



# WMSC Inspection Report 20250317

ISSUED 03/19/25

## Inspection Details

Title: Greenbelt Service and Inspection Shop, Digital Dial Gauge Availability

Location: Greenbelt Yard (E99)

Date of Inspection: 3/17/2025

Time of Inspection: 11:30am to 1:30pm

Unannounced

Risk-Based (Investigation W-0256)

Functional Area: Vehicles

Hazard Rating: 3D

## Overview

This WMSC inspection was focused on the availability of digital dial gauges at Greenbelt Yard, which are used to conduct back-to-back measurements on railcar wheelsets. This measurement is used to detect wheel migration as a mitigation developed in response to the October 12, 2021 derailment of a 7000-series train on the Blue Line between Arlington Cemetery and Rosslyn stations. (See [Investigation Report W-0256](#).)

Probable Cause: “The National Transportation Safety Board determines that the probable cause of the derailment of Washington Metropolitan Area Transit Authority train 407 south of Rosslyn Station was an out-of-specification wheelset that caused a wheel to depart the rail at a turnout; the wheelset was out of specification because the wheelset’s design allowed the wheels to migrate outward and eventually exceed the maximum permitted back-to-back measurement.”

As a result of this investigation, WMATA developed a number of mitigations, which include measuring wheelset back-to-back (distance between wheel flanges) and journal bearing gap (distance between bearing and wheel) every 30 days. 7000-series railcars that have undergone the wheel replacement program are measured every 60 days. The tool to accomplish these measurements accurately is referred to as a digital dial gauge.

After concluding the inspection, the WMSC inspectors conducted a debrief at with the WMATA General Superintendent, Car Maintenance, in accordance with Program Standard Section 6.F.1.



## Defects and Corrective Actions

WMSC Inspections identify safety issues that may be classified as defects, findings, or recommendations. Findings and recommendations are defined by Program Standard Section 5.E.2 and 5.E.3 respectively. Ordinarily, issues identified in a WMSC inspection report are classified as defects. Defects are specific safety issues of non-conformance/non-compliance that are identified and that require remedial action.

This inspection did not identify any findings or recommendations and therefore does not require a WMSC Corrective Action Plan in accordance with Program Standard Section 5.E.4.

## Defect Observations and Determinations

The WMSC identified one defect (see below) while at the Greenbelt Service and Inspection Shop. Regarding the digital dial gauges, the WMSC observed two gauges in the Greenbelt tool room that were in calibration and ready for use. Eight additional gauges were in the machine shop awaiting calibration. No back-to-back wheelset or journal bearing gap measurements were underway while at Greenbelt.



Photo 1. Digital dial gauges ready for use.



Photo 2. Digital dial gauges awaiting calibration.

In the shop, on lifts, at the time of inspection were two different pairs of railcars (3264–65 and 2034–35). Railcars 2034–35 were in the process of being decommissioned. There were also two sets of 6000-series railcars present.



## Defect 1

Rail vehicle door barriers (fall protection) were not in place on four railcars (two married pairs). This was reported to WMATA personnel on site and then subsequently via email on March 18, 2025 as well. Photos 3 and 4 show railcars without any fall protection in place. Photo 5 shows the proper fall protection (rail vehicle door barriers) in place.

Car Maintenance (CMNT) memorandum with the subject “Door Barriers on Elevated Railcars” (dated March 10, 2022) states that “[w]hen a rail car is elevated on a lift or pit, the side doors must be kept closed, **with the following exceptions:**

- A ladder with side rails and platform placed at the entrance and/or egress from the front side doors.
- Approved fall protection devices are installed at the door openings.
- During the installation of fall protection devices.
- In the case of an inspection pit, the doors on the catwalk side may remain open.”

**Hazard Rating: 3D**

### Photos:



Photo 3. Railcar on lift without fall protection in place.



Photo 4. Railcar on lift without fall protection in place.

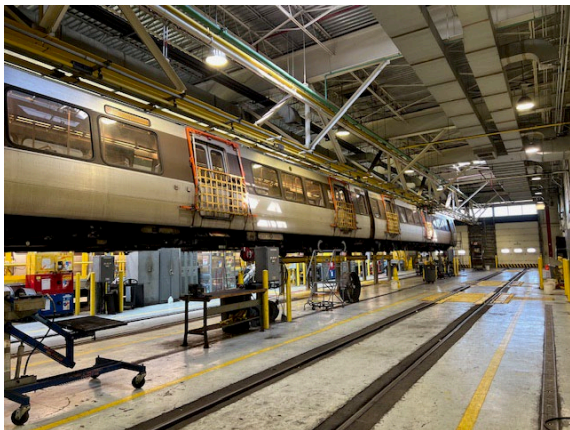


Photo 5. Railcar on lift with appropriate fall protection in place.

## Next Steps

Please respond **by Monday, March 24, 2025**, to acknowledge receipt and to convey responses to the WMSC regarding what, if any, actions will be or have been taken in response.