

The Washington Metrorail Safety Commission



Safety Audit

of the Washington Metropolitan Area Transit Authority

**Revenue Vehicles (Class 1 Vehicles) and
Roadway Maintenance Machines (Class 2 Vehicles)**



Final Report:
September 10, 2026

Table of Contents

Executive Summary	1
Background and Scope	3
Current Organizational Structure	5
What the WMSC Found	8
Positive Practices	9
Findings and Minimum Corrective Actions	12
Next Steps	22
Appendices	23
Appendix A: WMSC Corrective Action Plan Review	24
Appendix B: Metrorail Internal Safety Review, Internal Review, and Associated Corrective and Preventive Action Plan Review.....	40
Appendix C: Personnel Interviewed.....	46
Appendix D: Site Visits.....	46
Appendix E: Documents Reviewed.....	47
Appendix D: Public Transportation Agency Safety Plan Elements.....	60

Prepared under the authority of the Washington Metrorail Safety Commission

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Executive Summary

The Washington Metrorail Safety Commission (WMSC) performed this audit of Washington Metropolitan Area Transit Authority (WMATA) Metrorail's Revenue Vehicles and Roadway Maintenance Machines through in-depth interviews, site visits, and document and data reviews conducted from January 2026 to June 2026.

The scope of this audit includes Metrorail's Revenue Vehicles (Class 1 Vehicles) and Roadway Maintenance Machines (Class 2 Vehicles). Revenue vehicles or "railcars" are defined as any vehicle that is designed to carry customers. Roadway Maintenance Machines (RMM) are defined as all hi-rail or rail-bound machines used to maintain infrastructure or right-of-way. This audit also includes shop equipment such as railcar movers, this excludes shuttle wagons located in vehicle maintenance shops and track maintenance small equipment such as hand tampers and rail drills.

This audit also focused on Metrorail corrective action plans including Metrorail's Quality Assurance, Internal Compliance & Oversight (Quality) internal audits and corrective action

plans, WMSC corrective action plans, and WMATA recommended corrective actions that are overseen by the WMSC along with review of any related safety event investigations involving Metrorail's communication systems.

The WMSC appreciates the cooperation of Metrorail personnel throughout the interviews and observations conducted for this audit.

This audit identified critical areas where Metrorail does not follow its procedures and requirements. There are 4 findings that Metrorail is required to address through the corrective action process, 2 recommendations, and 1 existing corrective action plan, C-0270, that requires modification. The findings and recommendations identified are:

- **Finding #1: Metrorail has not updated periodic inspection manuals to account for new cameras installed on railcars.**
- **Finding #2: Metrorail's portable lifting jacks are not inspected or otherwise maintained as required.**

This audit identified critical areas where Metrorail does not follow its procedures and requirements. There are 4 findings that Metrorail is required to address through the corrective action process, 2 recommendations, and 1 existing corrective action plan, C-0270, that requires modification.

► **Finding #3:** Metrorail's railcar periodic inspection manuals are not reviewed on the required document control cadence.

► **Finding #4:** Metrorail is not inspecting or testing eye-wash stations in accordance with manufacturer instructions.

Recommendation 1: Metrorail should re-acquire the type of remote diagnostic capabilities the 7000 series originally started service with.

Recommendation 2: Metrorail should conduct a staffing assessment for the machinist position that accounts for current facilities, railcars, and maintenance requirements.

Full details on each finding and recommendation are stated in the Findings and Minimum Corrective Actions section of this report. Metrorail is required to propose corrective action plans to address each finding no later than 30 days after the issuance of this report.





Background and Scope

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The Office of Car Maintenance, Rail Fleet is charged with all preventative and corrective maintenance, major repair and overhaul, and engineering modification activities for a fleet of 1,208 rail car assets.

This audit's objectives include the assessment of all maintenance, engineering, operational practices and procedures, and training for purposes of compliance with applicable Metrorail plans and procedures, regulations, and industry best practices related to Metrorail's Revenue Vehicles and Roadway Maintenance Machines.

Metrorail's Rail Fleet consists of several offices which contribute to the operation and maintenance of both revenue vehicles and roadway maintenance machines including the Office of Car Maintenance, The Office of Vehicle Program Services, and The Office of Car Track Equipment Maintenance.

