



**OR**



**OPERATING  
RULES**

**EFFECTIVE APRIL 15, 2023**

# GENERAL

## 94. Responsibility for Safety of the Train

- (a) The Conductor, Engineer and pilot are jointly responsible for safety of the train and engine and for observance of the rules. Under conditions not provided for by the rules, they must take every precaution for protection. When necessary, they must instruct members of their crew as to proper performance of duties.
- (b) Other members of the crew must call attention of Conductor or Engineer immediately to any apparent failure to observe requirements of rules, Timetable, mandatory directives, messages or other instructions.
- (c) If the Engineer fails to control movement in accordance with signals or other conditions, crewmembers must communicate with him/her at once. If he then fails to immediately control speed properly they must take necessary action to stop the train.
- (d) When a train or yard movement has in its consist a crane, spreader, ditcher, or other equipment, the operation of which may foul adjacent tracks, such work must not be attempted until protection has been provided against approaching movements on all tracks that may be fouled.

## 96. Return Movement

When engines or cars are detached from a train, precautions must be taken to prevent damage to equipment when re-coupling. Return movement must be made at Restricted Speed. A crewmember must be stationed at, on, or ahead of the leading end of the return movement to protect against the detached portion of the train.

## 97. Movement of Single Light Locomotive

A single light locomotive must:

- (a) Not enter a Rail-highway grade crossing equipped with automatic crossing warning device until:

# TRAIN INSPECTIONS

## 140. Inspecting Trains

- (a) Employees must inspect passing trains for their entire length for defects such as sticking brakes, hot journals, broken or loose wheels, brake rigging down, loads shifted, or any other defect. Inspection on both sides is required when two or more employees can safely position themselves in advance.

**EXCEPTION:** During train meets, crew members must inspect passing trains from either inside the locomotive cab or from a safe ground location. When performing the inspection from the ground, employees must dismount the locomotive on the field side away from the adjacent track, if possible. Crew members are not required to cross tracks to inspect a passing train.

- (b) If any defect is observed, prompt action must be taken to notify the crew. If the crew cannot be notified, the Train Dispatcher must be notified as quickly as possible.
- (c) After the train passes, the employee performing the inspection must notify the crew by radio of the condition of their train.
- (d) Crew members must frequently observe their train for defects and maintain a vigilant lookout along the right-of-way for conditions affecting train movement. If a dangerous condition is observed, prompt action must be taken to notify the Train Dispatcher and to warn any approaching train.

## 141. Equipment with Defects

Conductors must if possible, remedy defects in their equipment, and must remove from the consist any cars that are unsafe to run. They must report all defective brakes, hot boxes or other defects, as well as repairs made between terminals.

They must comply with instructions for reporting materials applied to cars and disposition of defective parts.

Conductors must not move cars bearing Bad Order tags without proper authority.

Cars bearing Home Shop tags must be moved in accordance with any restrictions shown.

# **DEFECTIVE EQUIPMENT DETECTORS**

## **145. Defective Equipment Detectors**

Locations, functions, and associated instructions of defective equipment detectors are listed by Timetable.

## **146. Train Inspection – “No Defect” Message For All Detectors**

(a) When no defects have been detected, the exit radio message will be:

“NS detector, milepost location, identification of track to which message is applicable (in multiple track territory),” and followed by “NO DEFECTS.”

(b) If a “NO DEFECTS” message is received before the rear of train has cleared the detector, the train may proceed in accordance with **Rule 149 “Failure Messages.”**

## **147. Defect Message For All Detectors (Except Stress State Detectors)**

(a) When a train is occupying a detector and a defect has been detected, an automatic radio transmission as described below will occur:

- A defect warning alarm and/or a “TONE” will indicate that a defect has been detected.
- A defect warning message stating “CRITICAL ALARM” will indicate that an excessively hot journal or dragging equipment defect has been detected. The train must be immediately stopped for inspection, consistent with safe train handling procedures anytime a “CRITICAL ALARM” is received for detection of a hot bearing (hot box) or any dragging equipment defect.

(b) When a non-critical defect message is received, the train must immediately reduce speed to not less than 8 MPH until the rear of the train clears the detector at which point the train must be stopped for inspection.

- (c) When the rear clears the detector, or a detector times out due to lack of movement, a radio message is transmitted to indicate nature of any defects and its location in the train by axle count, starting at the first axle in the locomotive consist.

**148. Train Inspection – Defect Message For All Detectors (Except Stress State Detectors)**

- (a) If train speed drops below 8 MPH while passing over the detector, and a “DEFECT” message is received, the train must be stopped and all cars must be inspected.
- (b) When an inspection is required, the crew must contact the Wayside Detector Help Desk. After briefing with the Help Desk:
  1. A thorough inspection must be made of the car(s) indicated as being defective. Except when relieved by the Help Desk, both sides of the cars must be inspected.
  2. The crewmember must take the necessary tools and supplies. Crews in road service must have a Temperature indicator and a hand-held counter accessible while on duty. The hand-held counter must be used to ensure the proper axle is inspected.

**Exception (Not Applicable to Key Trains or Passenger Trains):**

The Help Desk may relieve a crew from inspecting their train for defect alarms when information is available confirming it is safe to proceed. Trains relieved of inspection may proceed, in accordance with existing authority, at a speed not to exceed 30 MPH to the next detector or to the location where the car is to be set out, if applicable. Trains relieved of inspection at the last detector prior to entering a yard must notify the Yardmaster, or other designated authority to ensure a proper inspection is made.

