

THE WESTERN PACIFIC RAILROAD COMPANY

C A T E C H I S M  
(Containing Questions and Answers Thereto)

On the

RULES

for the

MAINTENANCE OF WAY AND STRUCTURES,

SIGNAL

and

COMMUNICATION

DEPARTMENTS

Effective January 1, 1955

EXAMINATIONS REQUIRED

An examination on Rules for the Maintenance of Way and Structures, Signal and Communication Departments is required of applicants for employment as:

ROADMASTERS

ASSISTANT ROADMASTERS

TRACK SUPERVISORS

BRIDGE & BUILDING SUPERVISORS

ASSISTANT B&B SUPERVISORS

B&B INSPECTORS

B&B FOREMEN

TUNNEL FOREMEN

WORK EQUIPMENT ROADWAY MACHINE OPERATORS

ROADWAY MACHINE AND TRACK CAR MAINTAINERS AND REPAIRMEN

RAIL REPAIRMEN, FOREMEN, WELDERS & RAIL GRINDERS

WATER SERVICE FOREMEN

WATER SERVICE REPAIRMEN

SIGNAL SUPERVISORS

ASSISTANT SIGNAL SUPERVISORS

SIGNAL INSPECTORS

SIGNAL FOREMEN

SIGNAL MAINTAINERS

## INSTRUCTIONS

To insure uniform understanding of the Rules for the Maintenance of Way & Structures, Signal and Communication Departments, the authorized examiners will examine and instruct employes in accordance with this Catechism.

For convenience, questions and answers in the Catechism have been grouped as follows:

- I. - All employes subject to examination on Rules for the Maintenance of Way and Structures, Signal and Communication Departments.
- II. - All employes authorized to operate track cars.
- III. - All foremen.
- IV. - Bridge, building and tunnel foremen.
- V. - Track foremen.
- VI. - Work equipment and roadway machine operators, roadway machine and track car maintainers and repairmen.
- VII. - Rail repairmen, foremen, welders and rail grinders.
- VIII. - Water service foremen.
- IX. - Signal foremen.

Employes embraced in Groups I and II are to pass examination on questions 523 to 530 inclusive, in addition to the questions under their particular group.

Employes embraced in Groups III, IV, V, VI, VII, VIII and IX are to pass examinations on questions listed under Groups I and II, in addition to the questions under their particular group.

Employes embraced in Group III are to pass examination on questions 411 to 417 inclusive, in addition to the questions under their particular group.

Employes in Group IV are to pass examination on questions 483 to 485 inclusive, in addition to the questions under their particular group.

Employes in Group V are to pass examination on questions 418 to 484 inclusive, in addition to the questions under their particular group.

GROUP I

ALL EMPLOYES SUBJECT TO EXAMINATION ON RULES  
AND REGULATIONS FOR THE MAINTENANCE OF WAY &  
STRUCTURES, SIGNAL AND COMMUNICATION  
DEPARTMENTS

1. Q. What is of the first importance in the discharge of duty?  
A. Safety.
2. Q. What is essential to safety?  
A. Obedience to the rules.
3. Q. To enter or remain in the service is an assurance of willingness to do what?  
A. Obey the rules.
4. Q. What does the service demand?  
A. The faithful, intelligent and courteous discharge of duties.
5. Q. Must you provide yourself with a copy of the Book of Rules for the Maintenance of Way & Structures, Signal and Communication Departments?  
A. Yes.
6. Q. Must employes whose duties are in any way affected by the timetable have a copy of the current timetable with them while on duty?  
A. Yes.
7. Q. Must employes be conversant with and obey the rules and instructions?  
A. Yes.
8. Q. If in doubt as to the meaning of a rule, to whom must employes apply for an explanation?  
A. Proper officer.
9. Q. In case of doubt where immediate action is necessary, what must be done?  
A. The safe course taken.
10. Q. Must employes subject to the rules pass the required examination?  
A. Yes.
11. Q. Must employes attend the examination, quiz classes and instruction classes?  
A. Yes.

12. Q. Are employes required to render every assistance in their power in carrying out the rules and instructions?
- A. Yes.
13. Q. Must you report to the proper officer by quickest available means of communication the details of accidents, failure in the supply of water or fuel, defects in track, bridges, signals or any unusual condition which may affect the movement of trains?
- A. Yes.
14. Q. Is the use of intoxicants or narcotics by employes subject to duty or their possession or use while on duty prohibited?
- A. Yes.
15. Q. How must you care for property of the railroad including freight and articles of value found in or on cars or on the right-of-way?
- A. Must be cared for, properly reported and not in any way disposed of or removed from railroad premises or right-of-way without first securing proper authority?
16. Q. What is the primary duty of all employes?
- A. A constant presence of mind to insure safety to themselves and others
17. Q. Must employes exercise care to avoid injury to themselves and others?
- A. Yes.
18. Q. Must employes observe condition of equipment and tools which they use in performing their duties?
- A. Yes.
19. Q. When found defective, what must be done?
- A. If practicable, employes must put them in safe condition and then report defects to proper authority.
20. Q. Define an absolute signal.
- A. A block or interlocking.
21. Q. Home signal.
- A. Designated by letter "A" or by absence of a number plate.
22. Q. What is an automatic block signal system?
- A. A series of consecutive blocks governed by block signals actuated by a train, engine or by certain conditions affecting the use of a block.
23. Q. Define a block.

- A. A length of track between consecutive home signals governing in one direction or from a home signal to a sign reading, "Block Signal System Limit", the use of which by trains and engines is governed by block signals.
24. Q. Define a block signal.
- A. A fixed signal at the entrance of a block to govern trains and engines entering and using that block.
25. Q. Define current of traffic.
- A. The movement of trains on a main track in a designated direction specified by the rules.
26. Q. Define a division.
- A. That portion of a railroad assigned to the supervision of a superintendent.
27. Q. Define double track.
- A. Two main tracks upon one of which the current of traffic is in a specified direction and upon the other in the opposite direction.
28. Q. What is a dual-controlled switch?
- A. A power operated switch which is also equipped for hand-throw operation.
29. Q. What is an electric switch lock?
- A. An electrically operated mechanism applied to a switch or derail to prevent its operation except under prescribed conditions.
30. Q. What is an engine?
- A. A unit propelled by any form of energy or combination of such units operated from a single control used in train or yard service.
31. Q. What is an extra train?
- A. A train not authorized by a timetable schedule.
32. Q. For what may the designation "extra" be used?
- A. For any extra train except work extra.
33. Q. For what may the designation "work extra" be used?
- A. For work train extra.
34. Q. Define a fixed signal.
- A. A signal of fixed location indicating a condition affecting the movement of a train or engine.
35. Q. Name examples of fixed signals.

- A. Switch, train order, block, interlocking, semaphore, stop signals, yard limit signs, slow signs, or other means for displaying indications that govern a movement of a train or engine.
36. Q. What is a grade signal?
- A. Automatic block signal equipped with yellow marker displaying a black letter "G".
37. Q. Define a home signal.
- A. A fixed signal at the entrance of a route or block to govern trains or engines entering and using that route or block.
38. Q. Define an interlocking.
- A. An arrangement of signals and signal appliances so interconnected that their movements must succeed each other in proper sequence and for which interlocking rules are in effect. It may be operated manually or automatically.
39. Q. What are interlocking limits?
- A. The tracks between the opposing home signals of an interlocking.
40. Q. What are interlocking signals?
- A. The fixed signals of an interlocking.
41. Q. What is an interlocking station?
- A. A place from which an interlocking is operated.
42. Q. Define a main track.
- A. A track extending through yards and between stations and upon which trains are operated by timetable or train order or both or the use of which is governed by block signals.
43. Q. Define a regular train.
- A. A train authorized by timetable schedule.
44. Q. What is a schedule?
- A. That part of a timetable which prescribes class, direction, number and movement for a regular train.
45. Q. What is a section?
- A. One of two or more trains running on the same schedule displaying the same signals or for which signals are displayed.
46. Q. What is a siding?
- A. A track auxiliary to the main track for meeting or passing trains.
47. Q. Define signal aspect.

- A. The appearance of a roadway signal conveying an indication as viewed from the direction of an approaching train.
48. Q. Define signal indication.
- A. The information conveyed by the aspect of a signal.
49. Q. Define single track.
- A. The main track upon which trains are operated in both directions.
50. Q. What is medium speed?
- A. A speed not exceeding 35 m.p.h.
51. Q. What is restricted speed?
- A. A speed that will permit stopping short of another train, obstruction or a switch not properly lined, and looking out for broken rails, not exceeding 15 m.p.h.
52. Q. What is a spring switch?
- A. A switch equipped with a spring mechanism arranged to restore the switch points to original position after having been trailed through.
53. Q. What is a station?
- A. A place designated in the timetable by name.
54. Q. What is a subdivision?
- A. A portion of a division designated by timetable.
55. Q. Define superior train.
- A. A train having precedence over another train.
56. Q. Define timetable.
- A. The authority for the movement of regular trains subject to the rules. It contains classified schedules with special instructions relating to the movement of trains.
57. Q. Define a traffic control system.
- A. A block signal system under which train movements are authorized by block signal whose indications supersede the superiority of trains for both opposing and following movements on the same track.
58. Q. Define a train.
- A. An engine or more than one engine coupled with or without cars displaying markers.
59. Q. Define train of superior class.
- A. A train given precedence by timetable.



60. Q. Define train of superior direction.
- A. A train given precedence in the direction specified by timetable as between opposing trains of the same class.
61. Q. What is a yard?
- A. A system of tracks within the defined limits provided for the making up of trains, storing of cars and other purposes, over which movements not authorized by timetable, or train order, may be made, subject to prescribed signals and rules or special instructions.
62. Q. How may a standard clock be distinguished from one that is not standard?
- A. Will bear the sign "Standard Clock".
63. Q. Must you use a watch that has been examined and certified to by a designated inspector?
- A. Yes.
64. Q. Do you understand that employes must carry their watch certificate while on duty and must present it to an authorized watch inspector for renewal during the month of November each year?
- A. Yes.
65. Q. Are employes required to show their watches and certificates to division officers, authorized watch inspectors and traveling watch inspectors upon request?
- A. Yes.
66. Q. When watches reflect a variation of more than 20 seconds from correct time when comparison is made, what must be done?
- A. It must be set to correct time.
67. Q. When does a new timetable supersede the preceding timetable?
- A. The moment it takes effect.
68. Q. Must employes whose duties are in any way affected by the timetable have a copy of the current timetable with them while on duty?
- A. Yes.
69. Q. Where on the timetable one time is given for a train at any station, is it the arriving or leaving time except at terminating station?
- A. The leaving time.
70. Q. Where two times are given, what are they?
- A. They are the arriving time and the leaving time.
71. Q. Unless indicated otherwise, where does the time apply at a station?

- A. At the clearance point where an opposing train enters the siding.
72. Q. Where there is no siding, where does it apply?
- A. at the train order signal.
73. Q. Where there is neither siding nor train order signal, where does it apply?
- A. The point where traffic is received or discharged.
74. Q. Do special instructions in the timetable or in pamphlet form supersede any rules with which they conflict?
- A. Yes.
75. Q. Double track will be indicated in brackets at which side of the station column?
- A. Right side.
76. Q. Automatic block signal system and traffic control system will be indicated within brackets at which side of the station column?
- A. Left.
77. Q. Must employes whose duties require them to give signals provide themselves with proper signal appliances and keep them in good order and ready for immediate use?
- A. Yes.
78. Q. When must signals of the prescribed color and type flags or lights, when so prescribed, be used?
- A. By day.
79. Q. When must lights of the prescribed color and type be used?
- A. By night.
80. Q. When must night signals be used?
- A. From sunset to sunrise, and when day signals cannot be plainly seen.
81. Q. What do the following color signals indicate:
- Red?
- A. Stop.
- Yellow?
- A. Proceed as prescribed by the rules.
- Green?
- A. Proceed and as otherwise prescribed.

White?

A. Flag stop and other purposes provided.

Blue?

A. Stop. Men working.

82. Q. If an unattended red flag or red lamp is displayed on or near the track, what action must be taken?

A. Stop, then must be preceded by a flagman who must carefully examine track and structures for a distance of 4,000 feet from point where signal is displayed.

83. Q. If displayed beyond the first rail of an adjoining main track, will it apply to the track on which the train is running?

A. No.

84. Q. Whenever, for any cause, it is necessary to temporarily require trains or engines to reduce speed over any structure or portion of track, what signals will be displayed in both directions?

A. Yellow signals on the right side of the track in the direction of approach one mile in advance of point where speed is to be reduced.

85. Q. What signal will be displayed immediately beyond the track or structure affected?

A. A green signal.

86. Q. At what speed must trains and engines move over reduced speed track unless otherwise directed by train order or bulletin?

A. 15 m.p.h.

87. Q. How long must the speed prescribed be maintained?

A. Until rear of train passes green signal.

88. Q. Where will speed control boards as prescribed in Rule 10(C) be placed?

A. Four thousand feet in advance of point of restriction on right side of track in direction of approach.

89. Q. Where two numbers appear on a speed control board, do you understand that the higher number indicates the maximum for passenger trains and the lower number for all other trains?

A. Yes.

90. Q. Where but one number is shown, to what trains does it apply?

A. Both conventional passenger and freight trains.

91. Q. To what trains on this railroad do figures on yellow round speed control boards apply?

- A. Diesel powered streamlined passenger trains as designated by special instructions in the timetable or by bulletin.
92. Q. What will a train or engine finding a fusee burning on or near its track do?
- A. Must stop and extinguish the fusee and proceed at restricted speed for not less than one mile.
93. Q. May track cars move over a burning fusee?
- A. No.
94. Q. May maintenance of way employes extinguish a fusee found burning on or near tracks?
- A. No.
95. Q. Do you understand that burning fusees must not be placed on bridges, road crossings, sign boards or places where damage from fire may result?
- A. Yes.
96. Q. Is it understood that burning fusees must not be thrown off in tunnels, and if necessary to use in tunnel, they must be held in the hand or placed securely in the earth or ballast in such a manner that it would be impossible for fire to be communicated to woodwork within the tunnel?
- A. Yes.
97. Q. What is the indication of hand, flag and lamp signals when used in the following manner:
- Swung at right angle to track?
- A. Stop.
- Slight horizontal movement at arms' length at right angle to track?
- A. Reduce speed.
- Raised and lowered vertically?
- A. Proceed.
- Swung vertically in a circle at right angle to track?
- A. Back.
98. Q. What signal is any object waved violently by anyone on or near the track?
- A. Stop.
99. Q. Must hand, flag or lamp signals be used in accordance with the rules?
- A. Yes.

100. Q. How must those giving signals give them?  
A. So as to be plainly understood. (R7)
101. Q. What is the indication of engine horn or whistle signal when sounded as follows:  
Q. One short?  
A. Apply brakes. Stop.
102. Q. Two long?  
A. Proceed
103. Q. A long and three shorts?  
A. Flagman protect rear of train.
104. Q. Three shorts and a long?  
A. Flagman protect front of train.
105. Q. Four long?  
A. Flagman may return from west as prescribed by Operating Rules.
106. Q. Five long?  
A. Flagman may return from east as prescribed by Operating Rules.
107. Q. Two short?  
A. Answer to 14(k) or any signal not otherwise provided for. Not to be given in answer to a fixed signal, yellow signal, torpedoes or unattended fuses.
108. Q. Three short?  
A. When standing, back. Answer to 12(d).
109. Q. Four short?  
A. Call for signals.
110. Q. Two long, a short and a long?  
A. Approaching public crossing and grade to be prolonged or repeated until crossing is occupied by engine; approaching a train which is stopped on opposite track or siding; also as frequently as necessary when moving in fogs or storms and between 6:30 a.m. and 6:30 p.m. approaching tunnels, and before passing around curves where view is obscured.
111. Q. One long?  
A. One mile before reaching stations, junctions, draw bridges and railroad crossings at grade. When standing, apply air from rear of train, such application to be answered by 14 (g).

112. Q. A succession of short sounds?  
A. Alarm for persons or livestock on the track.
113. Q. A long and a short?  
A. When running against the current of traffic, approaching stations, curves, or other points where view may be obscured. Also, approaching passenger or freight trains and when passing freight trains.
114. Q. What signal is the explosion of two torpedoes? (15)  
A. To immediately reduce speed and proceed prepared to stop short of train or obstruction, but not exceeding medium speed for a distance of one mile from the point where torpedoes were exploded.
115. Q. May torpedoes be placed on public crossings, near station buildings or yards except in an emergency? (15)  
A. No.
116. Q. What should be done when torpedoes are exploded, damaged or displaced?  
A. They should be replaced. (15)
117. Q. What will be displayed to the front of every train by day and night?  
A. The headlight, except when switching. (17)
118. Q. When should the headlight be extinguished? 17  
A. When train has turned out to meet another train and has stopped clear of main track or standing to meet a train at the end of double track or junction.
119. Q. When an engine is running backward, what must be displayed by night on the rear?  
A. Headlight. If no headlight, a white light.
120. Q. What must be done when the headlight fails enroute?  
A. A white light must be substituted.
121. Q. On engines equipped with a white oscillating headlight, when will it be displayed? 17  
A. It must be displayed at night when approaching a street or highway crossing at grade and while passing over such crossings and at all times during the day when weather conditions impair visibility.
122. Q. On engines equipped with a red oscillating headlight when will it be displayed? 17  
A. By day or by night when train is stopped suddenly under circumstances in which adjacent tracks may be fouled, or in an emergency until flag protection ahead has been provided.

123. Q. What signals will be displayed at the rear of every train as markers?  
 A. By day, marker lamps not lighted in places provided. By night, marker lamps lighted showing red to the rear and green to the front and side. <sup>19</sup>
124. Q. When the rear unit of a train or engine is equipped with built-in electric markers or electric signal lamps, must they be lighted by day as well as by night to be considered as markers?  
 A. Yes. <sup>19</sup>
125. Q. What will all sections except the last one display in the place provided for that purpose on front of the engine? <sup>20</sup>  
 A. Two green flags by day and in addition two green lights by night.
126. Q. What will extra trains display in the place provided for that purpose on the front of the engine? <sup>21</sup>  
 A. Two white flags by day, and in addition two white lights by night.
127. Q. When an engine is equipped with indicators, will an extra train display white flags? <sup>21</sup>  
 A. No.
128. Q. When two or more engines are coupled, do both engines display the same signals and indicators?  
 A. Yes.
129. Q. Do you understand that Rules 20, 21 and 23 will not apply in TCS territory?  
 A. Yes.
130. Q. What does a blue signal displayed at one or both sides of an engine, car or train indicate?  
 A. That workmen are under or about.
131. Q. When thus protected, may it be coupled to or moved?  
 A. No.
132. Q. Who will display the blue signals?  
 A. Each class of workmen.
133. Q. Who is authorized to move them?  
 A. Only the same class of workers who placed the blue signals.
134. Q. How must a signal imperfectly displayed or the absence of a signal at a place where a signal is usually shown be regarded?  
 A. At its most restrictive indication.

135. Q. What is the exception to this requirement?
- A. When the day indication can be plainly seen it will govern.
136. Q. When and to whom must a signal imperfectly displayed or the absence of a signal at a place where a signal is usually shown be reported?
- A. To the chief train dispatcher.
137. Q. What signal should be used to stop a train at the flag stations indicated on the schedule?
- A. A white signal.
138. Q. Do you understand that when a signal except a fixed signal is given to stop a train, it must be acknowledged by proper signal unless otherwise provided?
- A. Yes.
139. Q. What day signal will be used by flagman?
- A. A red flag, torpedoes and fusees.
140. Q. What night signals will be used by flagman?
- A. A white light, torpedoes and fusees.
141. Q. Anyone changing rails or in any way working on track, bridges or tunnels rendering the track impassible what must be done?
- A. Flagman must be immediately sent in both directions with flagmen's signals a sufficient distance to insure full protection.
142. Q. What is the exception to the rule?
- A. It is not necessary to send out flagman where clock time is given in TCS territory.
143. Q. During foggy or stormy weather or when on descending grade or in vicinity of obscure curves, what will flagman do?
- A. He will increase the distance placing two torpedoes at every one-fourth mile beyond the second set of torpedoes.
144. Q. If the flagman sees or hears a train approaching before he reaches the required distance, what must he do?
- A. He must at once place two torpedoes on the rail on the engineer's side and go toward the approaching train, giving stop signals with a red flag, and if at night or during foggy or stormy weather, display a lighted fusee.
145. Q. How may flagman be recalled?
- A. The foreman personally or a reliable man delegated by the foreman must orally notify him that the track has been made safe for the passage of trains.



146.Q. How is flagman to know who will recall him?

A. Foreman must inform the flagman in advance of identity of man who will recall him.

147.Q. May flagman accept recall from anyone else?

A. Not unless given a written notice from the foreman.

148.Q. May flagman be recalled by giving a signal?

A. No.

149.Q. What must flagman do after he is recalled?

A. He will remove all torpedoes that he has placed.

150.Q. What understanding must be had between the foreman and flagman before he is sent out?

A. A clear understanding of what the flagman is to do.

151.Q. Before sending out flagman providing there is sufficient time, what must foreman give flagman?

A. He must give each flagman Form 2501 properly filled out.

152.Q. What must flagman do with Form 2501?

A. He must show it to the engineer of each train flagged, and when necessary, explain more fully the reason for flagging.

153.Q. When alone if track or bridge is found unsafe, what must be done?

A. Immediately place a red flag by day or a red light by night in both directions 20 rail lengths from the point of obstruction.

154.Q. What must be done after red signals are placed?

A. Place two torpedoes on the rail one-half mile from the red signal and an additional set of torpedoes one and one-quarter miles from the red signal.

155.Q. What must be done in the opposite direction?

A. Place torpedoes in the same way and return to the point of obstruction

156.Q. Is it understood that you must remain there until relieved by another flagman?

A. Yes.

157.Q. If a train approaches, what must you do?

A. Go toward it and flag it with hand signals.

158.Q. On a grade what should the flagman do?

- A. He should first protect against trains on descending grade unless he has information that train from opposite direction will reach the obstruction first.
159. Q. Is it understood that when flagman is sent out to protect track conditions that they must remain on continuous duty including the meal period unless relieved by foreman or by another flagman carrying foreman's written instructions?
- A. Yes.
160. Q. Can protection required by Rule 2000 be given in any other manner?
- A. Yes. By train order on such light traffic subdivisions as may be designated by the superintendent.
161. Q. After train dispatcher has advised the foreman or man in charge that train order protection has been provided, what must the foreman do?
- A. He must have a special designed metal red flag placed 400 feet in each direction in advance of structure or track being protected.
162. Q. What must be placed in advance of the metal red flag?
- A. Yellow restricting signals must be placed 5,280 feet (one mile) in advance of the metal red flags and two torpedoes must be placed on the rail 300 feet in advance of the yellow signals.
163. Q. Who is permitted to place and remove the specially designed metal red flags?
- A. Only the foreman or man in charge.
164. Q. If the work is not completed and track or structure not restored for normal use within the time limit specified in the train order, what must be done?
- A. Flag protection must be provided in accordance with Rule 2000.
165. Q. What is the maximum length of track that can be protected by train order?
- A. One mile.
166. Q. Can train order protection be provided between sunset and sunrise or during stormy or foggy weather or when signals cannot be plainly seen?
- A. No.
167. Q. Must trains and engines be protected against any known condition which interferes with their safe passage at normal speed?
- A. Yes.
168. Q. When conditions are found which may interfere with the safe passage of trains at normal speed and no protection has been provided, must such action be taken as will insure safety?

A. Yes.

169. Q. Whenever from any cause it is necessary to temporarily require trains to reduce speed over any structure or portion of track, what signs must be displayed?
- A. Restricted speed and resume speed to protect in each direction.
170. Q. What is the color of the restricted speed signs and where located?
- A. Yellow sign by day and in addition a yellow light by night except when having reflectorized material on engineer's side of track not less than one mile from point where the restricted track begins.
171. Q. What is the color of the resume speed signs and where located?
- A. Green sign by day and in addition a green light or reflectorized material by night on engineer's side of track 150 feet from where the restricted track ends.
172. Q. What must be done in addition to displaying restricted speed and resume speed signs?
- A. Train dispatcher, division engineer and roadmaster or supervisor must be notified.
173. Q. What advice must this notification include?
- A. Nature of trouble, location and speed limit to be observed.
174. Q. At what speed must trains move over restricted speed track in the absence of specified instructions?
- A. Not to exceed 15 m.p.h.
175. Q. Must messages or orders concerning the condition of track, bridges or structures that affect the movement of trains be in writing?
- A. Yes.
176. Q. If telegraph operator is available with whom must message be filed?
- A. Information must be filed in writing with telegraph operator.
177. Q. If telegraph operator is not available with whom must message be filed?
- A. Such information shall be given over the telephone to train dispatcher, division engineer, roadmaster, or applicable supervisor.
178. Q. Must any employe observing a condition that may result in an accident or interruption of train operation make prompt report and if necessary arrange proper protection?
- A. Yes.

179. Q. If any defect or condition which might cause an accident is discovered in track, bridges, culverts, or other structure, can the telegraph or telephone be depended upon to notify trains or must a flagman be left?
- A. No. A flagman must be left.
180. Q. Whenever a part of any bridge has been damaged, when may a train or engine be permitted to pass over the structure?
- A. Not until it is known structure is safe for traffic.
181. Q. Should a steel span forming part of a bridge be damaged, when may a train be allowed to cross?
- A. Not until authorized by the superintendent.
182. Q. After making sure no train will be allowed to cross until authorized by superintendent, what must be done?
- A. An immediate inspection must be made to determine nature and extent of damage and report wired to superintendent, division engineer and supervisor.
183. Q. Are foremen responsible for the position of switches used by them and their men?
- A. Yes.
184. Q. Who is responsible for return of switches and derails to their proper position after use?
- A. The foreman.
185. Q. When two or more gang cars are using the same switch, who must close it?
- A. The employe opening the switch.
186. Q. After employe has set switch for main track, what must he do?
- A. He must test the lock to know that it is secure and see that the switch points fit properly.
187. Q. Must main track switches and other switches equipped with switch locks be left locked and switches not equipped with locks be left hooked?
- A. Yes.
188. Q. If main track switch lock is found defective or missing, what must be done immediately?
- A. Lock must be replaced or switch securely spiked for main track movements.
189. Q. To whom must the fact be reported?
- A. To the train dispatcher, and when practicable, to the track foreman.

190. Q. Must employes obtain authority from train dispatcher before operating remotely controlled switches by hand?
- A. Yes.
191. Q. What is first required before attempting to operate an electrically locked switch?
- A. Secure permission from the train dispatcher.
192. Q. What must be done with derails after they have been used?
- A. They must be set to derail, and must be locked in that position.
193. Q. May maintenance of way employes handle switches for trainmen?
- A. No, except to prevent an accident.
194. Q. In case of doubt or uncertainty what course must be taken?
- A. The safe course.
195. Q. What must employes avoid when trains are passing?
- A. Standing on or near track. Standing on any track in multiple track territory and in yards or at stations where there are adjacent tracks.
196. Q. In what vicinity may employes stand near a switch while trains are approaching or passing?
- A. They must not stand within 25 feet of switch.
197. Q. Are employes permitted to stand in front or in rear of switch stand that would obscure view of target from enginemen or trainmen?
- A. No.
198. Q. Must employes do all in their power to prevent accidents, even though in so doing they may perform the duties of others?
- A. Yes.
199. Q. Must employes observe passing trains for defects when practicable?
- A. Yes.
200. Q. Before train passes what must be done?
- A. The foremen must divide their gangs, where practicable and safe, so that train can be closely observed from both sides.
201. Q. What defects should employes look for?
- A. Brakes sticking, wheels sliding, brake rigging down, swinging doors, hot journal, protruding objects, lading dangerously shifted, evidence of fire, or any other condition which will endanger movement of train.

202. Q. What will employes noting such defects do?
- A. Will give stop signal.
203. Q. If unable to communicate signals to member of crew of train, what will be done?
- A. Will notify train dispatcher immediately if practicable.
204. Q. When two or more gangs are working close together, must care be taken to prevent confusion of restricted speed and stop signals?
- A. Yes.
205. Q. Are the foremen equally responsible and must they have a mutual and definite understanding and arrange for full protection of the work as prescribed by the rules?
- A. Yes.
206. Q. Do you understand that extreme care must be exercised when working on tracks obscured by fog, and any work that will render the track unsafe for passage of trains at regular speeds should as far as practicable be postponed until the fog lifts?
- A. Yes.
207. Q. Is it understood that it is the duty of all employes to report by wire defects in tracks, bridges and equipment, or obstructions of any kind to the train dispatcher, and when practicable to the nearest track or bridge foreman?
- A. Yes. And when necessary, proper signals must be used to stop trains.
208. Q. Do you understand that where there is reason to believe that the track or any structure is in any danger by flood, fire or other causes, employe must, before permitting its use, make a personal inspection using all precautions?
- A. Yes.
209. Q. Any conditions likely to affect the safety of trains such as storms, floods, fire, etc. what must be done?
- A. It must be reported by wire immediately and be watched.
210. Q. Is it understood that in case of threatening or prevailing storms track must be patrolled and all bridges, culverts and other places in track liable to be affected must be closely watched?
- A. Yes.
211. Q. In case of damage to trains or structures wherein the security of freight or railway property is involved, what must be done?
- A. See that watchman is stationed to protect such property against theft or loss.

212. Q. Must employes report at the appointed time and devote themselves exclusively to their duties?
- A. Yes.
213. Q. May employes exchange duties with others or substitute others in their place without proper authority?
- A. No.
214. Q. Should employes subject to emergency call keep their immediate superior and the chief train dispatcher informed as to their whereabouts whenever practicable?
- A. Yes.
215. Q. When trains are being delayed by accident or from other causes, may the conductor or engineer call upon any employe for assistance?
- A. Yes.
216. Q. Is it understood unless authorized that no test of materials, appliances or devices shall be made on railroad property, or results of authorized tests be given?
- A. Yes.
217. Q. What is required of all employes to avoid killing of livestock?
- A. They must put forth every effort to prevent same. Driving stock off right-of-way when they can. If unable to drive off, make report by telephone or telegraph of livestock seen on right-of-way. Such reports should be made to train dispatcher, and when practicable to nearest track foreman.
218. Q. Should employes familiarize themselves with the location of wires and when work involves the use of derrick, pile drivers, drag lines or other work equipment which will interfere with the wires make arrangements in advance for protection.
- A. Yes.
219. Q. Are employes handling work equipment required to use every precaution to prevent damage or interference to wires?
- A. Yes.
220. Q. Must special care be exercised when burning of right-of-way, rubbish, ties, etc., to prevent damaging poles or annealing wires?
- A. Yes.
221. Q. If practicable, should ties and rubbish be burned on the opposite side of track from railroad owned wires?
- A. Yes.
222. Q. Should employes familiarize themselves with the location of wires carrying high voltage?

- A. Yes.
223. Q. What employes are permitted to handle high voltage wires or other wires or metal in contact with them?
- A. Only qualified employes.
224. Q. What should be ascertained in advance of excavating on carriers right-of-way?
- A. The location of underground cables, pipes, conduits, wires, parkway cables, etc. must be determined.
225. Q. What should be done if railroad telegraph and telephone wires are found broken?
- A. They must be temporarily repaired or if that is impracticable fasten so as not to touch other wires.
226. Q. Do you understand that signal and power wires must not be handled except for emergency repairs by other than qualified employes except under supervision of signalman, lineman or other qualified employe?
- A. Yes.
227. Q. Are employes permitted to use the communication lines unnecessarily or offer messages for transmission on railroad wires pertaining to their personal affairs except in case of accident or sickness?
- A. No.
228. Q. Is it permissible to send personal letters by company mail?
- A. No. To do so is a violation of the U. S. postal laws.
229. Q. Must employes promptly inform their immediate supervisor of any and all public improvements contemplated that may affect railroad interests, such as drainage, levees, roads, paving, sewers, etc., and mail to their superior officer any and all public notices on such whether by posters, petition, city ordinance or news item?
- A. Yes.
230. Q. Do you understand that the placing of unauthorized advertising on railroad property is prohibited?
- A. Yes.
231. Q. Do you understand that the rules prescribed for certain positions are designed to show their relation to the general organization and to define in a general way some of their principal duties but in no manner to relieve them from properly observing all rules or other employes from observing the rules referred to insofar as they relate to the proper discharge of duties?
- A. Yes.



GROUP II  
ALL EMPLOYES AUTHORIZED TO OPERATE TRACK CARS

232. Q. Unless indicated otherwise, to what does the term "car" apply?
- A. Motor cars, velocipedes, trailers and push cars, and all on-track roadway machines.
233. Q. Who may operate a car on main track?
- A. Only a responsible employe who has qualified by passing such examinations as may be prescribed who has a standard watch and who has familiarized himself with instructions contained in Rules 2033 to 2068 inclusive.
234. Q. In addition to copy of current timetable, what signal equipment must be on the car whenever it leaves a toolhouse, camp cars or other point of tie up?
- A. By day two red flags, 12 fusees, not less than 24 torpedoes. By night two lanterns with clear globes, two red flags, 12 fusees, not less than 24 torpedoes
235. Q. What is the maximum speed the following cars can be operated:
- (a) Light inspection cars?
  - (b) Gang cars without trailers?
  - (c) Gang cars with trailers?
  - (d) Hand propelled cars?
  - (e) All cars through tunnels?
- A. (a) 30 m.p.h.  
(b) 20 m.p.h. (10 m.p.h. on curves)  
(c) 15 m.p.h. (10 m.p.h. on curves)  
(d) 10 m.p.h.  
(e) 10 m.p.h.
236. Q. Rule 2038 prescribes maximum speeds permitted for motor cars. In many cases, track or other conditions may require you to run slower to insure safety at all times and under all conditions. Do you so understand?
- A. Yes.
237. Q. Do you understand that the speed of a car must be such that the car can be stopped in less than one-half the distance track is seen to be clear?
- A. Yes.
238. Q. For example, if the track is seen to be clear for 400 feet, how must the car be run?
- A. It must run at a speed that it can stop within 200 feet.
239. Q. What is important in the operation of cars?
- A. Care, caution, alertness, full use of eyes and ears, and use of

prescribed signals to protect when necessary.

240. Q. What must be done when two or more men are with a motor car and view is obstructed due to curves, tunnels, storms, or fog, or when side clearance is not sufficient to take the car off?
- A. They must flag.
241. Q. Where one-man cars are operated under the above conditions, what must be done?
- A. He must proceed with extreme care, walking if necessary, keeping sharp lookout for trains and motor cars in both directions, making frequent stops as necessary to listen for approaching trains.
242. Q. What precautions must be taken when operating in fog, storm or at night where view is obstructed in any way or when the car cannot be quickly removed from track because of weight or insufficient side clearance, poor footing or any other condition making it unusually difficult to handle the car?
- A. Special care must be used and if conditions require must only proceed under flag protection.
243. Q. Does written information showing approximate time of arrival of trains at a given point confer authority to occupy the main track?
- A. No.
244. Q. How may main track be occupied by track cars?
- A. Only by full compliance with all rules.
245. Q. Do you understand that when a line-up is copied by an employe in charge of track car, that he must repeat it to the operator or train dispatcher for verification?
- A. Yes.
246. Q. Do you understand that within TCS territory as designated by the superintendent motor cars will move by block authority on the basis of time between certain station or mile post limits?
- A. Yes.
247. Q. Are you assigned to work in any of these specified limits, and if so, what are they?
- A. (If working in limits where clock time is required, show limits).
248. Q. What must motor car operator do prior to the expiration of time limit?
- A. He must have his motor car clear of the main track and release the clock time to dispatcher.

249. Q. Must block time be released as soon as you are through with it?
- A. Yes.
250. Q. May block authority be issued to more than one motor car?
- A. No.
251. Q. If block authority has been issued to a motor car, how can another motor car enter that block?
- A. Arrangements must be made between the two motor car operators, and the motor car operator to whom authority has been granted is strictly responsible for knowing that the other motor car or motor cars, if more than one, are clear of the main track before releasing the block.
252. Q. Do you understand that when two or more motor cars move in the same block under this provision, motor car operators must have a definite understanding with each other?
- A. Yes.
253. Q. May a car ever be left on main track or siding unprotected?
- A. No.
254. Q. Must at least one man face rear when gang cars are running on main track?
- A. Yes.
255. Q. What traffic must be given preference at highway grade crossings?
- A. Highway traffic.
256. Q. May cars be operated over any crossing protected by manually controlled gates or flagman until gates are down or flagman is in proper position for flagging street traffic, and it is known that street traffic has been stopped?
- A. No.
257. Q. Must cars stop before passing over all crossings protected by automatic crossing signals?
- A. Yes.
258. Q. What is necessary to prevent derailment of car?
- A. Keep sharp lookout at all times for any obstructions on the rail or in flangeways that are likely to derail the car.
259. Q. How may cars pass over any switch or frog?
- A. Power must be shut off and speed reduced to one-half the maximum authorized.

260. Q. How may cars pass over a remotely controlled or interlock switch or derail?
- A. Car must be stopped. It may then be pushed through or operated through at a speed not exceeding 4 m.p.h. (walking speed).
261. Q. May cars be run or pushed through spring switches?
- A. No. They must be lifted over or if car loaded too heavily to lift the switch can be thrown.
262. Q. What must be done when approaching workmen or others on or near the track?
- A. Speed must be reduced, and if necessary, car stopped.
263. Q. Except where proper safeguards are provided or movement is otherwise protected, may a car pass between the train and platform at which passengers are being received or discharged?
- A. No.
264. Q. When about to pass a moving train on adjacent track, what must be done?
- A. Car must be stopped. If on a main track, car must be removed from the track unless the view of approaching train on that track from either direction is unobstructed.
265. Q. How far must a car stop behind a standing train?
- A. Not less than 500 feet.
266. Q. How far must a car be run behind: (a) a moving train? (b) another moving car?
- A. (a) 1000 feet (b) 500 feet.
267. Q. What must operator on the rear car do where two cars are following each other?
- A. He must keep a sharp lookout for signals from the car in front.
268. Q. When car in front contemplates on stopping, what should the operator do?
- A. He should signal the operator on the rear car that he is going to stop and should receive stop signal from the operator on rear car before stopping.
269. Q. Should each man in a regular gang be assigned a place to ride?
- A. Yes.
270. Q. May scuffling or changing positions while car is in motion be permitted?
- A. No.

271. Q. What precaution must be taken to insure brakes are working?
- A. They must be tested at sufficient intervals and before beginning day's work to know brakes are working. When men are transported on trailers, one man must be assigned to handle trailer brakes.
272. Q. May employes ride on push cars?
- A. No.
273. Q. Under what conditions may trailer car be pushed by a motor car?
- A. When used to haul concrete or other materials on the bridges, trestle or in tunnels. The empty car may be pushed on return trip to mixing plant or storage pile at a speed not to exceed 6 m.p.h. provided approved coupler is used and no person rides on car being pushed.
274. Q. May trailers and other cars being towed be coupled to motor cars with a rope, wire, chain or other makeshift coupler?
- A. No.
275. Q. Must cars stop before passing over railroad crossings at grade unless crossing is protected by gates which are set against other line?
- A. Yes.
276. Q. When necessary to operate at night, during fog, storm or snow or through tunnels, what lights must be displayed?
- A. Head and tail lights must be turned on and remain lighted until car is removed from track.
277. Q. May main track switches be thrown for cars when the cars can be lifted over?
- A. No.
278. Q. How frequently must foreman or man in charge drill gang in removal of car from track, and why?
- A. At least once weekly so that each man will always know what he is expected to do.
279. Q. If torpedoes are observed on the rail, shall they be removed and replaced and not run over by car?
- A. They should be removed and replaced; must never be run over and exploded if possible to avoid doing so.
280. Q. May cars be used for other than railroad business, or may others than employes in the discharge of their duties be permitted to ride upon cars except with proper authority?
- A. No.
281. Q. When removed from track, how must car be placed?

- A. So that it will not foul the track. If at public or private crossings its position must be such that it will not in any manner obstruct or interfere with the traveled way.
282. Q. What must be done with cars at night and other times when not in use?
- A. They must be housed or have wheels locked. When not housed cars should be locked together or to some stationary object if possible.
283. Q. Do you understand that ONLY insulated cars may be used within track circuit limits?
- A. Yes.
284. Q. Who is responsible for the condition of the car?
- A. The employe to whom the car is assigned.
285. Q. Must he make a thorough inspection frequently as to insure that all bolts, nuts, cotter keys are in place and tight, that gasoline tank, feed pipes and connections do not leak, that rail sweeps, when provided, are in place and in proper adjustment, that brakes are in good condition and adjusted and that wheel gauge is correct?
- A. Yes.
286. Q. Under what conditions may cars be run backwards?
- A. In an emergency or very short moves in picking up and unloading tools and materials or to reach a point where car may be turned.
287. Q. Is it understood that when the car is run backwards under the above condition special precautions must be taken to afford protection for tools or equipment on car to prevent same from falling off and to avoid injury to persons or derailment of car?
- A. Yes.
288. Q. Do you understand that spark must be fully retarded before starting free running motors and when cranking a free running motor it must be done by giving crank a quarter turn, lifting on crank with fingers and thumb on same side of handle and keeping body as far away as possible?
- A. Yes.
289. Q. Is it permissible to spin or move crank by downward pressure when starting motor?
- A. No.
290. Q. If car is pushed to start the engine, must it be pushed from the rear?
- A. Yes.

291. Q. Must operator and all riders be mounted on the car except men assigned to push it?
- A. Yes.
292. Q. After engine is started, what must the operator do?
- A. Stop the car and permit pushers to mount the car in safety.
293. Q. Is it understood that this does not apply to men operating cars alone who should exercise precaution in starting motor by hand cranking and when mounting car from the rear after engine starts?
- A. Yes.
294. Q. Is it permissible to crank track car engine by turning flywheel over by hand or pulling it up on compression?
- A. No.
295. Q. May employes get on or off a moving track car except in an emergency?
- A. No.
296. Q. Have you read and do you understand the requirements of Rule 2068?
- A. Yes.

GROUP III  
ALL FOREMEN

297. Q. Is it understood that foremen are required to have in their possession all current rules, timetable, circulars, special instructions, manuals, plans and specifications necessary for their guidance?
- A. Yes.
298. Q. Do you understand that you must assure yourself that men you employ are able bodied within the prescribed age limits, have passed physical and other necessary examinations, are capable of doing the work for which hired, and that current instructions governing employment of men are observed?
- A. Yes.
299. Q. Must report of time for each employe be made daily on prescribed form?
- A. Yes.
300. Q. May foreman excuse neglect or habitual failure to render satisfactory work on the part of their men?
- A. No.
301. Q. Is it necessary for foremen to promptly comply with roadmaster's

or supervisor's instructions other than their own and render assistance in emergency even though work may not be directly connected with their duties?

A. Yes.

302. Q. If called from your work by an emergency, what must be done?

A. Leave most reliable man in charge and notify superior officer by wire.

303. Q. Must men selected to flag be alert, in good physical condition, and have a correct understanding of flagging rules?

A. Yes.

304. Q. Is it understood that you must give careful consideration in the exercise of sound judgment on your part in the placing of speed restrictions or other restrictive orders?

A. Yes.

305. Q. Should it be impracticable to follow plans and instructions given you, what must be done?

A. Secure authority of roadmaster or supervisor to deviate therefrom.

306. Q. What must be done before taking a track or any facility affecting the movement of trains out of service?

A. Notify the roadmaster or supervisor, division engineer and the trainmaster by wire.

307. Q. When the facility is restored to service, what must be done?

A. Make a report immediately by wire to the same officers.

308. Q. Do you understand that only insulated track gauges, gauge plates and switch and gauge rods will be used within track circuits?

A. Yes.

309. Q. Should conditions force you to use track jack between rails, what must be done?

A. Protect by flagging as prescribed by Rule 2000.

310. Q. What exception to this rule?

A. Flag protection is not required when track is taken out of service and switch is spiked.

311. Q. Have you read Rule 2116, and do you understand the importance of observing all current rules and instructions governing handling, loading, shipping and transporting work equipment?

A. Yes.



A. Yes.

407. Q. May repairs or alterations be made to cylinders or valves?

A. No.

408. Q. Is it permissible to use hammer or wrench to open oxygen cylinder valve?

A. No. If they cannot be opened by hand, they must be returned.

409. Q. Have you read Rule 2188 covering electric arc welding in track circuit territory?

A. Yes.

410. Q. Must you provide yourself with a copy of current instructions covering the ordering of new equipment or supplies and the disposition of bad order or unused equipment?

A. Yes.

TO BE ANSWERED BY EMPLOYES IN GROUP III

411. Q. Who are responsible and accountable for all tools, material and supplies in their charge?

A. Foremen and all others entrusted with tools and material.

412. Q. May tools and material be loaned to or exchanged with anyone unless properly authorized?

A. No.

413. Q. How far from nearest rail must material be stacked?

A. Not less than seven feet.

414. Q. Unless the duty is delegated to others, who is responsible for picking up and disposing of release scrap material?

A. The workman releasing the materials.

415. Q. Do you understand that cars must not be loaded beyond their limit and that the weight shall be equally divided with respect to trucks and side loads, and if in doubt as to the weight and distribution of load, car must be ordered weighed?

A. Yes.

416. Q. Are you familiar with the rules governing the loading of commodities on open top cars issued by the A. A. R. and special instructions?

A. Yes.

417. Q. Have you read and do you have a working knowledge of drainage Rules 2205 to 2210 inclusive?

A. Yes.

TO BE ANSWERED BY EMPLOYEES IN GROUP V

418. Q. Have you read and do you have a thorough understanding of the requirements of Rules 2211 to 2213 inclusive; ballast?

A. Yes.

419. Q. What is essential for safe and smooth riding track?

A. The maintenance of good line and surface.

420. Q. What must be done before lining track?

A. It must be leveled and put to proper gauge.

421. Q. Have you read and do you have a thorough knowledge of the requirements of Rule 2215; flat work?

A. Yes.

422. Q. When may out of face work be done?

A. Only when authorized by the division engineer.

423. Q. Where should track servicing be started, and how directed?

A. At fixed locations, such as end of bridges and paved crossings, and directed away from such points.

424. Q. May track be raised above top of rail markers in tunnels or under overhead structures?

A. No.

425. Q. May track be raised adjacent to platforms or other facilities without authorized grade stake?

A. No.

426. Q. Do you understand that when track is being raised and surfaced, runoff must be such as to provide safe and comfortable passage of trains at maximum permissible speeds, and in no case at a rate in excess of that specified in table given in Rule 2219?

A. Yes.

427. Q. Do you understand that the level board must be used when raising or servicing track by either the spot, flat or out of face method?

A. Yes.

428. Q. When using spot board, what must be checked each time board is reset?

A. The height of sight block and foresight stripe on the board.

429. Q. Do you understand the necessity for proper tamping?  
A. Yes.
430. Q. Why must jacks be set plumb?  
A. To avoid moving track out of line.
431. Q. Where must special attention be given to surface and line?  
A. At ends of bridges, over culverts, through turnouts, crossings and station platforms.
432. Q. Is it permissible to use shims?  
A. No, except in emergencies and shims must be removed as soon as possible.
433. Q. Have you familiarized yourself with the content of Rule 2227, and do you understand the necessity of exercising special care to prevent buckling of tracks due to sun kinks?  
A. Yes.
434. Q. Do you understand method of testing level boards?  
A. Yes.
435. Q. May level boards with loose tubes or otherwise inaccuracies be used?  
A. No.
436. Q. How is super-elevation to be secured?  
A. Maintain inner rail of curve at established grade and raise the outer rail above the established grade.
437. Q. What is the maximum super-elevation that may be used without authority of Chief Engineer?  
A. Five inches.
438. Q. May the established super-elevations and the length of spiral of any curve be changed without instructions from the division engineer?  
A. No.
439. Q. When necessary to run a part of the super-elevation out on tangent, what is the maximum super-elevation that may be placed on the tangent track without special permission?  
A. Not more than one and one-half inches.
440. Q. Do you have a clear understanding of the content of Rules 2239 to 2258 inclusive, turnouts and railroad crossings, and are you aware of the duties and responsibilities these rules impose upon you?  
A. Yes.

441. Q. What character of work is required at crossings and throughout length of turnouts?
- A. Railroad crossing ties and turnout ties, including head blocks, must be thoroughly and solidly tamped their entire length. Special attention must be given to the tamping of the joints at both ends of frogs and at the heel of switch points, and also to line, surface and gauge throughout turnouts and crossings.
442. Q. How often must you inspect turnouts?
- A. Main track turnouts at least once a week and all other turnouts at least once a month.
443. Q. Do you understand all the requirements of semi-annual inspection of switches as prescribed in Rule 2243?
- A. Yes.
444. Q. Must the semi-annual inspection of main track switches include removal of head rods (except on power switches or electric locked switches) and connecting rods and thorough hammer testing of transit clips, bolts and other connections applicable thereto?
- A. Yes.
445. Q. What inspection must be made of the heel of normally closed switch points?
- A. It must be disconnected and heel of point carefully examined for cracks or other defects on both sides of web base and ball of rail, unless an approved electronic searching device is utilized.
446. Q. What must be done before removing switch rods and clips or dismantling or removing switch stands?
- A. The switch must be spiked or other adequate protection provided.
447. Q. What must be done before making semi-annual inspection of switches in signal territory?
- A. Arrangements must be made with signalman in accordance with Rule 2248
448. Q. Do you understand all of the requirements embraced in Rule 2248 covering semi-annual inspection of switch stands?
- A. Yes.
449. Q. With whom must you make a joint inspection of spring switch stands semi-annually?
- A. The signal foreman or signalman.
450. Q. What must be done after each semi-annual inspection of a spring switch?

- A. In addition to requirements common to inspection of all switch stands and switches, this inspection must include checking pressure of switch point against stock rail and a close examination of spindle crank, connecting rod and clevice, piston rod and all other working parts for cracks, fissures and excessive wear.
451. Q. How shall main track switch stands be located and installed where possible?
- A. Located on the closed point side or turnout side of track and in terminals and yards switch stands may be placed on either side of track, giving special attention to the convenience of switchmen and trainmen.
452. Q. In what manner shall switch locks be chained to the switch stand?
- A. To prevent locking switch in wrong position.
453. Q. How must connecting rod and switch rod bolts be inserted?
- A. They must be inserted from below to permit readily inspection of nuts, and these bolts must be provided with cotter keys properly spread.
454. Q. Guard rails shall be placed so that the distance from gauge side of frog to guard face of guard rail will be what distance?
- A. Four feet, six and five-eighths inches.
455. Q. For standard gauge track of  $4'8\frac{1}{2}"$ , what must be the standard width of flange way?
- A. One and seven-eighths inches.
456. Q. If gauge is widened for curvature, must flange way also be widened the same amount?
- A. Yes.
457. Q. Where must safety blocking be maintained?
- A. At guard rails, frogs and switches in accordance with standard plan.
458. Q. May self guarded frogs be used in main tracks or sidings?
- A. No, unless authorized by Chief Engineer.
459. Q. Do you understand that derails should not be placed on inside rail on curves and if necessary, switch point derails shall be used?
- A. Yes.
460. Q. Do you understand that derails must be of proper size and fit rail sections and must not be shimmed or ties notched to make them fit?
- A. Yes.

461. Q. Have you read Rules 2259 and 2260 pertaining to the use of new rails?  
A. Yes.
462. Q. How must rails be handled in loading, unloading and laying them?  
A. With much care to prevent damaging them.
463. Q. May holes in rails be punched or formed with a torch?  
A. No.
464. Q. Do you understand that extra length rails should be used to avoid joints at bridge ends, through highway grade crossings, through tunnels and by station platforms?  
A. Yes.
465. Q. May rails shorter than one-half of full length be used in main track?  
A. No, except for temporary work.
466. Q. Do you recognize that uniform gauge is essential to good track and must be maintained?  
A. Yes.
467. Q. When making connections between new and old rail, the old rail must be cut and compromise joint bars applied. With whom does the entire responsibility for making safe connections rest?  
A. The foreman in charge.
468. Q. When rail anchors are adjusted, may they be driven along the rail?  
A. No, they shall be removed and reapplied.
469. Q. If a rail shows signs of transverse defect, pipe, vertical split head, or head and web separation, what should be done?  
A. Such a rail should be removed immediately.
470. Q. When a rail has been removed from main track account of condemned heats, how should it be marked?  
A. Such rail should have an "x" cut on top of the ball of the rail 8" from one end and the top of the base painted orange at several locations.
471. Q. May rail so marked be used again in main tracks or sidings?  
A. No.
472. Q. Should rail detector car indicate existance of transverse defect, what action must be taken?  
A. Speed of trains must be reduced by restricting order until rail can be replaced.

473. Q. When such rails cannot be replaced the day the defect is found, what must be done?
- A. Angle bars must be applied to the rails at each failure using two bolts through the outside holes.
474. Q. Must preference be given to prompt renewal of ties that break or fail?
- A. Yes.
475. Q. How shall ties be spaced?
- A. They will be spaced according to the standard plan.
476. Q. When ties have been preadzed and bored, what must be done?
- A. The adzed surface must be placed up.
477. Q. Where ties have not been preadzed , what must be done?
- A. The hard face of the tie must be turned down. If this cannot be determined, the widest face must be placed down.
478. Q. What must be done whenever ties are adzed?
- A. Adzed or cut surfaces shall be swabbed with creosote oil, preferably hot and must be done before tie plates are placed so that creosote will cover all of the adzed surface.
479. Q. Must flange ways be kept free and clean from obstructions?
- A. Yes..
480. Q. Must particular attention be given to see that planks do not heave above top of rail?
- A. Yes.
481. Q. How are signs and fixed signals to be kept?
- A. In good condition and with view unobstructed by weeds, trees, or other obstructions.
482. Q. Should inspection of a bridge disclose an unsafe condition, what must be done?
- A. Trains must be protected, arrangements made for immediate repairs and report sent by wire to B&B supervisor, division engineer, Superintendent and Chief Train Dispatcher.
483. Q. In making inspection of steel bridges that have been damaged, what must be given special care?
- A. Particular care should be taken to ascertain condition of splices and connections of damaged members or of adjacent members, distortion of members, especially end and intermediate posts, top cords

and top flanges of beams and girders, cracked or torn sections, knicks or sharp bends in eye bars, line and camber of trusses and girders, as well as damage.

484. Q. Are you aware of the necessity of maintaining turn tables, appurtenances and approaches in efficient operating condition, and do you know how to look for and prevent or correct defects?

A. Yes.

485. Q. Have you carefully read, and do you understand the requirements of Rules 2319 to 2324 inclusive covering building and platforms?

A. Yes.

#### GROUP VIII WATER SERVICE FOREMEN

486. Q. Have you read and do you fully understand Rules 2328 to 2352 inclusive covering operation and maintenance of water, fuel oil and diesel oil stations, treating plants, water and oil treating and storage tanks, pipe lines, fire protection systems, heating, plumbing and sewer facilities?

A. Yes.

487. Q. What are responsibilities of water service foremen?

A. For safe, economical and efficient operation of pumping and treating plants, and knowing that employes who maintain and operate such plants, under their jurisdiction, are properly instructed, qualified to do the work assigned them, and are faithfully performing their respective duties.

488. Q. Do their responsibilities also include care and maintenance of storage tanks, pipelines, fire protection systems, heating, plumbing and sewer facilities?

A. Yes.

489. Q. How often must water service foreman inspect facilities in their charge?

A. At least twice each year, and oftener if circumstances require.

490. Q. Who must see that all stations and treating plants under their jurisdiction are properly equipped and adequately supplied with fuel, lubricants, tools, repair parts, chemicals and other necessities?

A. The water service foreman.

491. Q. How often must water service foreman make check of meter readings and delivery of every water meter in his territory?

A. At least one check each year, not less than six months nor more than 12 months apart.



492. Q. An actual check of the delivery of all water and fuel oil pumps must be made. If delivery is found to be less than the rated capacity per minute or per hour, what must be done?
- A. Corrected immediately. If unable to correct, make prompt report to superior officer, giving full particulars.
493. Q. May new pipe lines be installed or changes made in existing pipe lines unless properly authorized?
- A. No.
494. Q. What is the responsibility of a water service repairman?
- A. He is responsible for the proper maintenance of all facilities assigned to him. He must thoroughly familiarize himself with the type, manner of operation and care of these facilities and the location of all pipe and sewer lines in his territory. He must keep the water service foreman advised of his whereabouts when away from headquarters.
495. Q. Why must they regularly inspect all facilities in their charge?
- A. To insure dependable operation and at the same time make all needed repairs as stated by pumper or plant operator.
496. Q. What are the duties of pumpers and plant operators?
- A. They are responsible for the operation, normal running repairs and maintenance of plants and property assigned to them.
497. Q. Must they keep pump houses, chemical houses, operating rooms and all buildings in their charge as well as surroundings in a neat and clean condition and guard against fire hazards?
- A. Yes.
498. Q. How often must boilers be washed?
- A. As often as water conditions require, and in no case less than once a month.
499. Q. May machinery or moving parts be wiped or repaired while in motion?
- A. No.
500. Q. When there is danger from freezing, must water be drained from boilers, engines, pumps, and exposed piping?
- A. Yes.
501. Q. What precautions must be taken when thawing frozen pipes?
- A. To prevent fire hazard.
502. Q. Have you carefully read, and do you understand the requirements of Rules 2359 to 2368 inclusive; handling and use of explosives?

A. Yes.

GROUP IX  
SIGNAL FOREMEN

503. Q. To whom do signal foremen report?

A. To the signal supervisor and assistant signal supervisor.

504. Q. What is a signal foreman's responsibilities?

A. They are responsible for the proper installation and safe condition of signal apparatus, interlockings, crossing protection and protective devices assigned to their care.

505. Q. What must be done before taking out of service of any part of signal apparatus, protective devices or interlockings?

A. Signal supervisor must be notified in advance and his approval obtained.

506. Q. What must be done before any repair work is undertaken on an interlocking plant?

A. An understanding must be had with the towerman on duty in order to insure safe movement of trains and engines during the repair.

507. Q. If it becomes necessary to disconnect any switch, movable point frog, or derail, what must be done?

A. It must be safely secured in proper position before permitting trains or engines to pass.

508. Q. What plans must foreman have on hand?

A. Correct plans covering their work.

509. Q. Shall signal foreman notify track foreman a sufficient time in advance when necessary to do work requiring cooperation of track forces?

