GENERAL INSTRUCTIONS PERTAINING TO THE MOVEMENT OF TRAINS, ENGINES AND CARS

CANADIAN PACIFIC RAILWAY COMPANY

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CANADIAN PACIFIC RAILWAY COMPANY

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EFFECTIVE OCTOBER 28, 1962

THE FOLLOWING INSTRUCTIONS INCLUDED HEREIN ARE FOR THE GUIDANCE OF EMPLOYEES CONCERNED AND SUCH EMPLOYEES MUST HAVE A COPY ACCESSIBLE WHEN ON DUTY. THEY SUPERSEDE PREVIOUS INSTRUCTIONS ISSUED IN THIS FORM.

E. W. Barhie

Vice-President, Operations.

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A. GENERAL

1. Air brakes must be in service and automatic brake used when handling or switching passenger equipment occupied by passengers and when other than a light engine is being coupled to passenger equipment occupied by passengers; except that straight air brakes may be used on a multiple unit consist up to a maximum of six rail diesel cars when operating under their own power and not handling other equipment.

2. Occurrence of an Overheated Roller Bearing

In the event of a roller bearing box overheating between terminals, as indicated by the release of the gas from the stench bomb or by excessive heat of the journal box, the car or diesel unit shall be moved slowly under close observation to the next terminal and there set out. In the event that the condition of the bearing or the distance to be covered would make this movement unsafe, the car or diesel unit should be set out at the nearest siding. The master mechanic or the superintendent shall be notified immediately of the set-out. If the car or diesel unit is set out in freezing weather, the water systems must be drained. When the odour of stench bomb is detected, the train must be stopped at once and inspected prior to further action being taken.

3. Before uncoupling passenger equipment, it must be known that all trainlines, including those for public address systems and other electrical circuits, if any, and diaphragm curtains, are disconnected.

Engine or cars being attached to passenger equipment occupied by passengers, or passenger equipment occupied by passengers being coupled to other equipment or being placed against stop block, must be brought to a stop from six to ten feet from the equipment to which they are to be coupled or from stop block. Upon the proper signal, coupling must be made carefully to avoid shock.

After a coupling has been made to passenger, freight, or any auxiliary equipment, it must be known that the locking blocks and pins of the couplers have dropped into place. Slack must be taken carefully to ensure that a proper coupling has been made before proceeding to move in either direction.

4. Diesel engines consisting of more than one unit must not exceed twenty-five miles per hour when making backward movements, unless controlled from the unit leading the movement.

Single units not equipped with rear pilots must not exceed twenty-five miles per hour when making backward movements.

5. When a diesel engine consisting of more than two units is required to make back-up movements over or along a public road at grade, a member of the crew must be on the unit leading the movement as prescribed by Rule 103 U.C.O.R.

6. Diesel units of different gear ratios may be coupled and operated together. When this is done, it will be the responsibility of those in charge of the train to see that speed of train is restricted to that of the lowest geared unit on

the train, including those being moved idling or dead.

7. Except in emergency, the maximum number of diesel units which may be coupled together at the head end of a train shall be such as to limit the number of driving axles to a total of twenty on lines having 100-pound rail or heavier, and a total of sixteen on lines having rail lighter than 100-pounds per yard. Any additional units must be treated as if dead and marshalled in accordance with Clause 3, Section G. When emergency conditions require, and the current locomotive authorization chart permits the coupling together of units with more than a total of twenty driving axles on territory with 100-pound rail or heavier, or a total of sixteen driving axles on territory with rail lighter than 100-pounds per yard, the following precautions must be taken to minimize lateral thrusts caused by 'jacknifing'.

(a) Reduction in tonnage to sixty percent of "A" rating of the maximum number of units which can be coupled under normal conditions, or

(b) Elimination of use of dynamic braking on all units and avoidance of back-up (shoving a train) movements, especially up grade, except for short distances and then only with extreme caution.

NOTE:—Locomotive consists in excess of sixteen driving axles must not be operated on any subdivision, except as authorized by the superintendent.

8. Should diesel engines moving light, gas-electric cars, or rail diesel cars operating in Automatic Block Signal System territory (ABS) be stopped on sand, whether sanders are operated manually or automatically, the engine, or cars must be moved off the sanded rail immediately to ensure proper operation of automatic signals. If engine or cars cannot be moved, flag protection prescribed by U.C.O.R. Rule 99 for Outside Automatic Block Signal System territory (ABS) must be provided.

9. Diesel units should not be operated through water of a depth of more than three inches above top of rail. They may be operated through water if the depth is three inches or less above top of rail, but at a speed not exceeding three miles per hour. Should it be necessary for a diesel unit to be operated or handled through water above rail level, report must be made at the first terminal.

10. In all instances where diesel units or rail diesel cars are required to be set out on line, hand brakes must be applied and it must be known that the brake shoes on which the hand brakes operate are firm against the wheels and holding. If hand brake is inoperative, the unit must be coupled to equipment having operative hand brakes which must be applied. Doors must be locked, using coach key. If window locks provided, side windows must be locked from the inside.

11. Diesel units or rail diesel cars must not be stopped over open flame switch heaters unless absolutely unavoidable in which case they should be moved off promptly or switch heaters extinguished.

12. An unattached engine, car, or other unit must not be left standing within interlocking limits of a railway crossing at grade, nor on the movable portion of a drawbridge.

13. In all instances where automatic highway crossing warning devices operate improperly, or fail to operate, a watchman must be placed at such crossing as quickly as possible, in order that users of it may be adequately protected until repairs are effected. If this protection covers more than four tracks, two watchmen must be used, one on each side of the tracks. Employees observing the improper operation of any such device shall notify the train dispatcher as soon as possible who in turn will immediately notify the signal maintainer.

14. Enginemen should exercise care and judgment in giving public road crossing warnings as prescribed by Rule 14 (1) U.C.O.R. Under normal conditions, when the signal is given clearly and of sufficient duration, it gives effective warning. There are situations, however, which, in addition to strict compliance with the rule, require that enginemen use discretion as to giving additional warnings such as on slowly moving trains, during adverse weather, and where it is probable that trains in opposite directions will pass one another at or near the crossing.

15. Before coupling to or moving occupied boarding cars or other units of occupied work equipment, stop must be made and when practicable, persons in, on or about them notified. Upon the proper signal, coupling must be made carefully to avoid shock. Occupied boarding cars

must not be cut off in motion, nor may other cars be cut off in motion toward them.

16. When coupling cars together, speed of four miles per hour at time of coupling must not be exceeded to avoid damage to equipment and lading.

When switching shed, team or industrial tracks, partly loaded or unloaded cars containing commodities subject to damage due to load shifting should be handled with extreme care.

17. The use by employees in road and yard service of coloured glasses, goggles, or other devices which injuriously affect either acuteness of vision or colour perception is prohibited, except that enginemen on rail diesel cars and other locomotives may use prescription coloured glasses to reduce glare.

18. When trains carrying passengers encounter unusual delays enroute, conductors or trainmen should announce reason for such delays and expected duration in an effort to solicit whatever assistance might be available from experienced Company or other personnel on the train.

19. Attention is directed to the importance of prompt wired submission of Form 1124, REPORT OF DETENTION TO TRAINS AND DISABLED CARS SET OUT.

Reporting of slides should include:

(a) Dimensions of slide.

(b) Where first sighted and if emergency application of brake made.

(c) How far up bank material commenced to move.

20. During flat switching operations when cuts of twenty or more cars, including loads subject to damage from overspeed impacts, are to be coupled to other cars, the cut must be stopped one car length from point of coupling before the coupling is made.

21. A closed type car such as a box, refrigerator, baggage, express or closed type trailer on flat car must in all instances be marshalled between a flat car loaded with a flat-bed trailer containing steel pipe, iron rods or similar type lading not protected by end gates or otherwise, and the locomotive hauling the train or a car carrying passengers.

22. Shipments of bridge girders or similar type lading loaded on three or more flat or gondola cars must not be moved over humps in classification yards. When such shipments are being loaded on car ferries or barges, loading should be carried out at times when aprons are as level as possible, and after loading blocking and tie-down fastenings must be carefully examined.

B. INSTRUCTIONS TO CREWS IN THE USE OF RAILWAY RADIO COMMUNICATION SYSTEM

1. Where radio equipment is provided in road service, two radio units will be furnished on each controlling engine. The large unit is equipped with a loudspeaker and handset. The small portable unit will be stored in a shock-resistant mounting rack. Engines in yard service will be provided with the large unit only.

2. Only authorized employees are permitted to make adjustments to a railway radio unit.

3. In speaking, the employee must use a clear, distinct tone and speak directly into the handset mouthpiece. DO NOT SHOUT.

4. Before transmitting or speaking by radio, employee must listen long enough to ensure that the circuit is not already in use. If an emergency arises, interruption is permitted.

Operation of large mobile radio unit

5. Each engine equipped for radio communication will have an ON-OFF switch for the mobile radio unit.

6. The radio must be turned on and left on until the trip is completed, unless the equipment becomes unserviceable.

7. The 'power' indicator light shows power ON for reception or transmission when illuminated.

8. Sufficient warm-up time must be allowed to silence the high static from the speaker and handset.

9. To transmit, depress the 'push-to-talk' button or bar on the handset. The 'transmit' light if provided, will be lit when this is done.

10. To receive, release the 'push-to-talk' button or bar on the handset.

NOTE:—Wayside base station radio units are not generally equipped with indicator lights. All other operation instructions apply at these locations.

Operation of small portable radio unit

11. All cabooses and engines in road service that are fitted to accept radio equipment have shock-resistant mounting racks for the portable radio units. Some cabooses may have, in addition, auxiliary battery packs and external antennas and the portable units must be connected thereto when used inside the caboose.

12. The caboose portable unit will normally be turned off when not in use.

13. Each portable unit has the semi-automatic ON-OFF switch located below the handset mouthpiece. To put unit in operation lift the handset, turn and pull up the ON-OFF switch. The set is now ready for reception.

14. To transmit, the 'push-to-talk' button, located on the handset, must be depressed while speaking.

15. To receive, the 'push-to-talk' button must be released.

16. When transmission and reception have been completed, replace the handset firmly in its holder to ensure that the ON-OFF button is returned to the OFF position.

17. Each portable unit has a battery container which snaps onto its base and a whip-type antenna. When such a unit is to be operated inside a caboose equipped with a battery pack and external antenna, remove the battery container and whip antenna, place them in the space provided on the caboose, plug the portable unit into the battery pack receptacle and connect the external antenna.

18. The battery container and antenna will be placed in the space provided.

INSTRUCTIONS GOVERNING THE OPERATION OF RAILWAY RADIO COMMUNICATION SYSTEM

19. A railway radio communication system is one employing radio for the transmission of intelligence between moving equipment, between moving equipment and a fixed point or between fixed points. This facility is provided so that certain duties, which have always been required to be performed by personnel, may be carried out with more convenience, with less delay and added safety.

20. Selected stations, engines and cabooses within specified territory, have been equipped with Railway Radio Communication System.

21. It is necessary for those using radio equipment to adhere strictly to the rules and instructions.

22. These instructions do not modify or supersede any rule in the Uniform Code of Operating Rules, Time Table or Special Instructions, except as specified herein.

23. All failures of radio equipment must be reported promptly but trains should not be delayed as a result of such equipment becoming inoperative.

24. No employee shall transmit any unnecessary, irrelevant or unidentified communication, nor utter any obscene, indecent or profane language via radio.

25. Train orders must not be transmitted by radio between head and rear end of a train, except under provision of 27 (b).

26. In communicating, employees will identify themselves by prefacing their call with the railway name, repeating call at five second intervals.

Example:—"CP caboose train 952 calling CP engine train 952 over."
"CP engine 8651 East calling CP yard office Revelstoke over."

In answering a call the railway, train, caboose or station identification will be used.

Example:—"This is CP engine train 952 over."
"This is CP Yard Office Revelstoke over."

27. Within range of wayside stations, other trains or end to end, the radio is to be used as outlined below:

(a) To expedite the testing of air brakes.

(b) For checking train orders received and fulfilment of same.

(c) For locating the position of train.

(d) To verify that flagman has returned to his train.

(e) For information relative to train defects or to provide information that will in any way benefit train operations and assist in yarding trains, improve safety or prevent accident.

(f) For emergency conditions which shall be preceded by the word 'EMERGENCY' repeated three times and to be used to report any irregular or unsafe condition observed on trains or right-of-way.

28. When more convenient to do so, radio may be used in lieu of hand signals. During switching operations, when radio is being used, both the direction and distance of the movement must be given. The engineman will move the approximate distance and then stop, unless he receives further instructions.

Example:—"Engine 8921 back up two car lengths", rather than "Back up".

29. Radio shall **NOT** be used by train dispatcher for the transmission of train orders, **EXCEPT** as authorized by the superintendent, and when so used rules governing the transmission of train orders by telephone must be observed.

30. Radio transmitters must be turned off when within 150 feet of blasting operations which involve the use of electric blasting caps.

NOTE:—Superintendents will arrange to advise train and engine crews of the location of any blasting operations which involve the use of electric blasting caps.

C. INSTRUCTIONS IN THE EVENT OF DEATH ON BOARD TRAINS OR INJURIES AND DEATH AS THE RESULT OF ACCIDENTS INVOLVING TRAINS

These instructions will apply in all cases where there has been a train accident involving death or serious personal injury, or where death has occurred on board train otherwise than as the result of accident, and are intended to avoid delay in the operation of trains and to protect the interests of crew members and of the Company at inquests or in subsequent legal proceedings.

When a fatality has occurred due to accident or otherwise, crews should report the fact immediately to the local police and request that the coroner be notified and that a doctor be summoned to the scene.

When an accident involving serious personal injury has occurred, the local police and a doctor should be summoned to the scene, or, if the circumstances warrant, the injured person may be taken on the train to the next station in the direction in which the train is going where medical assistance can be obtained.

If a Company's medical officer is available, he should be advised.

It is permissible for trains to leave the scene before the arrival of the police or coroner, provided that some responsible person (an employee where practicable) is left in charge; that person should inform the police, or coroner particulars of the occurrence, including the number and direction of the train, the names and addresses of

the crew, and the direction in which any vehicle was moving at the time of impact.

Care should be taken not to disturb any wreckage more than is necessary to permit the starting of the train. If it is necessary to move a body, the person left in charge must be able to advise the police, or coroner of the original position in which it was found. If the accident occurs in a remote locality where it is impracticable to notify the police or coroner, or if the accident occurs in such circumstances that the police or coroner are not likely to arrive for a long time, and if it is not practicable to leave a responsible person in charge, a body may be taken to and left at the next station in the direction in which the train is going, with a responsible person left in charge to advise the police and the coroner of the facts.

The crew should not give or sign statements other than for an officer of the Company. However, if requested by the coroner or a police officer to give statements, crews may state such general facts as: their names and addresses; the number and direction of the train; the place and time of the accident and the direction of approach of the person or vehicle, but under no circumstances should crews express opinions as to the cause of a mishap, nor attempt to estimate speeds or distances.

To avoid delay to trains, arrangements should be made with police officers or coroners for any statements required, to be given on arrival at terminals in the presence of a railway officer.

Members of the train crews and other employees of the Company who may be on the scene or otherwise concerned in an accident, should make notes of all relevant facts, so that they will be in a position to give detailed information when the matter is being investigated by the Company.

In the event of public road crossing mishap, engine bell should be kept ringing after the train or engine has stopped, until the attention of the driver and any occupants of the vehicle and outside witnesses, if any, as well as of employees, is called to the fact that the engine bell had been ringing. Attention of driver, occupants and outside witnesses should also be drawn to fact that headlight is burning brightly and that gyra-lite, if applied, is functioning.

Where possible, the following information should be recorded:—

Time of accident:
Name and address of owner, driver and occupants of vehicle;
Position in vehicle of each passenger;
Identification of casualties;
Make, type and Provincial or State license number of vehicle;
Direction and speed of vehicle approaching and passing over crossing;
Point of impact on train or vehicles;
Damage to vehicle and railway equipment;
Weather, road conditions and visibility;
Position of vehicle after mishap, windows clean or dirty, open or closed, steamed or frosted, if glass broken out ascertain position of window mechanism; radio on or off;

Evidence of intoxicants;
Description of skid marks, if any, on road;
Number of rail lengths beyond crossing where train stopped;
Type of protective appliance at crossing and whether functioning properly;
Names and addresses of witnesses; car license numbers;
Was whistle sounded approaching crossing;
Was bell ringing approaching crossing;
Did witnesses hear whistle sounded and bell ringing;
Did witnesses observe headlight burning;
Where was engine when whistle and bell first heard by witnesses;
Where was engine when headlight first observed by witnesses;
Name and address of coroner and doctor called;
Any other relevant information.

In the event of an accident to a passenger on a train, or to a passenger who is entraining or detraining, the names and addresses of those in the immediate vicinity should be procured at once. Train crews or other employees should examine and report on the condition of the premises or equipment where the accident occurred. Time of accident should be noted.

In all cases of derailment or accident to passenger cars in which Pintsch gas, propane, or commercial acetylene is used, the supply must be shut off as quickly as possible. To shut off the supply of Pintsch gas, a combined main cock and tank valve key will be found in the pressure gauge box. For other gases, valve is located at supply tank.

In the case of derailments, collisions, highway crossing accidents, when the same are attended with personal injury to any person using the railway, or to any employee of the Company; all other accidents occurring on the railway, attended by personal injury to any person using the railway, or to any employee of the Company, and in which accidents the movement of trains, engines or cars is involved, and any damage caused by any such accident, to any bridge, culvert, viaduct or tunnel on the railway, rendering the same impassable or unfit for immediate use, (and whether attended by personal injury to any person or employee of the Company or not) the conductor or other employee of the railway company who is in charge of the train, place or structure in connection with which the accident occurred, shall, at the expense of the Company, and at the same time as he reports to the Company, send a telegram addressed to the Director of Operation, Board of Transport Commissioners for Canada, Ottawa, containing the following information:—

Date and place;

Name of railway;

Number and description of train or trains, engine or engines concerned;

Number of passengers, employees, or others killed and injured;

Statement of any damage to any bridge, culvert, viaduct or tunnel;

A short, concise statement of the apparent cause of the accident;

Name and title of person sending report.

Copy of such message sent to be immediately transmitted to superintendent's office. Other accidents occurring as a result of transportation which are required to be reported to the Board, will be reported by the superintendent.

Fires on diesel-electric locomotives which involve hazard or injury to train service employees and which affect the safe operation of trains must also be reported to the Director of Operation, Board of Transport Commissioners.

It should be carefully noted that, only such accidents as are specifically referred to above are to be reported to the Board of Transport Commissioners by wire.

Other accidents, including those occurring in railway shops, manufacturing establishments, or other places of the railway company in which the movement of trains, engines, or cars is not involved in the accidents, should be reported in accordance with standing instructions on the subject.

NOTE:—"Highway Crossing" means public crossing at grade and does not include private or farm crossings.

D. INSTRUCTIONS PERTAINING TO DIESEL UNITS

1. Fire protective appliances must not be damaged in any way.

2. Steam generator separator blowdown valve must not be operated at or near stations or other locations where there is danger of scalding persons and should not be operated when freezing weather prevails at locations where resulting ice accumulation will cause hazardous conditions, particularly at switches, interlockings or where signal mechanisms are located.

3. In case of mishap or fire to diesel units or rail diesel cars, the engines and fuel pumps should be stopped, emergency fuel cutoffs tripped and battery switches opened as soon as possible.

4. When passing over railway crossings at grade protected by interlocking block signals, the throttle on diesel unit should be placed in first to fifth notch, consistent with speed restrictions to prevent damage to electrical equipment from flashovers.

5. In case of injury or death resulting from an accident to a steam generator or diesel engine, the parts of equipment involved should, if possible, be left undisturbed until after inspection.

6. Employees should avoid placing feet on any valve, wheel or handle to avoid turning same accidentally, also on front door or panel to prevent scuffing of paint.

7. Before working in the engine room or electrical cabinets, employees should shut down the

engine and open battery switch unless required for test or inspection.

8. Air box hand-hole covers must not be removed while the engine is running.

9. Engine base doors must not be opened within a half hour after shutting the engine down.

10. When necessary to enter separate radiator compartment, employees must first shut the engine down.

11. The opening of engine compartment doors on road switcher units in motion is prohibited.

12. The passing between road switcher units in motion which are not equipped with walkways is prohibited.

13. To ensure operation of the safety control, pressure of the foot on the foot pedal is mandatory; any other means is prohibited.

E. DUTIES OF ENGINEMEN

TAKING CHARGE OF AND BEFORE MOVING DIESEL LOCOMOTIVE AT MAINTENANCE POINT

1. Apply and release air brakes. Operate communicating signal on units in passenger service to ensure that it is in working order.

2. Test the operation and recovery of the safety control foot pedal and know that it is cut in and operating properly.

3. Check lights, including cab, hood, signal (classification), headlight, and back-up light, and see that they are all working.

4. Know that flagging equipment is on the unit and in good order.

5. Know that fire extinguishers are in place on each unit and seals not broken.

6. Check hand brakes to ascertain if properly released.

7. Check that bell and whistle are in working order.

WHEN TAKING CHARGE OF DIESEL LOCOMOTIVE WHERE NO SHOP STAFF IS ON DUTY OR AVAILABLE

8. Start up engines as prescribed, if shut down.

9. See that air brake system is set up for the required service.

10. Apply and release air brakes. Operate communicating signal on units in passenger service to ensure that it is in working order.

11. Test the operation and recovery of the safety control foot pedal and know that it is cut in and operating properly.

12. Know that flagging equipment is on the unit and in good order.

13. Know that fire extinguishers are in place on each unit and seals not broken.

14. Check hand brakes to ascertain if properly released.

15. Check that bell and whistle are in working order.

16. Check that steam generator is operating as required, including water supply.

17. On all units check the following:—

(a) That air hoses and cable jumpers between units are properly connected and that air hoses not in use are hung up in dummy couplings or placed in receptacles provided.

18. Inspect the running gear for visible defects.

19. Try sanders.

TAKING CHARGE OF DIESEL LOCOMOTIVE AT A RUN THROUGH POINT

20. Examine the work report of the incoming engineman.

21. Check lights, including headlight, signal (classification) lights and back-up light and see that they are all working.

22. Know that flagging equipment is on the unit and in good order.

23. Check that bell and whistle are in working order.

24. Make brake test as required.

BEFORE LEAVING THE DIESEL LOCOMOTIVE WHEN GOING OFF DUTY AT A RUN THROUGH POINT

25. Complete Form M.P. 74.

BEFORE LEAVING DIESEL LOCOMOTIVE UNATTENDED OR WHEN GOING OFF DUTY — AT OTHER THAN A RUN THROUGH POINT

ENGINES LEFT RUNNING

26. Set the independent brake valve in full application position.

27. Open the generator field switch. Move the selector handle or transition lever to OFF position. Move the reverse handle to OFF position and remove the handle.

28. Except where shop staffs or other authorized persons are in attendance, if the unit is to be left outside or in an unheated engine house in freezing weather and terminal heating facilities are not available:—

(a) Know that all doors and windows are closed.

(b) See that the steam generator is operating in RUN or STANDBY in accordance with instructions.

29. Complete Form M.P. 74.

ENGINES SHUT DOWN

30. Open the generator field switch. Move the selector handle or transition lever to OFF

position. Move the reverse handle to OFF position and remove the handle.

31. Shut down engines as prescribed.

32. Release the air brakes and apply hand brakes firmly.

33. Except where shop staffs or other authorized persons are in attendance, if the unit is to be left outside or in an unheated engine house in freezing weather, know that all doors and windows are closed and see that protective heater, if provided, is operating properly before leaving unit unattended.

34. Complete Form M.P. 74.

TAKING CHARGE OF SELF-PROPELLED CAR AT MAINTENANCE POINT

35. Apply and release air brakes and check the operation and recovery of safety control foot pedal. Operate communicating signal to ensure that it is in working order.

36. Check signal (classification) lights and headlight, and see they are in working order.

37. Know that flagging equipment is on the unit and in good order.

38. Know that hand brakes are released.

39. Check that bell and whistle are in working order.

TAKING CHARGE OF A SELF-PROPELLED CAR AT A RUN THROUGH POINT

40. Examine the work report of the incoming engineman.

41. Check signal (classification) lights and headlight, and see they are in working order.

42. Know that flagging equipment is on the unit and in good order.

43. Check that bell and whistle are in working order.

44. Know that hand brakes are released.

45. Make brake test as required.

TAKING CHARGE OF A SELF-PROPELLED CAR WHERE NO SHOP STAFF IS ON DUTY OR AVAILABLE

46. Start up engines as prescribed, if shut down.

47. Apply and release air brakes and check the operation and recovery of safety control foot pedal. Operate communicating signal to ensure that it is in working order.

48. Check signal (classification) lights and headlight, and see they are in working order.

49. Know that flagging equipment is on the unit and in good order.

50. Know that hand brakes are released.

51. Check that bell and whistle are in working order.

52. Blow out condensate from reservoirs.

53. Try sanders.

BEFORE LEAVING SELF-PROPELLED CAR WHEN GOING OFF DUTY AT OTHER THAN A RUN THROUGH POINT

ENGINES LEFT RUNNING

54. Apply hand brake at operating end.

55. Remove throttle, reverse levers and brake handle, where removable.

56. On gas-electric car open auxiliary generator switch.

57. See that signal (classification) lights and headlights, (including oscillating headlight when provided), are extinguished.

58. Know that doors and windows are closed in operating end.

59. Complete Form M.P. 74.

ENGINES SHUT DOWN

60. Shut down engines as prescribed.

61. Apply hand brake at operating end.

62. Remove master plug, where provided. On gas-electric car open auxiliary generator switch.

63. See that signal (classification) lights and headlights, (including oscillating headlight when provided), are extinguished.

64. Know that doors and windows are closed in operating end.

65. Complete Form M.P. 74.

ON SELF-PROPELLED CAR WHEN GOING OFF DUTY AT A RUN THROUGH POINT

66. Complete Form M.P. 74.

F. DUTIES OF FIREMEN

1. The duties of firemen when employed on diesel units are as follows:—

(a) To assist the engineman.

(b) To comply with the provisions of the Uniform Code of Operating Rules and instructions relating thereto.

(c) To operate the steam generator and its appurtenances, and take water from facilities where no maintenance or shop staff is employed. The advice or assistance of the engineman may be called upon, if required.

2. It must be clearly understood that the engineman, not the fireman, is responsible for the diesel unit or units in his care. A fireman is not required to patrol diesel units, except as directed by the engineman or as may be required for the operation of steam generators.

3. Firemen are to go to engine rooms only when requested by enginemen or when necessary to attend steam generators in use heating trains.

G. INSTRUCTIONS CONCERNING THE MOVEMENT OF ASSISTING, DISABLED, OR DEAD DIESEL UNITS IN TRAINS

1. Speed restrictions for disabled and dead locomotives are governed by gear ratio of diesel units or bridge and track limitations outlined in time tables and special instructions, except that diesel units equipped with solid journal bearings, when being delivered new or after having undergone a major repair or inspection, are to be limited to thirty miles per hour for the first 100 miles, or over the first subdivision, whichever is the greater.

2. If diesel units are damaged or become defective, but are not rendered inoperative, they must be handled at a speed authorized by the superintendent.

3. Dead or disabled diesel units that cannot be placed at the head end of a train to comply with Section A, Clause 7, must be separated from the locomotive handling the train and from other diesel units by at least six cars, but in no case should a dead or disabled unit be more than sixteen cars from the locomotive handling the train, except that two diesel units may be coupled together. Assisting diesel units that cannot be placed at the head end of the train to comply with Section A, Clause 7, must be located in the train as authorized by time table footnote for operation between designated points.

4. Dead diesel units in every instance must be accompanied by waybill, except when being moved to first terminal after failure on the line.

5. The appropriate mechanical officer at the originating point must notify the chief dispatcher, storekeeper and yardmaster in writing of the movement of dead diesel units, specifying speed restrictions, if any, that are to be observed. This information must be stamped or written conspicuously on the face of the waybill. The yardmaster at EACH terminal, other than the originating point, must notify the mechanical officer who will be responsible for inspection of the diesel unit. After being advised by the mechanical officer that the diesel unit is in a safe and suitable condition for movement, the yardmaster must advise the chief dispatcher of the restrictions required and secure his authority as to the train in which the diesel unit is to be moved. The chief dispatcher must notify the connecting division of the movement and restrictions required, and the conductor and engineman of the train handling the dead units must be notified in writing by the train dispatcher.

6. When there is possibility of damage from freezing, engine cooling water and steam generator water must be drained from supply tanks and systems of dead diesel units before shipping.

7. All dead diesel units (or dead steam locomotives) in transit must have the brakes cut in and operating. A locomotive having the brakes inoperative must be equipped with train line coupled to equipment at both front and rear which has operative brakes cut in.

H. REGULATIONS GOVERNING THE APPEARANCE AND DEPORTMENT OF UNIFORMED CONDUCTORS AND TRAINMEN ON DUTY

Patrons of the railway form impressions as to the efficiency of the employees and the excellence of the service by the appearance and deportment of men who are employed on or about the Company's passenger trains.

Clothes should be kept pressed and cleaned. Plain white or light blue shirt with dark blue or black four-in-hand or bow tie and black shoes, properly polished, are to be worn.

Conductors and trainmen, must, at all times, be clean shaven and present a neat and tidy appearance. Caps should not be worn on the back or side of the head and should be changed when they become crushed or frayed.

Uniformed men, whose coats are intended to button, are to keep them buttoned at all times, except that train conductors and sleeping car conductors are exempted while selling or collecting tickets.

When standing by trains to entrain or detrain passengers, employees should stand erect, ready and attentive to assist passengers, using stepping boxes where provided and necessary and taking every precaution to avoid accident or injury.

Employees deadheading or off duty must not visit with employees on duty, thereby interfering with them in the performance of their work.

Employees, while on duty in or about passenger stations, or on passenger cars, should refrain from the use of chewing gum, etc.

I. RULES AND REGULATIONS GOVERNING THE HANDLING OF VESTIBULE DOORS, PLATFORMS, CURTAINS, GUARD RAILS, SIDE AND END GATES, TAIL GATES, CHAINS AND BARS ON EQUIPMENT HANDLED ON PASSENGER OR MIXED TRAINS

1. ON THROUGH AND LOCAL TRAINS, TWO TRACKS, RIGHT-HAND OPERATION. When running, all vestibule doors and platforms are to be kept closed. When standing, those on right hand side only are to be opened, except when necessary to open those on left hand side to receive or discharge passengers.

2. ON THROUGH AND LOCAL TRAINS, TWO TRACKS, LEFT-HAND OPERATION. When running, all vestibule doors and platforms are to be kept closed. When standing, those on left hand side only are to be opened, except when necessary to open those on right hand side to receive or discharge passengers.

3. ON THROUGH AND LOCAL TRAINS, SINGLE TRACK. When running, all vestibule doors and platforms are to be kept closed.

4. ON SUBURBAN TRAINS, TWO TRACKS, RIGHT-HAND OPERATION. Vestibule doors and platforms on right hand side of train may be kept open. Those on left hand side are to be kept closed, except when necessary to open them to receive or discharge passengers.

5. ON SUBURBAN TRAINS, TWO TRACKS, LEFT-HAND OPERATION. Vestibule doors and platforms on left hand side of train may be kept open. Those on right hand

side are to be kept closed, except when necessary to open them to receive or discharge passengers.

6. ON SUBURBAN TRAINS, SINGLE TRACK. All vestibule doors and platforms may be kept open.

NOTE:—Through and local trains, when within commutation limits and carrying commutation traffic within such limits, will be regarded as suburban trains, and vestibule doors and platforms will be handled as provided for suburban trains in Clauses 4, 5 and 6.

7. SECURE VESTIBULE DOORS AND PLATFORMS. When permissible to have vestibule doors and platforms open when running, these must be securely fastened.

8. GUARD RAILS OR SIDE GATES. These appliances will be handled as prescribed for the handling of vestibule doors and platforms.

9. VESTIBULE CURTAINS. These appliances will be kept drawn and securely fastened, except during switching operations.

10. TAIL GATES, CHAINS OR BARS. The appliance at the rear of the last car on the train must invariably be kept closed, and securely fastened, and the appliance at the rear of the last passenger car must also be kept closed and securely fastened when a baggage car, flanger or caboose is immediately behind it. Rail diesel cars being used in multiple operations or being used as coaches in conventional trains must have the end vestibule doors closed and safety chains connected between the cars when in motion. Bars in vestibules of Budd passenger equipment must be in place, except when vestibules are open.

11. When vestibule doors and platforms, side gates or guard rails (if required by these regulations to be kept closed when running) are closed as the train moves away from stopping point and remain closed until nearing the next stopping point, or when trainman is on duty at the opening, it will be considered that the regulations are being complied with.

12. On passenger and mixed trains when the car immediately ahead of the first passenger carrying car is of the non-diaphragm type, the tail gate, chain or crossbar at the forward end of the passenger carrying car should be kept in closed position while the train is in motion.

J. TIME SERVICE REGULATIONS

1. Time signals, indicating correct Standard Time, are transmitted daily from 11.54 A.M. through to 11.56 A.M. Eastern Standard Time.

2. A reliable railway grade watch that has been approved for service by the proper authority and for which a card has been issued must be carried and used by superintendents, assistant superintendents, trainmasters, division master mechanics, division engineers, assistant division engineers, road foremen of engines, locomotive foremen, assistant locomotive foremen, outside hostlers, roadmasters, assistant roadmasters, snow plow foremen, B&B masters, signal supervisors, signal maintainers, signal foremen, conductors, trainmen, train baggagemen, enginemen, firemen, yardmasters, yard foremen (also yardmen and switch tenders after six months service) and such other employees as the Company may direct.

3. Employees required to use railway grade watches must submit them to a designated watch inspector for comparison and record at intervals not exceeding ninety days or more often, if required.

4. Names and locations of watch inspectors may be obtained from division officers and those desiring watch information should be directed to the local watch inspector.

5. Watch movements and cases used in service must be equal to, or of a higher grade, than the approved standard in effect at date of entry and hereafter watches entering service must be of the antimagnetic type.

6. Employees will report to the watch inspector shown on their watch card and must not change watch inspectors, except as follows, when Form TS 21 must be issued:

(a) When transferred from one division to another.

(b) When it is not possible to report to their own watch inspector.

(c) By permission of their division officer when the employee's watch card will be examined by the officer concerned.

7. Watch cards and corresponding watches are subject to inspection by Company officers on request.

8. When railway grade watches are purchased from Company watch inspectors, any balance of the purchase price may be paid by payroll deductions.

9. Watches must be cleaned within eighteen months of purchase or from the last cleaning date and regularly thereafter within eighteen months.

10. When a railway grade watch is left with a watch inspector, a loan watch will be provided free of charge. If the loaned watch is held by the employee for a period in excess of fifteen days without permission of the watch inspector, a rental charge may be made.

11. A description of a loan watch will be recorded on the back of the employee's watch card.

12. If no loan watch is available, the inspector will provide the employee with authority to use his own watch until a loan watch is available.

13. When a railway grade watch is serviced by or purchased from other than a Company watch inspector, the employee must obtain a dated receipt on billhead or other stationery showing the name and address of the company or watchmaker, on which will be shown the make and serial number of the watch purchased or serviced with date on which the watch was cleaned or new. This receipt, or copy and the corresponding watch must be submitted to the employee's watch inspector for approval before the watch is used in service.

14. Certain watches may become magnetized when close to rotating electric motors, generators, dynamos, heavy electric cable, also if close to steel plates and rails which may have been loaded by magnet. When necessary for an employee carrying a railway grade watch to closely approach such equipment or material, precaution should be taken to avoid the watch becoming magnetized.

15. The aim and purpose of using approved watches is to ensure efficiency and safety. Correct time is of the utmost importance where the movement of trains is involved. The closest co-operation of all concerned is, therefore, important.

K. HANDLING OF LIVESTOCK

1. When a train consists of dead freight and livestock, the cars containing livestock are to be placed together and handled at the head end of the train when practicable.

2. Method of handling livestock and the condition of cars furnished for the transportation thereof is important. Packing companies, livestock associations, railway companies and stockyards are making every effort to convey livestock from shipper to packing house with a minimum of damage and loss, due to bruising of livestock in transit.

3. It is important that all employees be fully aware of the necessity of carefully inspecting equipment and that defects such as loose or protruding nails, bolts, broken slats, damaged floors, etc., be corrected before cars are supplied or placed for loading.

4. Care must be exercised to ensure rough couplings are not made when handling cars containing livestock.

5. Defective or non-standard gang planks or toe boards which do not fit closely into the car doors should not be used. All such appliances should be inspected at frequent intervals and repairs effected at once.

6. Bruising may be caused by the use of rods, sticks, canes or whips in loading and unloading animals; this practice must not be indulged in by employees, who should also endeavour to prevent others from so doing. Extreme care should be exercised in keeping platforms and unloading docks, etc., in good condition; when wet or icy,

they should be properly cleaned and sand or cinders sprinkled on such spots as well as in alleys where the cattle are required to make a sharp turn in order to get into the pen. If any injury does occur from any cause, it should be promptly reported to the superintendent.

7. When spraying of hogs is performed, as requested by shippers or consignees, a steady stream of water is not to be directed on the animals, but it is to be sprayed against the ceiling of cars and allowed to drip on the animals.

8. Exchange of animals at stockyards is not permissible. Employees observing or being informed of such exchanges must promptly report all available information to the railway representative in charge of yards.

9. The attention of all concerned is called to the provisions of the Criminal Code in reference to the feeding, watering and resting of livestock in transit.

Sec. 2 (5) 'cattle' means neat cattle or an animal of the bovine species by whatever technical or familiar name it is known, and includes a horse, mule, ass, pig, sheep or goat.

Sec. 389 (1) Except as provided in this section, no railway company or owner or master of a vessel shall confine cattle in a railway car or vessel in which they are conveyed in Canada or between Canada and the United States for more than thirty-six hours without unloading the cattle for rest, water and feeding for a period of at least five consecutive hours.

(2) No offence is committed under subsection (1) where compliance with that subsection is

prevented by storm or by necessary delay or detention or by other unavoidable cause.

(3) No railway company or owner or master of a vessel shall convey in a railway car or vessel calves that are under age of three weeks except calves at foot of milch cows or pure-bred calves. (Cows and mares with suckling young should be partitioned from other stock. Different kinds of livestock should be segragated by partitions, except that goats may be mixed with sheep or veal calves. Partitions must not be nailed to sides of car but must be fastened with wire hoop around upright posts of car.)

(4) For the purposes of subsection (1) the period of confinement of cattle includes the time during which the cattle have been confined without rest, food or water on a connecting railway or vessel from which the cattle are received, whether in the United States or in Canada.

(5) This section does not apply in respect of cattle that are carried in a car or vessel in which they have proper space and opportunity for rest and in which they are provided with proper food and water.

(6) The owner of cattle to which this section applies or the person who has custody of them shall properly feed and water them during the periods of rest required by this section, but if he does not do so, the railway company or the owner or master of the vessel that carries them shall properly feed and water them at the expense of the owner or of the person who has custody of them, and the railway company or

owner or master of the vessel, as the case may be, has a lien in respect thereof upon the cattle and is not liable for any detention of the cattle.

(7) When cattle are unloaded from cars for rest, food and water as required by this section, the railway company that has, at that time, charge of the cars in which the cattle have been carried, shall, except during a period of frost, clean the floors of the cars and litter them with clean sawdust or sand before they are again loaded with livestock.

(8) No railway company shall permit a railway car or other vehicle that carries cattle or other domestic animals or birds on the railway to be overcrowded so that unnecessary suffering is caused to the cattle or other domestic animals or birds therein.

(9) No railway company shall permit a bull of mature age to be carried on its railway in the same railway car with other cattle unless the bull is securely tied by the head. (Rope should be not less than $1/2$ inch, of sufficient length to permit animal to lie down. Rope should not be run through the nose ring or tied with slip knot around the neck.)

(10) Everyone who knowingly and wilfully violates or wilfully fails to comply with this section is guilty of an offence punishable on summary conviction.

Sec. 390 (1) A peace officer who believes on reasonable and probable grounds that a person has failed to comply with Section 389 in respect of a vehicle or vessel may at any time enter the vehicle or go on board the vessel.

(2) Everyone who refuses to admit a peace officer acting under subsection (1) to a vehicle or vessel or to any premises where the vehicle or vessel is located is guilty of an offence punishable on summary conviction.

10. In the case of all livestock shipments originating at or destined to any point on the Canadian Pacific Railway, or passing over any of its lines, the date and hour at which said livestock was loaded must be clearly shown on the waybill and where livestock has been rested, fed and watered in transit, the date, hour and place at which it was last rested, fed and watered must also be shown on the waybill.

11. Employees should see that stock is not confined in any car longer than the periods prescribed, and should see that cars are placed so that the owner can unload, feed and water, and, (if the owner refuses or neglects to unload, feed and water), should see that the stock is unloaded, rested, fed and watered.

12. When transfer record for livestock delivered to this Company from a connecting line indicates that there is not sufficient time to move the shipment to destination or to a feeding, watering and resting yard within the time prescribed by law, agents at junction points will refuse to accept the stock until it has been rested watered and fed.

13. All concerned must see that the law is strictly observed and no livestock carried past a feeding station, unless there is time to reach the next feeding station within the legal limit.

14. United States laws, violations of which provide for heavy penalties, prohibit the confining of livestock in cars for over TWENTY-EIGHT HOURS, unless prevented by storm or other accidental or unavoidable causes which cannot be anticipated or avoided by the exercise of due diligence and foresight, except when the THIRTY-SIX hour release (C.P.R. Form 1090) is signed by the owner or person in charge of that particular shipment, and notation made on the waybill accordingly in the place provided for this purpose on the front of the waybill, in which event, the time of confinement may be extended to THIRTY-SIX HOURS.

L. TANK CARS

1. Tank cars containing liquified petroleum gases such as methane, ethane, propane, butane and mixtures thereof; casinghead gasoline, refinery gasoline, naphtha or any flammable liquid with flash point of 80°F or below, while connected by loading or unloading connections must have signs placed on the track or car so as to give warning to persons approaching car from open end or ends of siding. The party loading or unloading the tank car is responsible for furnishing, maintaining, and placing these signs, and the same party alone has authority to remove them. Tank cars thus protected must not be coupled to or moved. Other cars must not be placed on the same track so as to intercept the view of these signs, without first notifying the party who placed the signs. Before these signs are removed, even temporarily, the party authorized to remove them must securely close the outlet valve of the tank car. The outlet valve must not be opened until the tank car is properly protected by signs. Such signs must be at least 12 x 15 inches in size and bear the words "STOP-Tank Car Connected" or "STOP-Men at Work", and the word "STOP" being in letters at least four inches high and the other words in letters at least two inches high. The letters must be white on a blue background.

2. While such tank cars are being loaded or unloaded the hand brakes shall be kept applied and the wheels at both ends of the car shall be blocked on the rails.

3. Except in cases where wire-guard-protected vapour-proof-type electric lights, or vapour-

proof electric flash lights are provided, the loading or unloading of tank cars shall not be permitted excepting during daylight hours. Open flame lanterns, or other exposed flame lights or fires must not be used or permitted during loading or unloading operations. Flood lighting at safe distance is permitted.

4. Loading and unloading tracks for tank cars are to be grounded as outlined in B.T.C. General Order No. 602.

M. GENERAL INSTRUCTIONS RE HANDLING CARS OF EXPLOSIVES, POISON GAS, FLAMMABLE POISON GAS, DANGEROUS, OR DANGEROUS-RADIOACTIVE MATERIAL AND PLACARDED TRUCKS OR TRAILERS ON CARS OR PLACARDED TANK CARS IN TRAINS

1. Cars placarded EXPLOSIVES, POISON GAS, FLAMMABLE POISON GAS, DANGEROUS or DANGEROUS—RADIOACTIVE MATERIAL and placarded trucks or trailers on cars or placarded tank cars in trains must have air and hand brakes in service and must not be handled in a train which carries passengers, except on lines where there are no regular trains operating in freight service only. Train and engine crews must be advised in writing of the presence and location in the trains of cars placarded EXPLOSIVES. This notice must be transferred from crew to crew at points other than terminals.

2. No car moving under its 'own' momentum shall be allowed to strike any car placarded EXPLOSIVES, POISON GAS or FLAMMABLE POISON GAS, or any flat car carrying a trailer placarded EXPLOSIVES, POISON GAS, DANGEROUS or DANGEROUS—RADIOACTIVE MATERIAL, nor shall such car be coupled to with more force than is necessary to complete the coupling.

3. Cars placarded EXPLOSIVES, POISON GAS or FLAMMABLE POISON GAS, or any flat car carrying trailer placarded EXPLOSIVES,

POISON GAS or FLAMMABLE POISON GAS, DANGEROUS or DANGEROUS—RADIOACTIVE MATERIAL must not be cut off while in motion.

4. In switching operations, cars placarded EXPLOSIVES must be separated from the engine by at least one non-placarded car.

5. Closed cars placarded EXPLOSIVES shall have doors closed before they are moved. Such cars in the process of loading must not be switched, unless the contents are properly braced.

6. PLACARDED LOADED TANK CARS or a draft including such cars must not be cut off in switching operations until the preceding car or cars have cleared the lead track, and cars must not be allowed to follow PLACARDED LOADED TANK CARS until they in turn are clear of the lead. When PLACARDED LOADED TANK CARS are to be controlled by HAND BRAKES, the brakes must be tested and determined to be in good working order before cars are cut off.

7. Cars placarded EXPLOSIVES should be so placed in yards or on sidings that they will be safe from all probable danger of fire and provision made for quick REMOVAL and ISOLATION in case of fire. Such cars must not be placed under bridges or overhead highway crossings, nor in or alongside of passenger sheds or stations, except for loading or unloading purposes. Engines on parallel track must not stand opposite or near them.

8. Cars placarded DANGEROUS or known to contain flammable liquids, gases or vapours must not be entered with a lighted open flame

lantern, torch or other fire until both car doors have been opened and sufficient time allowed for ventilation and escape of any vapours.

9. PLACARDED CARS which have been on fire due to hot journals or any other cause shall not be transported, except to the extent necessary to facilitate fire fighting, until it has been determined that there is no fire remaining within the car.

10. Cars placarded EXPLOSIVES or POISON GAS, or both and cars placarded FLAMMABLE POISON GAS when accompanied by car carrying guards or gas handling crews, shall be next to and ahead of the car occupied by the guards or gas handling crews accompanying such car; except that when the car occupied by guards or gas handling crews is equipped with a lighted heater or stove, it shall be the fourth car behind a car or cars requiring EXPLOSIVES placards.

EXPLOSIVES:—

11. When length of freight or mixed train permits, cars placarded EXPLOSIVES must be placed not nearer than the SIXTEENTH car from both the engine or occupied caboose. When length of freight or mixed train will not permit to be so placed, they shall be near MIDDLE of train, except that when moving in a freight or mixed train performing pick-up and/or set off service, it shall be placed not nearer than the SECOND car from both the engine or occupied caboose, and in freight or mixed trains made up in "blocks" or classifications, it shall be placed near the middle of the "block" or classification in

which moving, but not nearer than the SIXTH car from either the engine or occupied caboose.

12. Cars placarded EXPLOSIVES must not be handled next to car placarded DANGEROUS, DANGEROUS — RADIOACTIVE MATERIAL, POISON GAS or FLAMMABLE POISON GAS; engine, wooden underframe car; loaded flat car, except that flat cars carrying trailers or containers placarded EXPLOSIVES, as authorized by the regulations, may be coupled to each other; open top car when lading extends or protrudes above or beyond the ends or sides thereof; car equipped with automatic refrigeration or any other apparatus utilizing an open flame light or an internal combustion engine in its operation; car containing lighted heaters, stoves or lanterns; car loaded with live animals or fowl, occupied by an attendant; occupied caboose, passenger or combination car other than when occupied by gas handlers or military personnel accompanying shipments.

LOADED PLACARDED TANK CARS:—

13. When length of freight or mixed train permits, loaded placarded tank cars must be SIX cars from engine, occupied caboose or passenger car, but in no case nearer than the SECOND car from engine, occupied caboose or passenger car, unless the remainder of the train consists of loaded placarded tank cars.

14. Loaded placarded tank cars must not be handled next to car placarded EXPLOSIVES; engine or occupied caboose (except when train consists only of loaded placarded tank cars); cars placarded POISON GAS or FLAMMABLE

POISON GAS; wooden underframe car; loaded flat car; open top car when lading extends or protrudes above or beyond the ends or sides thereof; car equipped with automatic refrigeration or any other apparatus utilizing an open flame light or an internal combustion engine in its operation; car containing lighted heaters, stoves or lanterns; car loaded with live animals or fowl, occupied by an attendant; occupied caboose, passenger or combination car other than when occupied by gas handlers or military personnel accompanying shipments.

15. Loaded placarded tank cars or other cars containing explosives, must not be stopped over open flame switch heaters unless unavoidable due to an emergency, in which case cars should be moved off promptly, or switch heaters extinguished.

NOTES:—

A. For any special handling of explosives and other dangerous articles, other than outlined above, apply to Supervisory Officer, who can refer to Board of Transport Commissioners' Regulations.

B. Conductors, agents and yardmasters should also refer to instructions on reverse side of Form 470—"Explosive Freight Waybill".

N. RADIOACTIVE MATERIALS

RADIOACTIVE MATERIALS ARE LABELLED "RADIOACTIVE MATERIAL" AND PLACARDED "DANGEROUS— RADIOACTIVE MATERIAL".

1. Cars containing RADIOACTIVE MATERIAL and placarded DANGEROUS — RADIOACTIVE MATERIAL must not be placed in train next to cars placarded EXPLOSIVES or next to carload shipments of undeveloped film.

2. In the event of breakage of container, accident, fire or unusual delay involving a shipment of RADIOACTIVE MATERIAL labelled RADIOACTIVE MATERIAL or placarded DANGEROUS — RADIOACTIVE MATERIAL, the car and any loose RADIOACTIVE MATERIAL must be isolated from human contact and no persons must be allowed to remain near car or contents needlessly, until qualified persons are available to supervise handling. The Board of Transport Commissioners, shipper and the Bureau of Explosives must be notified immediately.

3. Cars, buildings, areas, or equipment in which radioactive materials have been spilled must not be placed in service or occupied until decontaminated by qualified persons.