- (c) The Inspection results must be provided to the Help Desk prior to the crewmember departing the car location.

## 149. Failure Messages

- (a) A train receiving no message or a failure message as listed:
- “Analyzer Failure”,
  - “System Failure”,
  - “Detector Malfunction”,
  - “System Not Working”, or
  - “Train Too Slow”,

must contact the Help Desk and may proceed, in accordance with existing authority, at a speed not to exceed 30 MPH to the next detector provided:

1. Train is not a Key Train or Passenger Train.
  2. No erratic operation of the train is detected by the train crew.
  3. The previous detector over which the train passed detected “NO DEFECTS”.
- (b) A train receiving a failure message at the first detector after departing a yard, or on 2 consecutive detectors, must be stopped and a roll-by inspection of one (1) side of the train must be performed.
- (c) A train receiving a failure message at the last detector prior to entering a yard must notify the Yardmaster, or other designated authority, to ensure a proper inspection can be made.

## 150. Hotbox Detectors

- (a) When authorized by the Help Desk, after stopping, a roll by inspection may be performed on the side of the train indicated as having defects. The person making the inspection must visually monitor the train during the roll-by inspection for any defects, and must stop the train and inspect the cars identified as being defective.
- (b) Inspections must be made using a temperature indicator to determine if a bearing is over heated and car cannot continue in service. Results must be provided to the Help Desk.
- (c) If no apparent defects are found, 20-axles ahead and behind of the designated defect must be inspected for the noted defect.



# NS-1



## **RULES FOR EQUIPMENT OPERATION AND HANDLING**

**EFFECTIVE APRIL 15, 2023**

# DISTRIBUTED POWER (DP) OPERATIONS

## DP OPERATING MODES

**NORMAL** – all remote traction and dynamic brake functions are enabled for control. All remote air brake functions are enabled and the brake valve cut in.

**IDLE** – the remote throttle remains in IDLE. All remote air brake functions are enabled and the brake valve may be cut in.

**ISOLATE** – the remote throttle does not respond to commands and remains in IDLE. The remote's emergency air brake application function and independent brake functions are enabled for control. All other brake functions are disabled and the brake valve is cut out. NOTE: This condition may automatically occur during a COMM LOSS.

**SYSTEM MODE RUN** – normal DP system mode. All throttle, dynamic brake, and air brake functions available. Synchronous and Independent control are available.

**SYSTEM MODE IDLE** – initial mode after linking. All airbrake functions are available. No throttle control is available. Successful brake pipe continuity test required before mode can be changed.

**SYNCHRONOUS CONTROL** – remotes duplicate traction, dynamic brake, and air brake commands from lead DP locomotive. Commands are sent instantly but may take up to 20 seconds to update on the controlling locomotive's screen.

**SET OUT** – the remote throttle does not respond to commands and remains in IDLE. The remote's throttle and dynamic functions are disabled and the brake valve is cut out. All other air brake functions are disabled and the brake valve is cutout. NOTE: This condition may automatically occur during a COMM LOSS.

**ASYNCHRONOUS CONTROL (FENCED)** – allows remote locomotive to be commanded independently of the lead locomotive. All automatic and independent braking remain under the control of the lead locomotive.

**BV OUT** – all remote traction and dynamic brake functions are enabled for control. The emergency and independent air brake functions are enabled for control. The remote automatic air brake functions are restricted by cutting out the brake valve.

**MOMENTARY COMM LOSS (DP)** - a loss of communication between a controlling lead locomotive and a controlling remote locomotive lasting less than 45 seconds. This type of



communication loss will be displayed on the controlling lead locomotive with the word “COMM” displayed in yellow letters above the controlling remote locomotive with which the controlling lead locomotive cannot communicate.

**SUSTAINED COMM LOSS (DP)** – a loss of communication between a controlling lead locomotive and a controlling remote locomotive lasting 45 seconds or longer, or in 10 seconds if an automatic brake application is made. A sustained COMM LOSS will be displayed on the controlling lead locomotive with the word “COMM” in red letters above the controlling remote locomotive with which the controlling lead locomotive cannot communicate.

**TRAIN CHECK** – an automated feature that ensures continuity and integrity of the brake pipe specifically for COMM LOSS communications.

### **DP-1. SET-UP**

- (a) Before beginning DP set up, each locomotive consist, lead and remotes must be set up as a lead consist for conventional train operation.
- (b) The automatic brake handle on the controlling remote locomotive must be pinned (if equipped) and the seat locked or secured from contacting the controls.
  - 1. The cab doors on the remote consist must be locked (if equipped).
  - 2. Linking DP locomotive consists:
    - a. The train and locomotives must be properly secured.
    - b. After conditioning and linking consists, a DP Brake Pipe Test must be performed.

### **DP-2. VERIFICATION**

After a link is established, a load test in FENCED mode must be performed individually on each remote consist to confirm each remote consist is loading in the intended direction. This test is not required if conditions such as grade or curvature could compromise safe train handling.

### **DP-3. AXLE LIMITS**

Unless otherwise specifically authorized by special instructions: