

### **GR-6-1. WARM-UP EXERCISES**

In order to assist in avoiding muscle strain, all Train and Engine service employees are required to perform five (5) minutes of stretching exercises from the warm-up exercise examples depicted in the Safety and General Conduct Rule Book at the beginning of each tour of duty. The Conductor, or in the absence of the Conductor, the Engineer is responsible for ensuring that all crew members, including himself/herself, perform the stretching exercises. Stretching exercise is a safety preparation to be used in advance of performing your work that presents potential strenuous activity.

Take care of yourself by doing the stretching preparation in a reasonable and moderate manner within your physical ability.

### **GR-9-1. DEFECTIVE EQUIPMENT DETECTORS**

#### **1. INSTRUCTIONS FOR DETECTORS**

When a detector announces one or more defects to a passing train, the crew must stop the train and the specified axle(s) must be examined for excessive bearing heat, dragging equipment, sticking brakes, over dimension, and/or sliding wheel, as applicable.

When approaching, passing, or departing detector locations, crew members must be alert for radio transmissions from detectors (on the road frequency for that territory). When in the vicinity of the detector locations, all employees must keep radio transmissions to an absolute minimum to avoid interference with detector radio messages.

When stopped by hot bearing detector and no hot bearing is found, the Conductor on the inbound train will advise the proper authority at the final terminal so the car(s) may be inspected by mechanical forces prior to the train departing.

When an inspection is made for a suspected hot bearing or dragging equipment, the crew member will take available tools and supplies for use if needed.

#### **1.1 TEMPERATURE INDICATOR**

Crews in road service must have a 200 Degree Temperature indicator accessible while on duty.

To determine if a bearing is overheated and car cannot continue in service, a crew member must:

- stroke the outside surface of the top of the journal box or the lower half of the cup of the roller bearing
- stroke the top of the inboard surface of the adapter on Amfleet cars equipped with inboard bearings

If a liquid smear results, obtain instructions from the Train Dispatcher/Control Operator.

The temperature indicator should be used only on the reported bearing or if there is evidence of an overheated bearing.

## 1.2 INFORMATION

When a train is stopped for a defect, a crew member must give the following information to the Train Dispatcher/Control Operator as quickly as possible by railroad radio or authorized communication device:

- (a) Car Initials and Number
- (b) Type of defect
- (c) Type of car
- (d) Loaded or empty
- (e) Type of journal for hot bearing
- (f) Standard or unusual journal configuration (if cars are not hot)
- (g) Axle or wheel position on car
- (h) Disposition of car
- (i) Name or location of detector involved

For hot wheel alarms, the Engineer, after stopping the train, will release the train air brakes after making a full service application and the employee making the inspection will determine that the brake has released, the hand brake will be released if applicable. If not released, Engineer will again make full service application and release. If still not released, the air brake may then be cut out.

## 2. HOT BEARING DETECTORS

When a train is occupying a detector and a defect has been detected, an automatic radio transmission as shown in the example below will occur:

- (a) A warning alarm and/or a "TONE" will indicate that a hot bearing (or other defect) has been detected. The speed of the train must be reduced, and after the rear of the train has cleared the detector, train must be stopped for inspection as soon as possible, consistent with safe train handling procedures. When the rear has cleared, a radio message will be transmitted to indicate nature of any defect(s) and its location in the train. The location will be given by axle count, counting from the first axle in the locomotive consist. The detector will identify track to which message is applicable in multiple track territory.

**NOTE:** At Dragging Equipment Detector locations that do not provide an axle location for the defect, the entire train must be inspected.

- (b) When excessively hot journal or dragging equipment has been detected by a detector, a radio message stating "CRITICAL ALARM" will be transmitted at once and train must be stopped for inspection as soon as possible consistent with safe train handling procedures.



- (c) When an inspection is required, a thorough inspection will be made of both sides of the car(s) indicated as being defective. If no apparent defects are found, 20-axes ahead and behind on either side of the designated car(s) will be thoroughly inspected on both sides.

Crews in road service must:

- have a hand-held counter accessible and available for immediate use while on-duty
- take every precaution to ensure the proper axle is inspected including the use of a hand-held counter

A copy of train consist must not be used to locate an axle indicated as defective. While en route to and from either end of the train to inspect a car(s), crew members will, when practicable and safe to do so, make a visual inspection of both sides of the train.