A. Yes.

510. Q. What are a signal maintainer's responsibilities?

A. They are responsible for the inspection, adjustment and proper maintenance of signal and other apparatus assigned to their care.

511. Q. Are they required to keep records and make the required reports of the time of men, and of receipt, distribution and use of material?

A. Yes.

512. Q. Must they systemize their work, performing certain duties on certain days, consulting signal supervisor as to the most efficient system to be followed?

A. Yes.

513. Q. What action must be taken in case of a severe storm?

A. Inspection must be made as soon as practicable and any trouble corrected.

514. Q. Who is responsible for the cleanliness of surroundings, material houses, signal appliances, etc?

A. The signal maintainer.

515. Q. Must signal maintainer cooperate with track forces in regard to track work affecting signal apparatus?

A. Yes.

516. Q. What must signal maintainer do before working on an interlocking plant?

A. He must have an understanding with the towerman on duty in order to insure safe movement of trains and engines during repairs.

517. Q. What must be done if it is necessary to disconnect any switch, movable point frog, or derail?

A. It must be safely secured in proper position before permitting trains or engines to pass.

518. Q. What must be done in case of an accident in which signal apparatus or other controlling device is concerned?

A. A thorough examination must be made immediately of all parts involved and a record made of the result of such examination and a copy of this record forwarded to the signal supervisor.

519. Q. If broken rail or other condition which may affect safety of train operation is found, what should be done?

A. Action should be taken immediately to protect trains by flag, signals or other controlling devices and defect remedied as quickly as possible.

520. Q. What must be done in case of damage to or failure of a signal?

A. See that signal is secured to show its most restrictive indication until it can be ascertained whether or not a dangerous condition affecting the movement of trains is involved.

521. Q. Before rail flaw detector car enters automatic block signal territory what must be done?

A. Ascertain from signal supervisor what procedure to follow so that signal devices will operate properly.

522. Q. Must the signalmen know the track foreman understands that when rails are bonded for an electric circuit new rails should not be

put in or electric connections broken without signalman present, except in emergencies?

A. Yes.

TO BE ANSWERED BY EMPLOYEES IN GROUP I

523. Q. In case of injury of any kind, no matter how trivial, to himself or anyone in his employ, what reports must be made by employe in charge?

A. He must immediately make report by wire to superintendent, division engineer, roadmaster or supervisor, giving name of person injured, occupation, age, sex, whether married or single, place of residence, extent of injury as nearly as can be ascertained and the manner in which the party was injured.

524. Q. Have you read Rule 2409 and do you understand that whenever employes are injured everything must be done to care for them properly?

A. Yes.

525. Q. What should be done when tools, machinery or other types of equipment are involved in an accident resulting in personal injury?

A. They should, if at all possible, be marked for identification and placed in custody of some responsible officer or employe and held subject to the order of the claim agent or superintendent.

526. Q. What are requirements for drivers of railway vehicles?

A. Driver must be in good physical condition with no physical impairments that would prevent safe driving. He must be qualified and observe traffic laws and ordinary driving courtesies. He must have in his possession a driver's license authorizing him to operate a highway motor vehicle in his charge as required by law.

527. Q. Will railroad owned vehicles only be used for business of the railroad and are non-employe prohibited from riding in railroad vehicles unless properly authorized?

A. Yes.

528. Q. Must brakes be kept in proper adjustment and exercise of judgment in their use?

A. Yes.

529. Q. Must stop be made for all railroad crossings?

A. Yes.

530. Q. Have you read Rule 2421, and do you understand what reports are to be made in case a railroad owned vehicle is involved in an accident?

A. Yes.

312. Q. What precautions must be taken when moving a car?

A. Foreman must know that brakes are in good order and that car is kept under control at all times and must not foul a main track or siding, without protection.

GROUP IW  
BRIDGE, BUILDING AND TUNNEL FOREMEN

313. Q. Have you familiarized yourself with the contents of Rule 2119 to see that everything possible is done to prevent structures from being subjected to fire hazard?

A. Yes.

314. Q. May a cutting or welding torch be used for any purpose on wood or steel bridges without proper authority?

A. No.

315. Q. What must be character of bridge and building work done?

A. In a neat and workmanlike manner. Framing of timber must be accurately done and use of shims avoided. Debris cleaned up daily and either burned or removed to a safe distance to prevent risk of fire.

316. Q. When doing bridge work that affects condition of track on embankment as well as on bridge, must proper cooperation with track forces be arranged?

A. Yes.

317. Q. Have you read and do you understand Rule 2122 covering super-elevation during construction when renewing pile trestles on curves?

A. Yes.

318. Q. What must be done before reducing super-elevation?

A. Place proper speed restriction and see that same is not removed until normal super-elevation is restored.

319. Q. Must all piles having 6" or less in diameter of sound timber be replaced with a post at once?

A. Yes.

320. Q. Must all piles having only 7" in diameter of sound timber be replaced with a post during the bridge repair year?

A. Yes.

321. Q. In four-pile bent how many posts are permitted?

A. Two posts.

322. Q. If three posts are necessary, what must be done?  
A. All piles in the bent must be cut off and put on frame bent.
323. Q. How many posts are permitted in a five pile bent?  
A. Three posts will be permitted, provided only two of them are adjacent, and if three posts are required and all adjacent, all piles in the bent must be cut off and put on frame bent.
324. Q. Do you understand that when putting in posts, excavation must be down to sound timber in the old piles and in no case less than 4' below the surface of the ground except when water prevents?  
A. Yes.
325. Q. Is it understood that each post put in a bridge must be drift bolted to the old pile with two drift bolts driven from opposite sides of the post crossing each other?  
A. Yes.
326. Q. Must there be a drift bolt through the cap into the post?  
A. Yes.
327. Q. When necessary to remove guard timbers, what speed of trains will be permitted?  
A. 20 m.p.h. or less, except 30 m.p.h. may be permitted where temporary guard timbers of plank (3"x10") are spiked to ties properly spaced with spikes 6" or more in length.
328. Q. What speed of trains will be permitted during reconstruction of bridges or renewal of ties on open deck bridges when every anchor or line tie only are fully spiked?  
A. 15 m.p.h. but at least every fourth tie must be fully spiked.
329. Q. Do you understand that requests must be made for grade and line stakes before cutting off piles or building bridge seats in new bridges, and that you must not change the grade, elevation or alignment of track on bridges or approaches without authority?  
A. Yes.
330. Q. May emergency repairs be made to any structure that is in an unsafe condition including liability to fire?  
A. Yes, making report to supervisor.
331. Q. When driving the first pile in any bridge and it is found that the piles are too short to give proper resistance or so long that cut-offs appear excessive or wasteful, what must be done?  
A. The foreman must contact the supervisor for instructions before proceeding with driving.

332. Q. Is it permissible to bore holes or drive spikes in piles to support staging planks?

A. No.

333. Q. What must be done after piles have been cut off to proper elevation?

A. They must be thoroughly saturated with hot creosote oil by mopping or slowly pouring same on head of pile until no more absorption will take place. After saturation with hot creosote oil heads should be sealed by application of heavy hot cold tar pitch then sealed with one-ply treated felt mopped on with hot cold tar.

334. Q. Must exposed ends or cuts of any timber or pile be treated with creosote and sealing compound?

A. Yes.

335. Q. What must the foreman do before scaffolds are used?

A. He must personally inspect all material to be used in the scaffold, test rope and tackle, supervise its construction and see that it is made safe. He must not permit overloading in service.

GROUP V  
TRACK FOREMEN

336. Q. What is the responsibility of track foreman?

A. He has charge of and is responsible for the condition of and the safe and economical maintenance of track, road beds, fences, right-of-way, water-ways, roadway crossings and station grounds assigned to him.

337. Q. In the event a facility not under his direct supervision needs attention, what must the foreman do?

A. Make a prompt report.

338. Q. Are you familiar with the detailed instructions given in Rule 2141, and are you aware of the necessity of inspection your section as often as conditions require, giving attention to the conditions of main track, turnouts, sidings, cattle guards, bridges, culverts, crossings, farm gates, fences, rail lubricators and wire line?

A. Yes.

339. Q. During storm, heavy rain fall or high water which may affect safety of operation or damage company property, must you detail reliable watchmen to patrol track to watch bridges or perform other duties and visit these men at such intervals day or night as may be necessary to see that their duties are faithfully performed and to make personal examination of conditions to insure safety of trains?

A. Yes.

350. Q. Must foremen observe the position of switches and derails?  
A. Yes.
351. Q. Do you understand that in territory where trains are operated by signal indication for both opposing and following movements, it is necessary under certain conditions for train to leave main track switches lined for turnout, and foreman and others finding this condition must determine if switch is being used by train and must not be lined unless authorized by train dispatcher?  
A. Yes.
352. Q. When must track be inspected for frozen joints?  
A. In the spring and fall of each year.
353. Q. When frozen joints are found, what must be done?  
A. Loosen bolts, equalize expansion of all joints and retighten bolts.
354. Q. What attention must foreman give rail lubricators?  
A. See that rail lubricators are well maintained, supplied with lubricant and are functioning properly.
355. Q. What is required with respect to culverts or other openings in the roadway for the passage of water?  
A. They must be kept free from obstructions.
356. Q. Must foremen keep bridge seats, top of piers and other readily accessible portion of bridges clear of ballast, debris and dirt and keep approaches to bridges in good line and surface?  
A. Yes.
357. Q. What is required after every rain storm or extra ordinary flow of water?  
A. Foreman must examine all waterways and if any undermining of foundation or other damage has occurred report must be made promptly to the roadmaster and train dispatcher, placing speed restriction if necessary.
358. Q. When drift accumulates at bridges, what is expected of you?  
A. Will assist B&B gangs in pulling drift at bridges and remove any drift left after flood recedes.
359. Q. What are you required to do during or immediately after extreme high water?  
A. Mark the surface of high water or high water marks both on the upstream and downstream side of track at frequent intervals throughout the affected areas and forward information with date to the roadmaster.



