
W-7	13'7" to 14'0"
W-8	14'1" to 14'6"
W-9	14'7" to 15'0"
W-10	15'1" and over

- 1.7 When a dimensional shipment is lifted at line stations, the conductor must advise the train dispatcher and obtain authority for movement.
- 1.8 When a dimensional shipment is set out at line stations, the conductor must advise the train dispatcher the location and track. Such shipment must not be set out on a track adjacent to the main track or siding without prior authority from the train dispatcher.
- 1.9 Care must be taken when handling dimensional shipments particularly in terminals and other locations where conditions of limited clearance exist. When trains or movements are being yarded, yardmaster or other persons in charge must ensure dimensional shipments are not on adjacent tracks. Yardmaster or other persons responsible should keep yard foremen informed of the location of dimensional shipments within yards.

Crews must be especially watchful when operating through yards, sidings and interchange tracks to ensure ample side clearance between their movement and cars or engine(s) on adjacent tracks.

Where overhead or side clearance is doubtful, movement must be stopped and adequate protection provided.