- (d) After a defect message has been received, if train is stopped while occupying the detector, or if train speed over the detector drops below 8 MPH, all cars following the last car indicated as being defective must be inspected.
- (e) If three (3) or more of the same type of defects are reported, those defect locations must be inspected and the balance of the train behind the last reported defect must be inspected in accordance with **Item 5**.

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."

**NOTE:** If "NO DEFECTS" message has been received from a defect detector before passing the designated radio acknowledgement point (milepost locations designated in Timetable or the train length plus approximately 20 car lengths beyond the detector when a milepost is not designated), Train Dispatcher/Control Operator must be contacted for further handling. The train will be handled in accordance with **Item 5**.

- (f) All defect messages, including nature of the defect and its location in the train, must be acknowledged to the Train Dispatcher/Control Operator. A crew member must notify the Train Dispatcher/Control Operator of the results of the inspection even if no exception is taken.

### **3. HOT WHEEL DETECTORS**

For hot wheel alarms, the Engineer, after stopping the train, must release the train air brakes after making a full service application and the person making the inspection will determine that the brake is released, the hand brake is released, and the retainer is in the proper position if applicable. If not released, Engineer will again make a full service application and release. If still not released, air brake may then be cut out.

### **4. HIGH CAR AND CLEARANCE DETECTORS**

If there is no transmission received after passing over a detector location or after a "DETECTOR NOT WORKING" or "SYSTEM FAILURE" message is received, the train must not pass through obstructions such as height restricted bridges, tunnels, etc., until inspection is made.

If a defect is detected at a radio alarm High Car Detector or Clearance Detector, in addition to checking the location specified, two (2) cars (or two (2) platforms on articulated equipment) ahead and behind the reported location must also be inspected, even if a defect is found at the reported location.

### **5. CONDITIONS WHEN VISUAL INSPECTION REQUIRED**

The Train Dispatcher/Control Operator may relieve a crew from inspecting their train when office information is available confirming no defects, or if a detector is known to be defective, the Train Dispatcher/Control Operator may authorize a roll-by inspection, not exceeding 30 MPH, of both sides of the train by qualified persons within the designated acknowledgement point (milepost locations designated in Timetable) or a train length plus 20 car lengths beyond the detector when a milepost is not designated.

The following instructions do not apply to Key Trains. All Key Trains must stop immediately and must be given full inspection with any detector failure.

When no defects have been indicated and one of the following conditions exists, a visual inspection of the train is required if:

- (a) Train stops on detector.
- (b) Train speed over detector drops below 8 MPH.
- (c) Train is operated over a track, which caused it to bypass a detector it normally would pass over.

Except as noted above, a train receiving no message from a detector must stop immediately and must perform a full inspection of the train.

## 6. FAILURE MESSAGE

A train receiving a failure message ("Analyzer Failure" or "System Failure" or "Detector Malfunction" or "System Not Working") may proceed, in accordance with existing authority, at a speed not to exceed 30 MPH to the next detector provided:

- (a) Train is not a Key Train or Passenger Train (these trains must stop and be inspected).
- (b) Train Dispatcher/Control Operator is notified of detector failure.
- (c) No erratic operation of the train is detected by the train crew.
- (d) The previous detector over which the train passed detected "NO DEFECTS."

**NOTE:** A train receiving a failure message on two (2) consecutive detectors must be stopped and inspected.

If a train receives a failure message at the first detector location immediately departing a yard, the Train Dispatcher/Control Operator must be notified and the entire train inspected. If a train receives a failure message at the last detector location prior to entering a yard or crew change point, the train may proceed in accordance with this section. However, positive communication must be made with the Yardmaster, relieving crew, or other designated authority to ensure a proper inspection is made.

## GR-9-2. CONSECUTIVE DETECTOR STOPS

When a hot journal is indicated for the same journal by two (2) consecutive detectors or by two (2) of three (3) successive detectors, the car is to be set out. Additionally, any time a car has a high reading on three (3) detectors over a division, the car is to be set out. A malfunctioning detector will not be considered as one of the consecutive or successive detectors except for any cars known to be correctly scanned by that detector. A car will not be set out if it can be determined, positively, that sticking brakes caused the high readings and it is known that the car can be moved safely.

These instructions apply to trains traversing territories governed by adjoining Train Dispatcher/Control Operators. Information on detector stops must be promptly conveyed between Train Dispatcher/Control Operators.