340. Q. If upon arrival at end of his section, it appears probable the adjoining section may have been damaged, what must foreman do?
- A. Continue as far as considered necessary to insure safety of trains or until the foreman of that section is met.
341. Q. What report must foreman make?
- A. He must keep the train dispatcher informed from each available point of communication as to his movements and conditions during and after patrol.
342. Q. If a foreman knows or is notified of unsafe or obstructed track on an adjoining section, must he go at once, make or assist in making repairs, and report his action to roadmaster and train dispatcher?
- A. Yes.
343. Q. If the foreman is unable to handle an emergency on his own section, may he call on other foremen for assistance without authority?
- A. Yes.
344. Q. What equipment are track walkers required to carry?
- A. Flagging equipment prescribed in Rule 35 and such tools as are likely to be needed and in TCS territory, a shunt cord.
345. Q. Do you understand the necessity of taking all steps necessary to check spreading of fires set out from any cause, and to make complete investigation and report, especially if fire should spread to adjoining property?
- A. Yes.
346. Q. Are you familiar with your duties in reporting and handling injured livestock?
- A. Yes.
347. Q. Do you understand that in case of a derailment you are required to determine the cause, if possible, and make report on prescribed form?
- A. Yes.
348. Q. Who must be notified in case a switch is run through?
- A. The roadmaster, and if a main track switch, the train dispatcher must also be notified.
349. Q. What are you required to do when a main track switch has been run through, or has been damaged by dragging equipment or derailment?
- A. Switch stand and head rods must be removed immediately, and if such stands and rods are not seriously damaged they may be used in other tracks if authorized by roadmaster.

360. Q. Do you understand you must familiarize yourself with the boundaries of all railroad property on your section and to report trespassing and encroachment as prescribed in Rule 2158?
- A. Yes.
361. Q. When must slopes or bluffs be inspected for loose rock or other material?
- A. They must be inspected periodically throughout the year and especially during the thawing season in the spring and after storms and heavy rains.
362. Q. What must be done with loose materials that might fall on the track?
- A. It must be promptly removed or if beyond ability of securing gang immediately, advise roadmaster.
363. Q. Do you understand the requirement of making inspection of joint, private, interchange and industry tracks, railroad crossings, and other facilities on your section which are maintained by outside parties or other railroads on which trains or engines are operated?
- A. Yes.
364. Q. If inspection discloses any defects, what must be done?
- A. Report such defects to the roadmaster and to the parties responsible for maintaining the track.
365. Q. Must special attention be given to obstructions that impair clearances affecting the safety of employes?
- A. Yes.
366. Q. Is it understood that if the required work is not done promptly the roadmaster must be fully informed and should the track become unsafe foreman will spike the switch, notifying the Superintendent, Chief Train Dispatcher, roadmaster and the owner or his local representative?
- A. Yes.
367. Q. Are you to give attention to condition of telegraph and telephone lines?
- A. Yes, and in case of interruption a report should be made to train dispatcher, roadmaster and lineman. Should trees or limbs fall onto railroad wires and interrupt service, they should be removed and such temporary repairs as possible should be made.
368. Q. Are you to assist signalmen in an emergency?
- A. Yes, when requested by them.
369. Q. When doing any class of work which may change adjustments, disturb or interfere with the operation of signal apparatus in any manner, what must be done?

- A. Advise signalman in advance.
370. Q. Do you understand you will be held jointly responsible with signalman for the safe condition of switches and derails at interlockings?
- A. Yes.
371. Q. May foreman request towerman at interlocking to operate switches and derails providing it does not interfere with the movement of trains for the purpose of inspecting same?
- A. Yes.
372. Q. What must they do at interlockings during snowstorms?
- A. Keep derails, switches, pipe lines and connections free from ice and snow and assist signalmen and towermen in keeping interlockings in operation.
373. Q. What precautions must be taken when working around an interlocked or remotely controlled switch?
- A. No one must be permitted to place hands or tools between switch point and stock rail until arrangements have been made with the towerman and point blocked.
374. Q. Do you understand the requirements of Rules 2167 and 2168, reference cleaning away vegetation and accumulation of ballast and dirt from interlockings and providing drainage for signal apparatus?
- A. Yes.
375. Q. Who is responsible for the condition and proper maintenance of insulated joints?
- A. Track foreman and signalman jointly.
376. Q. What is necessary when replacing broken rails in track circuits?
- A. Bond wires should be cut off of rail to be removed and signalman notified immediately.
377. Q. To whom must you report signal failures?
- A. Report must be made to roadmaster, signal supervisor and train dispatcher at once, giving signal number or milepost location, time and date.
378. Q. To whom must you report failures of highway crossing protection apparatus?
- A. Signal supervisor, roadmaster and train dispatcher by wire.
379. Q. When such apparatus fails to indicate approach of trains, what should you do?
- A. Place a watchman at the crossing until repairs are made or until

otherwise directed.

380. Q. Is it understood that you are to keep on good terms with land owners and other citizens and listen patiently to complaints of land owners or other tenants about road crossings, cattle guards, drainage or alleged damage to their property caused by the railroad or its employes, and report such complaints with the facts to the roadmaster?
- A. Yes.
381. Q. How must you care for property of the railroad, including freight and articles of value found in or on cars or on the right-of-way?
- A. Must be cared for, properly reported and not in any way disposed of or removed from railroad premises or right-of-way without first securing proper authority.
382. Q. Do you understand that billboards must not be erected or material placed so as to obstruct the view of approaching trains?
- A. Yes.
383. Q. May signs, posters and advertising matter be permitted on or about railroad property, unless properly authorized?
- A. No.
384. Q. When necessary to take down fences to expedite work, do you understand that sufficient restoration must be made before leaving the job each day to prevent stock from entering right-of-way?
- A. Yes.

GROUP VI  
WORK EQUIPMENT ROADWAY MACHINE OPERATORS, ROADWAY  
MACHINE AND TRACK CAR MAINTAINERS AND REPAIRMEN

385. Q. To whom do operators of work equipment and roadway machines report?
- A. To the roadmaster, supervisor or foreman under whose jurisdiction their work is performed.
386. Q. Will operators, maintainers and repair men of roadway machines receive instructions from supervisor of roadway machines regarding maintenance and operation?
- A. Yes.
387. Q. Are you required to have a copy of the current instructions covering the operation and maintenance of the particular machine or machines assigned to you?
- A. Yes.
388. Q. What are the duties and responsibilities of work equipment and roadway machine operators?

- A. For the efficient operation and proper care of equipment, keeping it clean, well lubricated, in good repair and adjustment. They shall give machines a daily inspection to detect loose bolts, or connections, broken parts or other defects, and make needed corrections.
389. Q. In the event that a defect cannot be corrected, what should be done?
- A. Division engineer and supervisor of roadway work equipment must be notified immediately.
390. Q. Is it understood that worn or weak parts be detected and reported in ample time to secure repair parts before it becomes necessary to tie up machine?
- A. Yes.
391. Q. What are the duties and responsibilities of maintainers and repairmen?
- A. For the proper maintenance of roadway machines, motor cars, trailers, other cars and all power operated equipment and tools placed in their charge.
392. Q. To what extent shall they make personal inspection and repairs?
- A. Sufficient to insure maximum safe and efficient use of each unit and to arrange for major repairs and overhauling at proper intervals.

GROUP VII  
RAIL REPAIRMEN, FOREMEN, WELDERS AND RAIL GRINDERS

393. Q. Who may use welding equipment?
- A. Only men who are qualified and have been regularly examined will be permitted to use welding equipment.
394. Q. What are the duties and responsibilities of rail repairmen, foremen, welders and rail grinders?
- A. They are responsible for the proper performance of such electric arc welding, acetylene welding, cutting and heat treating as may be assigned to them. Also, for the proper care of all equipment assigned to them for use.
395. Q. Do you understand that much of your work is on tracks where train movements are frequent and that when necessary you are to protect with restricted speed train order or in accordance with Rule 2000?
- A. Yes.
396. Q. Do you realize that you use a mixture of oxygen and acetylene that is very explosive and that it is necessary to exercise extreme care to prevent personal injuries and fire?
- A. Yes.

397. Q. What precautions must be taken to prevent fire?
- A. Use asbestos shields or other protective devices to prevent setting fire to or damaging bridge timbers, ties, insulated joints, rail bonds, or other material. Water must be immediately available. Before leaving work, man in charge must make personal check to see that no fire or hazard of fire exists.
398. Q. When may cutting or welding torch be used on wooden bridges?
- A. Only when authorized by supervisor.
399. Q. What must you wear when using torch or arc welding?
- A. Proper goggles.
400. Q. When working in confined spaces such as boilers or tanks of any kind, what precautions must be taken?
- A. Adequate ventilation must be provided and a helper must be nearby to render assistance in an emergency.
401. Q. What should employes do when looking at acetylene flame or electric arc?
- A. Goggles fitted with dark colored lenses must be worn.
402. Q. Do you understand that operators must know that all hose and valve connections are tight to avoid leaks in oxygen and acetylene lines, that hose is in good condition and hose connections are free of oil and grease and have been tested within a seven day period and tag must be attached to hose showing last day it was tested?
- A. Yes.
403. Q. May oxygen be used with compressed air or as a source of pressure?
- A. No. It may only be used for cutting and welding.
404. Q. Is it understood that cylinders must not be thrown, dropped or otherwise roughly handled and must not be left standing upright unless secured and when laid down must be blocked to prevent rolling?
- A. Yes.
405. Q. When valves on cylinders indicate that they are leaking, what should you do?
- A. The cylinder should be marked "leaky valve" so producer may correct same.
406. Q. Do you understand that oxygen must not be allowed to come in contact with oil or grease, and that oily or greasy substances must be kept away from cylinders, valves, couplers, regulators, hose and apparatus and from hands, clothing or gloves?