4. The amount of radiation from a substance cannot be determined either by its appearance or by its volume, and must be determined by instruments or measuring device.

5. To transport these hazardous materials necessitates packing them in containers of such design that the radiation escaping from the pack-

age is reduced to safe limits, so as to enable personnel to handle the packages without danger to themselves.

6. For the more active materials, which are, of course, the more hazardous, lead shielding is used and the thickness of the lead is proportionate to the activity of the substance. In like manner, the value of radioactive materials results in their being extremely well packed to prevent possibility of loss. This reduces the possibility of materials being spilled even under adverse conditions, and the instructions below are for the purpose of providing some protection in case of serious accident resulting in actual spilling of the material.

GENERAL INSTRUCTIONS:—

7 Until the extent of the hazard can be determined, keep all persons the greatest practicable distance away.

8. Trains or vehicles may be allowed to pass if they can do so without stopping in the suspected area and without scattering spilled material.

9. PERSONS NOT PROPERLY PROTECTED AGAINST RADIATION SHALL NOT BE PERMITTED TO APPROACH THE VICINITY OF ANY PLACE WHERE RADIOACTIVE MATERIAL IS SUSPECTED TO HAVE BEEN SPILLED. Protection of personnel will vary, depending on circumstances, and may consist solely of radiation monitoring. In cases where radioactive material has been scattered, anti-contamination clothing and means of shielding personnel from radiation may be necessary.

10. If material is involved in fire or spillage, avoid exposure to smoke, fumes, or dust.

11. Get names and addresses of persons who may have been in contact with spilled material and take precautions to avoid further spreading spilled material.

12. If radioactive material has been submerged as a result of the accident, all persons must be kept as far away from the area as is practicable until qualified persons are available to direct the removal of the submerged material.

PROCEDURE:—

13. If there is evidence of any damage to shipping container, determine as soon as possible whether the outside container has been broken open and whether material has been actually exposed or spilled. If container is damaged, proceed as follows, depending on the type of package involved:

14. For small containers, i.e., radioactive materials in fibreboard or wooden boxes or steel or fibre drums and weighing less than 200 pounds.

(a) Keep all persons at least 10 feet away if practicable and do not remain near exposed material unnecessarily.

(b) If it is impracticable to keep persons away, sandbag or cover the radioactive material with at least 4 inches of earth or sand, using a long-handled shovel and remaining near the material only so long as is necessary to accomplish the work.

(c) Following notification, the Bureau of Explosives will assist in arranging for removal of the material and any necessary decontamination.

15. For containers of heavy steel or metal construction (weighing 200 pounds or more) and lined or partially filled with lead, concrete, or paraffin.

(a) If there is any evidence that the container has been broken open or seriously damaged, observe rules in Clause 7, GENERAL INSTRUCTIONS, until assistance or further advice has been obtained from a competent authority.

(b) Even though container has not been opened or damaged, persons should not remain near the container unnecessarily until it has been determined that no radiation hazard exists.

16. For materials of low activity, such as uranium and thorium ores, which are packed in ordinary containers such as bags, steel or fibre drums, or wooden or fibre boxes and may be in the form of powders, liquids, sludges, or waste paper or other scrap materials.

(a) Obtain assistance of qualified persons to handle spilled material.

(b) Avoid direct contact with spilled material.

(c) Protect persons from breathing dust. This can be accomplished by approaching from upwind side or by breathing through respirators or handkerchiefs when other means are not available.

(d) Prevent spreading of spilled material and keep it out of streams, reservoirs, sewers, etc.

17. For United States Atomic Energy Commission-United States Dept. of Defense escorted

shipments (sometimes shipped as explosives and radioactive materials).

(a) If guards are present and not incapacitated, follow their recommendations with regard to safety and elimination of hazards until other assistance arrives.

(b) If the guards are incapacitated and the shipment is involved in fire which cannot be readily brought under control, keep all persons 1500 feet away and as much farther as is practicable and observe rules in Clause 7, GENERAL INSTRUCTIONS.

(c) If the guards are incapacitated and the shipment is not involved in fire, it should not be moved until proper instructions for its disposition are received from the shipper, the Bureau of Explosives, or other competent persons.

NOTES:—

A. The above instructions are mainly for the general guidance of those persons who are present at transportation accidents where radioactive materials are involved. They are issued for the purpose of establishing standard procedures in place of conflicting information which has been published rather than because of any feeling that the majority of radioactive shipments are more hazardous than shipments of other dangerous articles.

B. For other special handling of RADIOACTIVE MATERIAL apply to Supervisory Officer.

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

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.

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 handled 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.

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.

4. Cap to gasoline storage tank must be tightly closed and there must be no leakage of gasoline at any point.

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.

6. Smoking or using lighted matches in cars or warehouses containing automobiles is prohibited.

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 anti-freeze solution and owner assumes risk of freezing per Tariff Rule, proper notation of which should be made on the bill of lading.

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.

P. CONNIVANCE IN ILLEGAL TRANSPORTATION BY RAILWAY EMPLOYEES

SECTION 344 OF THE CRIMINAL CODE READS

"(1) Everyone who, by means of a false or misleading representation, knowingly obtains or attempts to obtain the carriage of anything by any person into a country, province, district or other place, whether or not within Canada, where the importation or transportation of it is, in the circumstances of the case, unlawful is guilty of an offence punishable on summary conviction.

(2) Where a person is convicted of an offence under subsection (1), anything by means of or in relation to which the offence was committed, upon such conviction, in addition to any punishment that is imposed, is forfeited to Her Majesty and shall be disposed of as the Court may direct."

Your attention is also directed to Section 180 of the Customs Act of Canada, reading as follows:—

"180. (1) If any goods are unlawfully imported on any railway, they shall be seized and forfeited, and the car in which such goods were so imported shall be seized and detached from the train and forfeited.

(2) Every conductor, baggage-master, or officer or servant employed on any railway and every officer or servant employed by any express company, who is privy to or aids or abets in such unlawful importation, shall forfeit a sum equal to the value of the articles, and

(a) if the value for duty of the goods is under two hundred dollars, is further liable on summary conviction before two justices of the peace to a penalty not exceeding two hundred dollars and not less than fifty dollars, or to imprisonment for a term not exceeding one year and not less than one month, or to both fine and imprisonment; and

(b) if the value for duty of the goods is two hundred dollars or over, is guilty of an indictable offence and liable on conviction to a penalty not exceeding one thousand dollars and not less than two hundred dollars, or to imprisonment for a term not exceeding four years and not less than one year, or to both fine and imprisonment."

This is submitted for your information and guidance and you will note that the consent, connivance, aid or assistance of any railway employee in illegal transportation constitutes an offence for which a prison term is a penalty, in addition to carrying penalties by way of seizure and forfeiture. All employees will use their best efforts to prevent violation of the law and every facility should be given officers of the Government in their investigations.

If an agent, yardmaster or conductor (and particularly the latter in connection with cars loaded at flag stations and outlying sidings) has reason to believe that a shipment is falsely billed and contains contraband, although classified as some other commodity, he will immediately inform his superintendent by telegraph, giving full particulars, including car number.

Q. PREVENTION AND EXTINGUISHING OF FIRES ON OR IN THE VICINITY OF RIGHT-OF-WAY

TO ALL EMPLOYEES GENERALLY:—

1. It will be the duty of all officers and employees generally to take precaution to prevent fires on or along the Roadway of the Company; to promptly extinguish and prevent spread of fires outside the right-of-way and to investigate and report fires and probable cause thereof.

2. TO ALL CONDUCTORS, ENGINEMEN, TRAINMEN, AND OTHER EMPLOYEES CONCERNED: — Conductors, enginemen, or trainmen who discover or receive notice of the existence and location of a fire burning upon or near the right-of-way, or of a fire which threatens land adjacent to the right-of-way, shall report the same by wire to the superintendent, and shall also report it to the agent or persons in charge at the next point at which there shall be communication by telegraph or telephone, and to the first section employees passed. Notice to track forces of such fire shall also be given immediately by engine whistle signal 14 (r) U.C.O.R.

3. No employee shall do or cause damage or injury to any of the fire-protective appliances on any engine.

4. Fire, live coals, or hot ashes shall not be deposited on the tracks, right-of-way or elsewhere unless extinguished immediately thereafter, except in pits provided for the purpose. On no account shall ashes from cars or cabooses be thrown out while running. Burning or smoulder-

ing waste taken from hot boxes shall be completely extinguished. Freight and passenger cars in which there are lighted stoves must not be left spotted adjacent to grain elevators, oil warehouses, loaded tank cars or those containing explosives or other dangerous commodities.

5. TO ALL AGENTS, DISPATCHERS AND OPERATORS:—Conductors, enginemen and trainmen have received instructions to report all fires occurring on or adjacent to the right-of-way, and it shall be your duty, on receiving such report, to notify immediately the superintendent and roadmaster by wire, also the section foreman and local Fire Inspector of the Board of Transport Commissioners in territory where such fire inspectors are located, giving the exact location, by mileage, of the fire, its extent, and any other information which may be of value, particularly as to the number of men needed to fight same.

6. TO SECTION FOREMEN, EXTRA GANG FOREMEN, BRIDGE FOREMEN, TELEGRAPH OR OTHER CONSTRUCTION GANGS, AND OTHER TRACK EMPLOYEES:—In all cases where fire occurs, on or in the vicinity of the right-of-way, it shall be your duty to proceed immediately to such fire and extinguish same, remaining as long as may be necessary to do this. The carrying on of your work, though it may be important, must be set aside until the fire is completely extinguished, provided, however that you are not at the time engaged in labours immediately necessary to the safety of trains. In case the fire cannot be extinguished as above, additional help shall be immediately requested by telegraph or telephone

message to the superintendent or roadmaster. The section foreman on whose section the fire occurs, shall in the absence of an officer of the Company, make a thorough investigation regarding the origin of the fire and submit a full report to the roadmaster.

7. Between April 1st and October 31st, no ties, cutting debris, or litter upon or near the right-of-way shall be burned except under such supervision as will prevent fire from spreading beyond the strip being cleared. Any officer of the Board of Transport Commissioners may, at any time, require that no such burning be done along specified portions of the line, except with the written permission or under the direction of such officer.

8. TO SUPERINTENDENTS, ROADMASTERS AND OTHER OFFICERS CONCERNED:—If the fire is of such an extent that the section gang, or other local force available cannot control it unaided the superintendent, or in his absence, his representative, must immediately arrange for the dispatch of the roadmaster or other competent officer with the necessary additional men who can be drawn from those available in any department, and all necessary fire-fighting appliances to the scene of the fire, and must so arrange the train service that they will reach the fire with the least possible delay in order that no time may be lost in getting it under control.

9. The officer in charge must also arrange to obtain promptly complete statements from all witnesses, so that origin or any responsibility for the fire can be accurately determined.

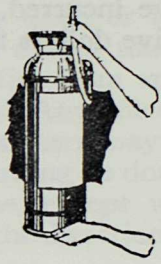
PENALTY:—

General Order of the Board of Transport Commissioners, No. 548, dated December 4th, 1935, provides as follows:—"If any employee or other person included in the said regulations fails or neglects to obey the same, or any of them,—he shall, in addition to any other liability which he may have incurred, be subject to a penalty of twenty-five dollars for every such offence."

R. INSTRUCTIONS IN THE OPERATION OF FIRE EXTINGUISHERS

600. Soda-Acid Extinguisher.

1



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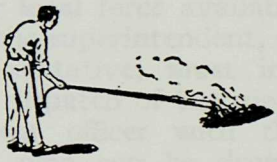


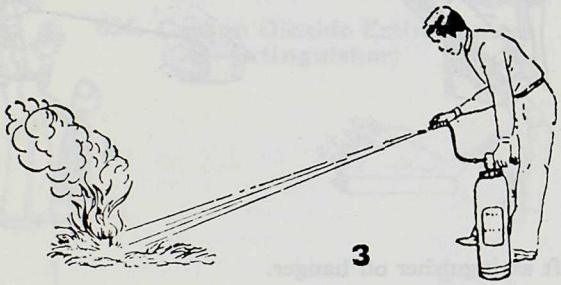
4

1. Lift extinguisher off hanger.
2. Carry extinguisher to fire.
3. At fire, turn extinguisher over.
4. Direct stream at base of flames.
5. DO NOT USE ON ELECTRICAL EQUIPMENT.

601. Water Extinguisher, Gas Cartridge Operated.

1

2

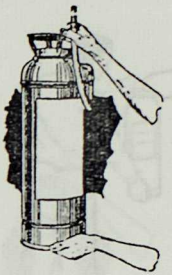


3

1. Lift extinguisher off hanger.
2. Carry extinguisher to fire.
3. Operate mechanism that releases gas pressure and direct stream at base of flames.
4. DO NOT USE ON ELECTRICAL EQUIPMENT.

602. Foam Extinguisher.

1



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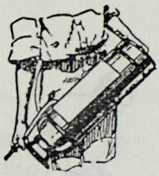


3

4

1. Lift extinguisher off hanger.
2. Carry extinguisher to the fire.
3. At fire, turn extinguisher over.
4. If fire is in a container or tank, direct stream against inside of opposite wall. If fire is on floor, allow foam to fall gently on flames.
5. DO NOT USE ON ELECTRICAL EQUIPMENT.

603. Carbon Tetrachloride Extinguisher. ("CTC" Extinguisher)

1

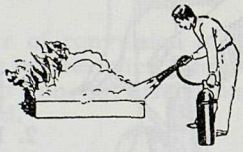
2

3

1. Remove extinguisher from wall bracket by grasping handle and pulling outward. If in cabinet, follow same procedure after breaking glass.
2. Unlock pump handle by turning and operate pump.
3. Direct stream at base of flames and work around fire rapidly. If fire is in a container or tank direct stream against inside opposite wall above level of burning liquid.
4. May be used on electrical equipment.
5. When using carbon tetrachloride extinguishers, care should be taken in confined spaces to avoid exposure to fumes.

604. Carbon Dioxide Extinguisher. (CO Extinguisher)

1



2

1. Remove extinguisher from bracket by grasping handle with left hand. Carry to fire by means of the handle and open valve to release gas.
2. Direct the discharge as close to the fire as possible, applying first at edge and bottom of fire and progressing forward and upward, moving discharge horn slowly from side to side. Continue discharge even after the fire has been extinguished to cool burnt material and prevent possible reflash.
3. May be used on electrical equipment.

605. Dry Chemical Extinguisher. (Dry Powder Extinguisher)

1

2

1. Remove extinguisher from bracket by grasping handle with left hand. Carry to fire by means of the handle and operate mechanism which releases gas pressure.
2. Direct discharge with a fast sweeping motion at base of flame.
3. May be used on electrical equipment.

606. Pump Tank Extinguisher.

1. Place foot on the foot rest at bottom of tank.
2. Pump stroke need not be more than six or eight inches in length.
3. Direct stream at base of flames.
4. Follow flames and work around fire if possible.
5. DO NOT USE ON ELECTRICAL EQUIPMENT.

S. INFORMATION TO ASSIST IN DEALING ADEQUATELY WITH CASES OF PERSONAL INJURY

1. Stop all bleeding. (Items 11 to 15).

2. Apply artificial respiration if breathing is not apparent. (Items 45 to 51).

3. Do not move the injured person until the extent of injury is known, except when necessary to protect him from further injury.

4. Use a stretcher, if obtainable, to move a person with a severe injury. Any injured limb must be carefully supported. (Item 52).

5. Call the nearest Medical Officer in cases of severe injury. If he is not available call any other doctor who can arrive quickly. (Items 53 to 55).

NOTE: Medical Officers are listed in the time table.

6. Sips of water, milk, warm sweet tea or coffee may be given, if necessary, if there is no severe bleeding, internal bleeding or stomach injury. Give nothing by the mouth if the patient is unconscious. Do not give alcohol except on the advice of a doctor.

7. If the patient is in a state of convulsion his head should be supported and he must be prevented from biting his tongue or striking objects near him, but his movements should not be completely checked.

8. Do not allow bystanders to crowd about an injured person.

9. Do not leave an injured person until another responsible person has been placed in charge, unless it is unavoidable.

10. In all cases of personal injury the Superintendent must be advised as promptly as possible on the prescribed form, and by wire if necessary, giving full particulars of the nature and cause of the injury and the condition of the injured person.

BLEEDING

Small Wounds

11. Cover a small wound with a firm dressing to stop the bleeding and prevent infection, but

(a) Do not breathe, cough or talk into the wound.

(b) Keep the fingers out of the wound.

(c) Do not touch the side of the dressing to be applied against the wound.

(d) Do not apply antiseptics to the wound.

Apply extra dressings and pressure by hand if necessary to control the bleeding.

If the bleeding is so severe that there is no time to obtain a dressing, direct pressure may be applied on the wound with the thumb or palm of the hand.

Dressings

A dressing should be a thick pad of soft, clean material large enough to cover the wound. It may be held in place by a bandage or adhesive tape. Suitable dressings are below, in order of preference:—

Prepared	Improvised
1. Field dressing.	1. Sanitary napkin.
2. Sterile gauze.	2. Folded handkerchief.
3. Several layers of a sterile bandage.	3. Towel or wash cloth.
	4. Any cotton or linen material, such as a shirt or sheet, torn to size.
	5. Tissue paper handkerchiefs or paper towels.

Bandages

Bandages should be clean, and applied firmly enough to stop the bleeding but not so tightly that circulation of the blood is prevented. Suitable bandages are listed below:—

Prepared	Improvised
1. Bandages—roller and triangular.	1. Strip of sheeting.
2. Surgical adhesive tape.	2. Clothing—shirt sleeve stocking scarf tie belt.

Foreign Bodies

12. Remove loose foreign bodies before applying a dressing.

Large Wounds

13. Cover large wounds, or those containing foreign bodies which cannot easily be removed, or where projecting broken bones are apparent, with pad dressings (Illustrations 1 and 2). Build up the dressings in "cone" fashion around the wound, to allow pressure to be applied by the bandage.

Illustration 1

Illustration 2

(Illustrations 3 and 4). The dressings must be firmly bandaged in position, but pressure on the foreign body or projecting broken bone should be avoided (Illustration 5).

Illustration 3

Illustration 4

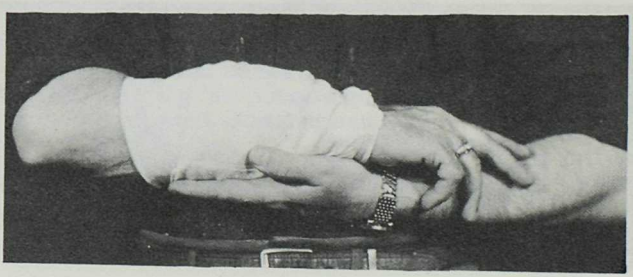


Illustration 5

Amputations

14. Immediately apply a very tight (constrictive) bandage a few inches above the stump wound.

Severe Bleeding—Pressure Points

15. Apply pressure to the appropriate pressure point when direct pressure and bandaging on the wound fail to stop severe bleeding. A pressure point is one where a main blood vessel can be compressed against an underlying bone to stop the flow of blood beyond that point.

Neck Arteries

These arteries supply blood to the head and pass up on either side of the neck. To apply pressure the thumb must be placed in the hollow behind the windpipe and the blood vessel compressed against the spine (Illustration 6). It may also be necessary to apply pressure with the other

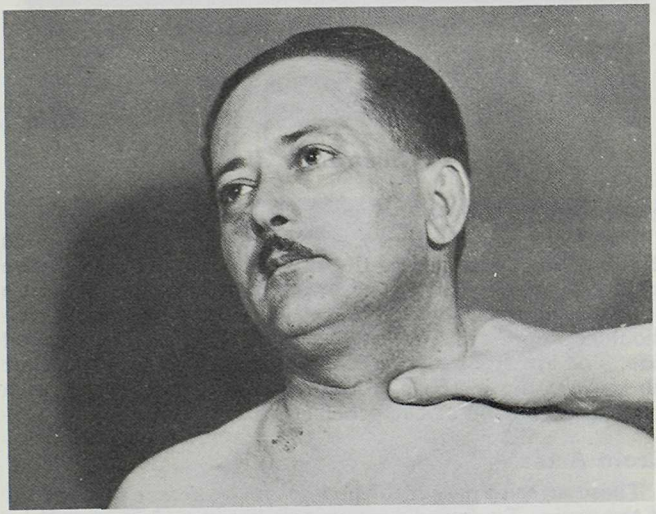


Illustration 6

thumb above the wound to stop the flow of blood from the main vein in the neck which runs alongside the artery (Illustration 7).

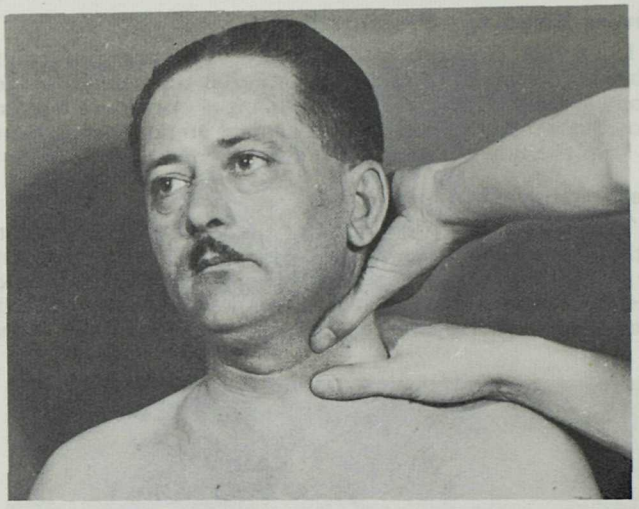


Illustration 7

Shoulder Arteries

These arteries pass from a point behind the inner ends of the collar-bones across the first rib on each side to the underside of the arms. To apply pressure the patient's neck and upper part of the chest must be bared, the shoulder depressed and the head inclined to the injured side. The artery must then be compressed against the first rib by pressing in the hollow behind the collar-bone with one thumb on top of the other (Illustration 8).

Groin Arteries

These arteries pass into the legs at the centre of the fold of the groin. To apply pressure the patient's knee must be flexed and the thigh grasped with both hands. The artery must then be compressed against the brim of the underlying bone by pressing directly downwards in the centre of the groin with one thumb on top of the other (Illustration 9).

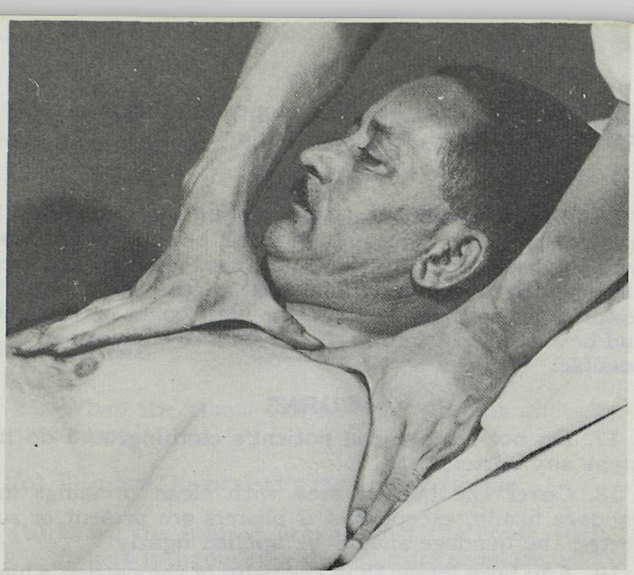


Illustration 8

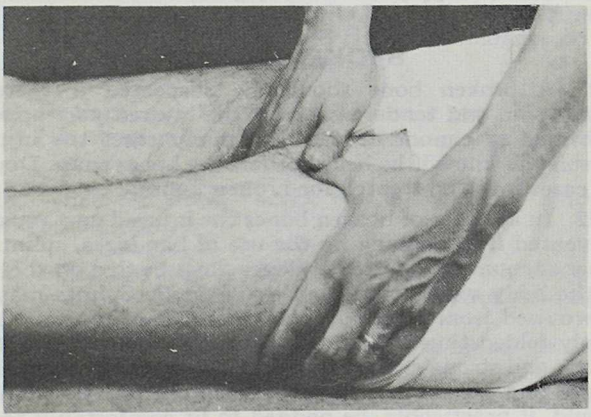


Illustration 9

When the bleeding has been stopped in this way apply a dressing with a firm bandage to the wound.

SHOCK

16. A person suffering a severe injury must also be treated for shock. The patient must be laid on the back with his head low, any tight clothing loosened, and fresh air allowed to circulate. The heat of the body must be restored by covering the patient with coats or blankets, and he should be taken to shelter on a stretcher as soon as possible.

BURNS

17. Do not remove the patient's clothing, and do not break any blisters.

18. Cover the burned area with clean dressings and bandage firmly, except that if blisters are present or suspected the bandage should be applied lightly.

19. Any burn larger than the palm of the patient's hand must be considered as severe, the patient treated for shock, and medical aid obtained as soon as possible.

NOTE: The early appearance of a burn is often misleading as to its severity, and doubtful cases must be considered as severe.

20. Do not apply ointments, grease or oil to a severe burn.

BROKEN BONES

21. A broken bone should be suspected if there is severe pain and tenderness, or if the injured part appears deformed or cannot be used. In many cases the injured person will know if he heard or felt the bones snap. Doubtful cases must be treated for broken bones.

22. In all cases of broken bones the injured part must be prevented from moving by the use of bandages, splints or other adequate support. Bandages must be tied on the side of the body away from the broken bone. Splints may be improvised from pieces of wood, handles of tools or flags, firmly folded time tables or newspapers, or anything that is long and strong enough to prevent the joints immediately above and below the broken bone from moving. Splints should, if practicable, be padded to fit comfortably to the limb, be of ample width, and be applied over the clothing.

23. Do not move a person with a broken back, hip or thigh, except lying down, preferably on a stretcher.

24. Treat the injured person for shock in all cases of broken bones.

Broken Arm

25. When the elbow can be bent without difficulty or increasing pain:—

(a) Remove the patient's coat if practicable.

(b) Place the injured arm against the chest, with the fingers just touching the opposite shoulder, and provide adequate padding.

(c) Fix the hand in position with a collar and cuff sling, taking care that there is no constriction at the wrist.

(d) Secure the arm to the chest firmly by two bandages, one with its upper border level with the top of the shoulder, the other with its lower border level with the tip of the elbow, and tie both bandages on the opposite side (Illustration 10).

(e) Replace and button the patient's coat, if possible (Illustration 11).

26. When the elbow cannot be bent without difficulty or increasing pain:—

(a) Place the injured arm by the side with the palm against the thigh, and provide adequate padding.

(b) Secure the arm to the body by three broad bandages, one round the upper arm and body, one round the elbow and body, and one round the wrist and thighs.

(c) The injured person must be moved lying down.

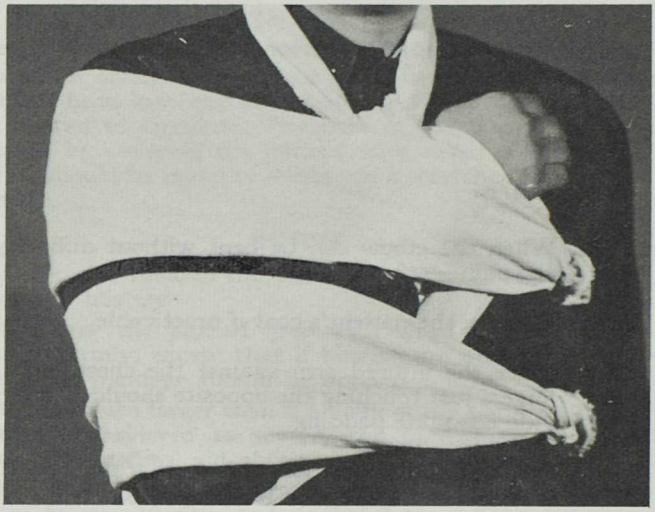


Illustration 10

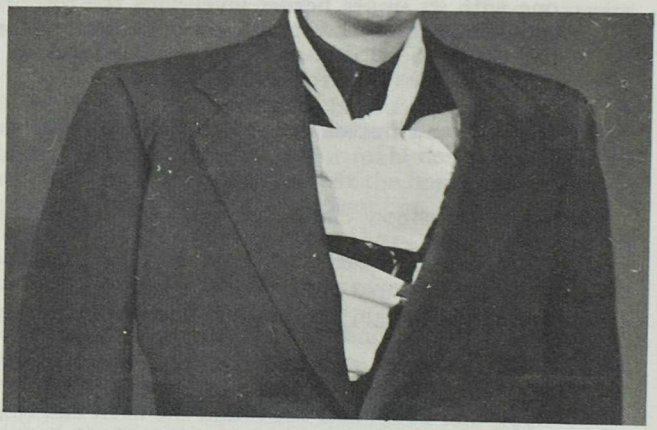


Illustration 11

Broken Wrist

27. For emergency treatment to a broken wrist, see Illustration 12.

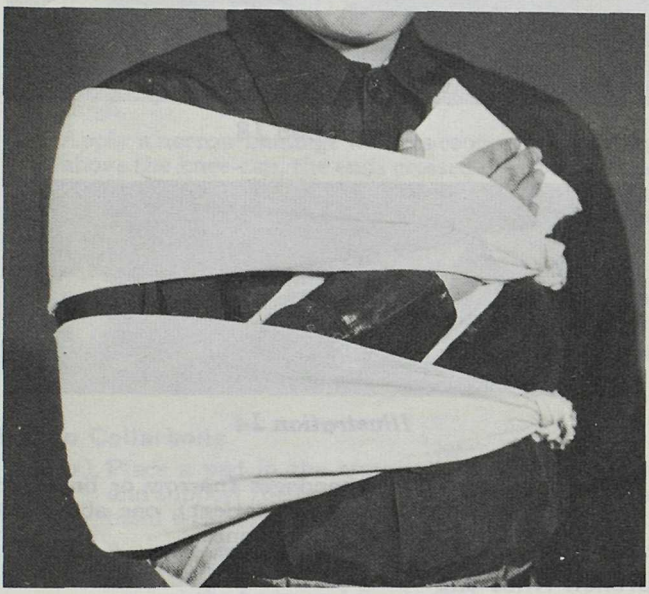


Illustration 12

Broken Leg or Thigh

28. (Illustrations 13 and 14).

(a) Hold the broken leg steady by grasping the ankle, and carefully move it as nearly as possible into line with the sound leg, without increasing pain.

(b) Place padding between the ankles, feet, legs and thighs.

(c) Apply a bandage around the ankles in the form of a figure-of-eight.

(d) Use a broad bandage to hold the knees together.

Illustration 13

Illustration 14

(e) Apply two further bandages (narrow or broad according to the size of the patient), one above and one below the break in the bone.

Broken Knee-cap

29.(Illustration 15).

Illustration 15

(a) Lay the injured person on his back, with head and shoulders slightly raised and well supported.

(b) Raise the injured leg carefully and gently straighten it.

(c) Apply a splint along the back of the leg, reaching from the buttock (seat) to beyond the heel.

(d) Provide adequate padding, particularly under the natural hollow of the ankle to raise the heel from the splint, and secure the splint by bandages round the thigh.

(e) Apply a narrow bandage with its centre immediately above the knee-cap, the ends crossed over behind the splint, passed round to the front of the leg, and tied just below the knee-cap, (that is, a figure-of-eight bandage around the knee).

(f) Move the sound leg into line with the injured leg, pad the ankles and feet, and fasten the feet together with a figure-of-eight bandage tied under the soles.

(g) Support the feet well off the ground, and apply a cold compress over the broken knee-cap.

Broken Collarbone

30. (a) Place a pad in the armpit on the injured side, and support the forearm in a large sling with the hand well elevated.

(b) A broad bandage, with its centre applied over the point of the elbow, should then be passed around the body and firmly tied.

Broken Rib

31. (a) If it is suspected that the lung is injured (usually indicated by blood being coughed up), the injured person should be placed in the most comfortable position, generally lying down slightly inclined to the injured side. The forearm on the injured side should be supported in a sling, and cold water cloths or ice should be applied over the injury. If the patient is conscious ice may be given to suck.

(b) If the lung is not injured, support the forearm in a sling (Illustration 16).

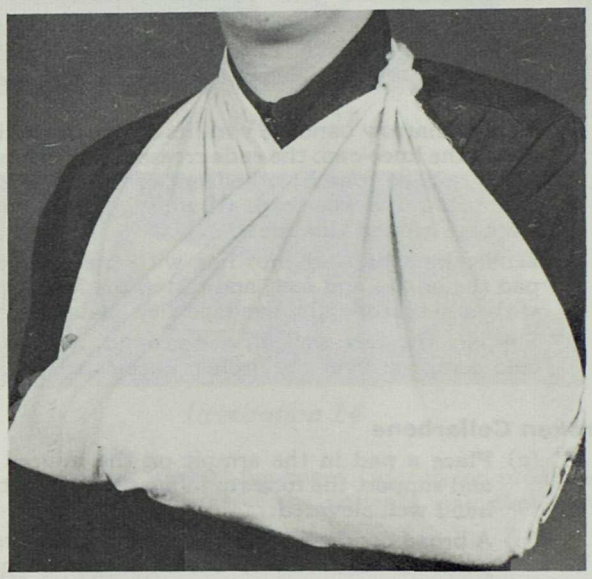


Illustration 16

Broken Back or Neck

32. (a) Prevent the injured person from moving, and keep him warm with coats or blankets.

(b) If necessary to move him to shelter the patient must be carried lying down on a rigid stretcher (a wide plank or door) with adequate padding in the small of the back and around the neck and head, so that the back and neck are kept stiff and straight, and movement is prevented. Great care must be taken to avoid bending the patient, particularly when being placed on the stretcher.

HEAD INJURIES

33. (a) Apply a dressing to the wound. Ice packs or cold water dressings may be used.

(b) Keep the injured person lying down and, as a general rule, the head should be lower than the body if the face is pale and higher if the face is flushed. When a stretcher is used this may be done by raising the foot or head of the stretcher.

(c) Do not give stimulants.

EYE INJURIES

34. Whenever an eye becomes inflamed or painful from even a light injury, a doctor should be consulted.

35. Prevent the patient from rubbing the eye.

36. A cinder or other foreign body in the eye may be removed by gently brushing it with the corner of a soft handkerchief moistened with clean water. If the foreign body is under an eyelid it may be brought into view by pulling down the lower lid or turning the upper lid over a wooden match stick laid along the upper part of the lid.

37. When a foreign body is embedded in the eyeball DO NOT ATTEMPT TO REMOVE IT. Apply a soft pad of gauze and bandage.

38. If the eye received a burn, bathe it immediately with plenty of water, preferably warm. Tilt the patient's head back and drop water into his open eye or else immerse his face in a pail of water, telling him to keep the eye open and moving from side to side. Then apply a soft pad of gauze and bandage.

FROSTBITE

39. Protect the patient from the weather but do not take him into heated surroundings until sensation and blood circulation have been restored in the affected parts. This may be done by holding the affected parts with warm, dry hands under coats or blankets. When sensation and circulation have been restored the patient may be transferred to a room in which the temperature is not more than 60 deg. Fahrenheit. Cover the affected parts with soft, dry gauze, and bandage. Do not use water or moist dressings.

POISON IVY AND POISON OAK

40. The only prevention is to avoid contact. If contact occurs, wash the affected part with plenty of soap and water as soon as possible to remove the poison. Clothes may have poison on them so change as soon as possible and wash with soap and water.

SNAKE BITE

41. If bitten by a suspected poisonous snake, immediately

(a) Apply tourniquet a few inches above the bite. This must be released for five seconds every fifteen minutes.

(b) Secure medical attention.

(c) Cut the skin through the bite in both directions about ¼ inch deep and ¼ inch to ½ inch long. Apply suction to wound until a doctor is available.

(d) Do not allow the patient to walk or exert himself.

(e) Alcohol is forbidden.

ELECTRIC SHOCK

42. The victim of electric shock must be freed from the electric circuit as soon as possible. Shut off the power at the nearest switch, if practicable. If this is not practicable use any DRY non-conductor (clothing, stick, board, rope, rubber gloves, rubber tobacco pouch or rubber raincoat) to move either the victim or the conductor. Do not use any metal or moist material. The victim's loose clothing, if DRY, may be used to pull him away, but do not touch his bare skin, armpits or boots. Stand on a DRY board or on some other DRY insulating surface.

43. If necessary to cut a live wire, an axe or hatchet with a DRY, wooden handle should be used, with the face turned away to protect against electric flash.

44. Apply artificial respiration, if necessary, immediately the victim is released from the current. Treatment for shock and burns (if any) must also be given.

ARTIFICIAL RESPIRATION

45. In all cases where breathing has stopped, whether due to electric shock, asphyxiation from gas or fumes, apparent drowning or other causes, it is vital to get the victim breathing again as quickly as possible. Artificial respiration must be started at once, even if some delay has occurred before the victim is reached.

46. To carry on artificial respiration the services of several persons are often required to relieve one another by turns. Efforts must be kept up until normal breathing is restored or a doctor pronounces the victim dead.

47. During and after artificial respiration the victim should be covered with extra clothes or blankets to keep him warm.

48. Two methods of artificial respiration are explained in Items 49 and 50. The rescuers should use the method with which they are most familiar.

49. Schafer method

(a) Place the victim on his stomach with the head turned to one side so as to keep his nose and mouth away from the ground.

(b) Kneel at one side of the victim, facing his head, with the hands placed over the small of the patient's back, wrists nearly touching, thumbs as near each other as possible without strain, and the fingers passing over the loins on either side and pointing towards the ground but not spread out (Illustrations 17 and 18).

(c) With arms straight and rigid, lean forward to apply firm but not violent pressure straight down on the small of the back, thus forcing air out of the victim's lungs. Then, without removing the hands, draw your body back somewhat more rapidly and relax the pressure; this allows air to enter the lungs.

(d) These movements must be alternated by a rhythmic swaying forwards and backwards, twelve to fifteen times per minute.

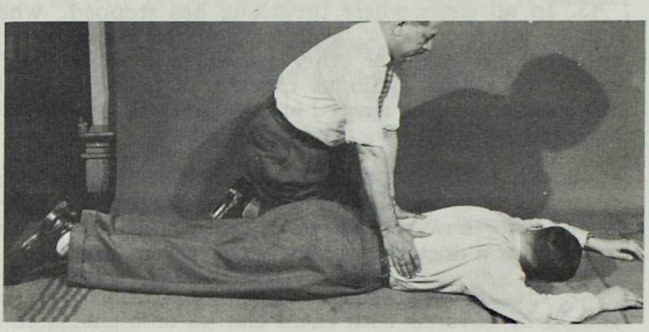


Illustration 17

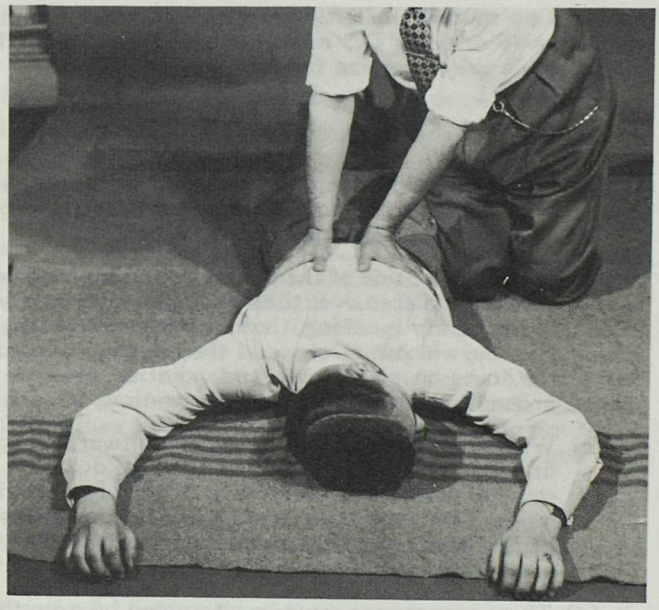


Illustration 18

50. **Back pressure—arm lift method**

(a) Place the victim on his stomach and bend his elbows, placing one hand upon the other. Turn his face slightly to one side, with his forehead on his hands, as shown in Illustration 19.

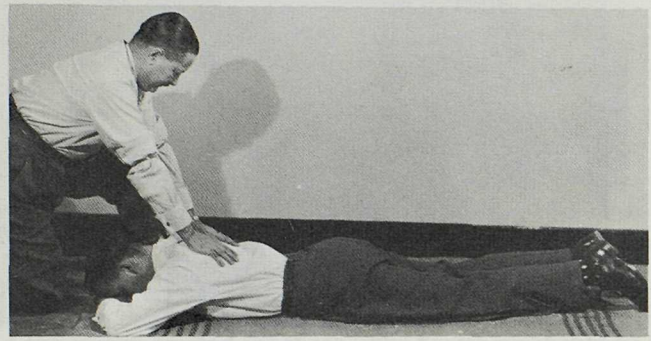


Illustration 19

(b) Kneel at the head of the victim, on one knee or both knees, whichever is more comfortable. Take out false teeth or any other object from the victim's mouth, and draw his tongue forward.

(c) Place hands on victim's back, fingers extended, tips of thumbs just touching, and heels of hands just below a line between the arm-pits, as in Illustration 20.

(d) Keeping arms straight, swing forward slowly with moderate, steady pressure for a count of "one-and-two-and-three" (Illustration 21) then slowly release the pressure. This forces air out of the lungs.

(e) Then lean back, placing hands on victim's arms, just above the elbows.

(f) Draw his arms upward and toward you, until you feel resistance, as in Illustration 22. This act will last through a count of "four-and-five-and-six", and aids in full expansion of the victim's lungs. Then replace arms in original position and begin over again. These movements must be repeated about twelve times per minute.

Illustration 20

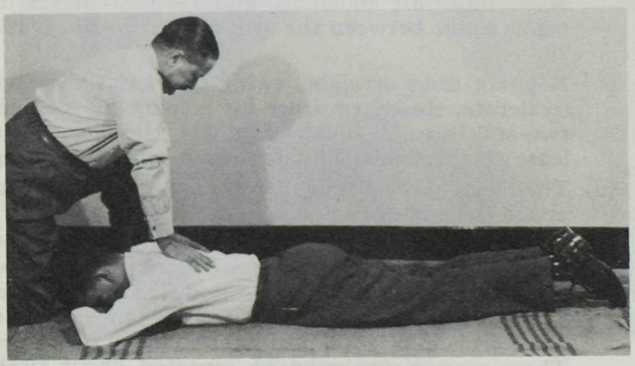


Illustration 21

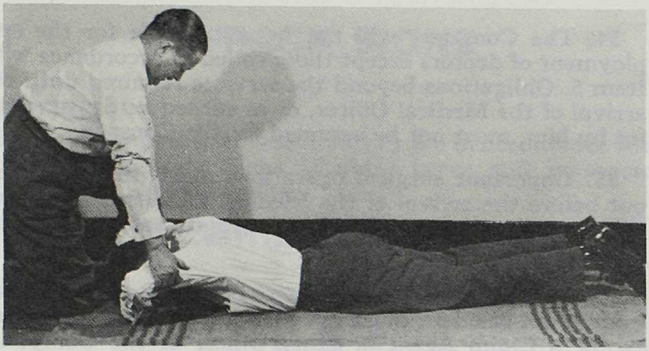


Illustration 22

51. When breathing is restored, promote warmth and circulation by rubbing the legs, arms and body vigorously towards the heart. Any other injuries should be cared for, and the victim treated for shock. The breathing should be watched carefully for some time to see that it does not fail; if it does artificial respiration must be continued at once. If necessary to move the victim a stretcher must be used.

STRETCHERS

52. A short improvised stretcher may be made by turning the sleeves of a coat inside out. Take two poles and pass one through each sleeve, then button the coat. The patient may then be carried on this, sitting up with his back against the front bearer. For a patient who must be kept lying down a longer stretcher may be made by using several coats in the same way, or by rolling up two strong poles in the sides of a blanket. A door or wide board covered with clothing or blankets may also be used. Any type of stretcher should be tested before the injured person is placed upon it.

GENERAL

53. When the Medical Officer arrives he will take charge of the injured person, and will also arrange for any doctor already on the scene to continue or discontinue attendance.

54. The Company will not be responsible for the employment of doctors except those called in accordance with Item 5. Obligations beyond the services required until the arrival of the Medical Officer, or as subsequently arranged for by him, must not be assumed for the Company.

55. Important surgical operations must not be carried out before the arrival of the Medical Officer except those that may be necessary for the immediate safety of the injured person.

56. An employee who witnesses or who has any knowledge of an accident must not give information to anyone except a Claim Agent or other Officer of the Company, unless legally required to do so. Persons seeking information must be referred to a Claim Agent or other Officer.

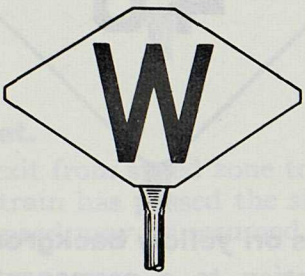
57. First Aid boxes and kits must be examined regularly each month to see that they are properly equipped. If any articles are missing or any of the sterile packages broken they must be promptly replaced.

58. Employees are urged to join one of the First Aid classes in connection with the Company's St. John Ambulance programme. The lectures are free to all employees and are followed by practical demonstrations by First Aid Instructors.

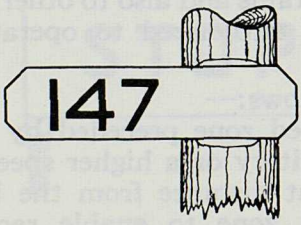
T. TRACK SIGNS

NOTE:—
Signs illustrated in this section (T) are in accordance with current standards. Signs of older types still in service convey the same meanings.

WHISTLE POST

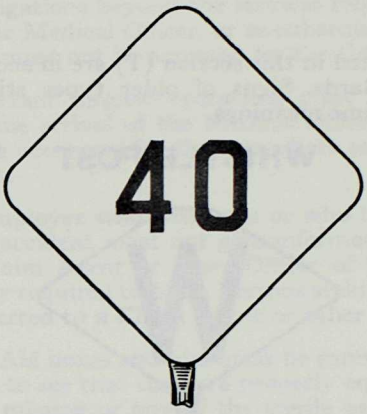


MILE POST



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.

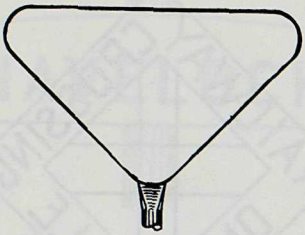
When one speed is shown on the sign it will apply to passenger trains and also to other trains which are otherwise authorized to operate at higher speeds.

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.

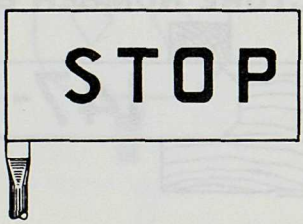
RESUME SPEED



Green target.

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

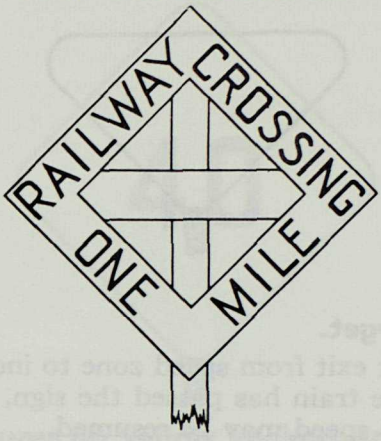
STOP



Black letters on red background.

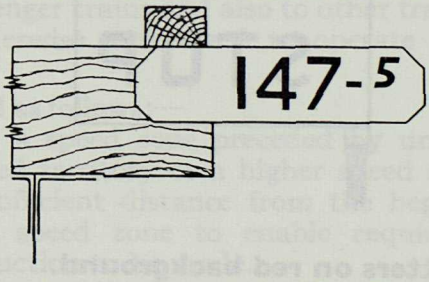
Located 500 ft. from non-interlocked railway crossings at grade, non-interlocked drawbridges, and at other locations where its use is required.

RAILWAY CROSSING AND DRAWBRIDGE



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

STRUCTURE NUMBER BOARD

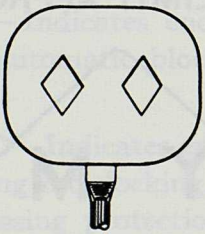


To designate to nearest tenth of a mile the location of certain structures such as bridges, tunnels and snowsheds.

STATION MILE BOARD

Located one mile from outer siding or yard switch or station.

RESTRICTED CLEARANCE



Two diamond shaped holes on yellow background.

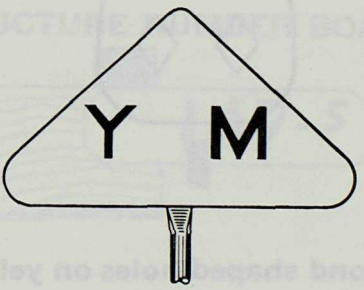
To call attention to restricted side or overhead clearance, or both, where men must not ride sides or tops of cars as case may be.

YARD LIMIT

Black letters on yellow background with circular hole.

To define yard limits.

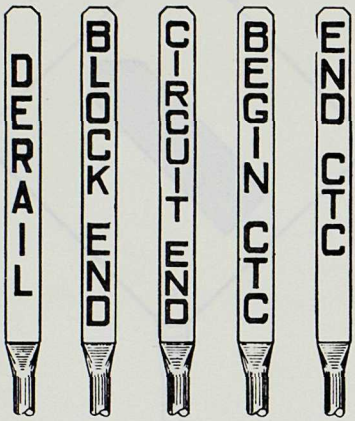
YARD LIMIT APPROACH



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.



DERAIL—
Black letters on yellow background.
Indicates location of derail.

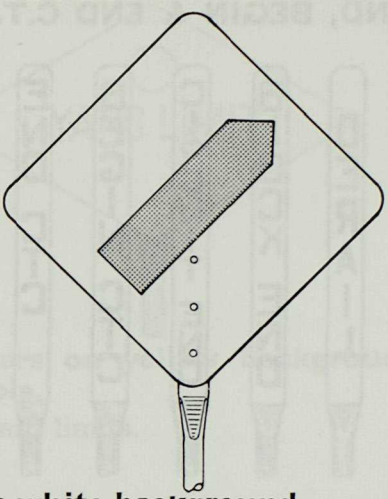
BLOCK END—Indicates end of track circuit controlling an automatic block or station protection signal.

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

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

END C.T.C.—Indicates end of 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.

MEMO

MEMO

MEMO

MEMO