The Office of Car Maintenance, Rail Fleet is charged with all preventative and corrective maintenance, major repair and overhaul, and engineering modification activities for a fleet of 1,208 rail car assets. Car Maintenance operates 10 facilities located across the Metrorail system. While all facilities are charged with preventive and corrective maintenance of railcars, some of the shops perform specialized functions, such as heavy repair, overhaul, inspections, or component maintenance.

The Office of Car Track Equipment Maintenance, Rail Fleet is responsible for 180 roadway maintenance machines (class 2 rail vehicles) which includes prime movers, flatcars, cranes, tampers, ballast regulators, and ancillary support equipment like drills, spikers, and saws. Car Track Equipment Maintenance currently has 5 active heavy maintenance facilities: New Carrollton, Greenbelt, Dulles, Alexandria, and Branch Avenue.

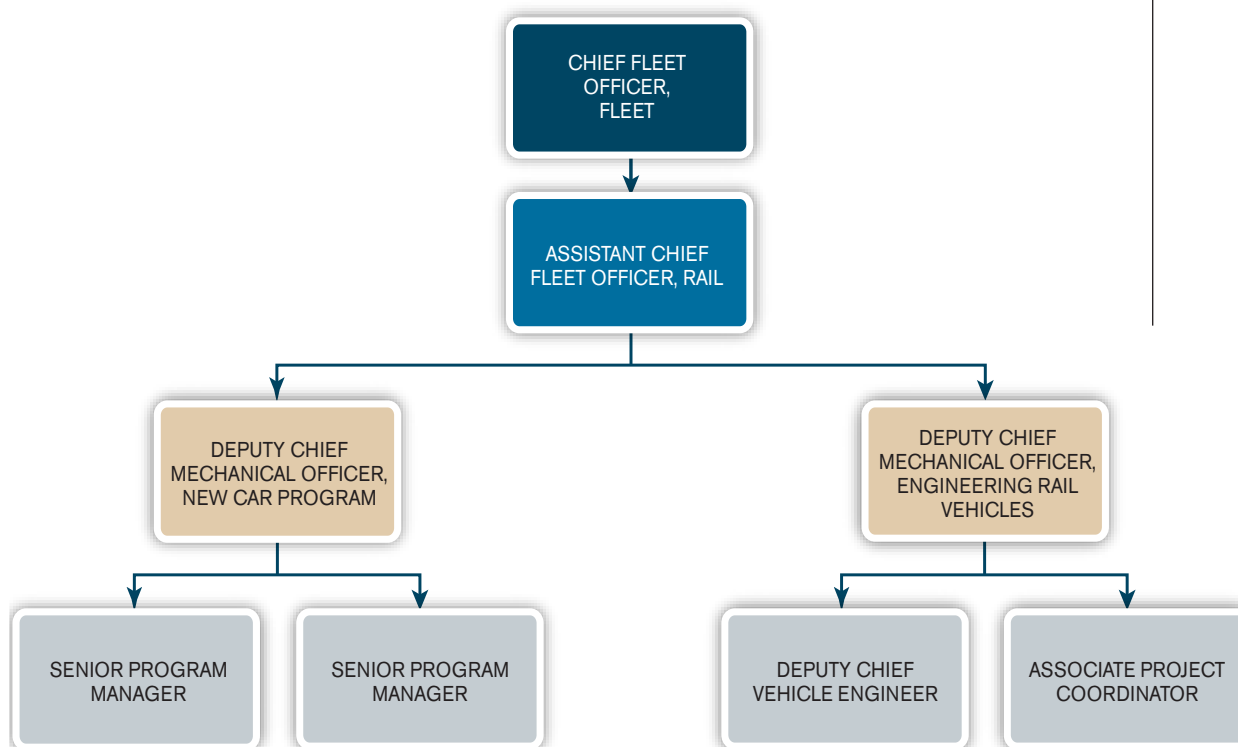
The Office of Vehicle Program Services, which includes Vehicle Engineering, is charged with improving railcar reliability and safety by providing technical support and guidance to ensure that equipment and procedures meet engineering standards. This office also includes the New Car Program, which leads and coordinates with vehicle stakeholders, the delivery and acceptance of railcars which meet the specification requirements outlined in the vehicle procurement requirement.





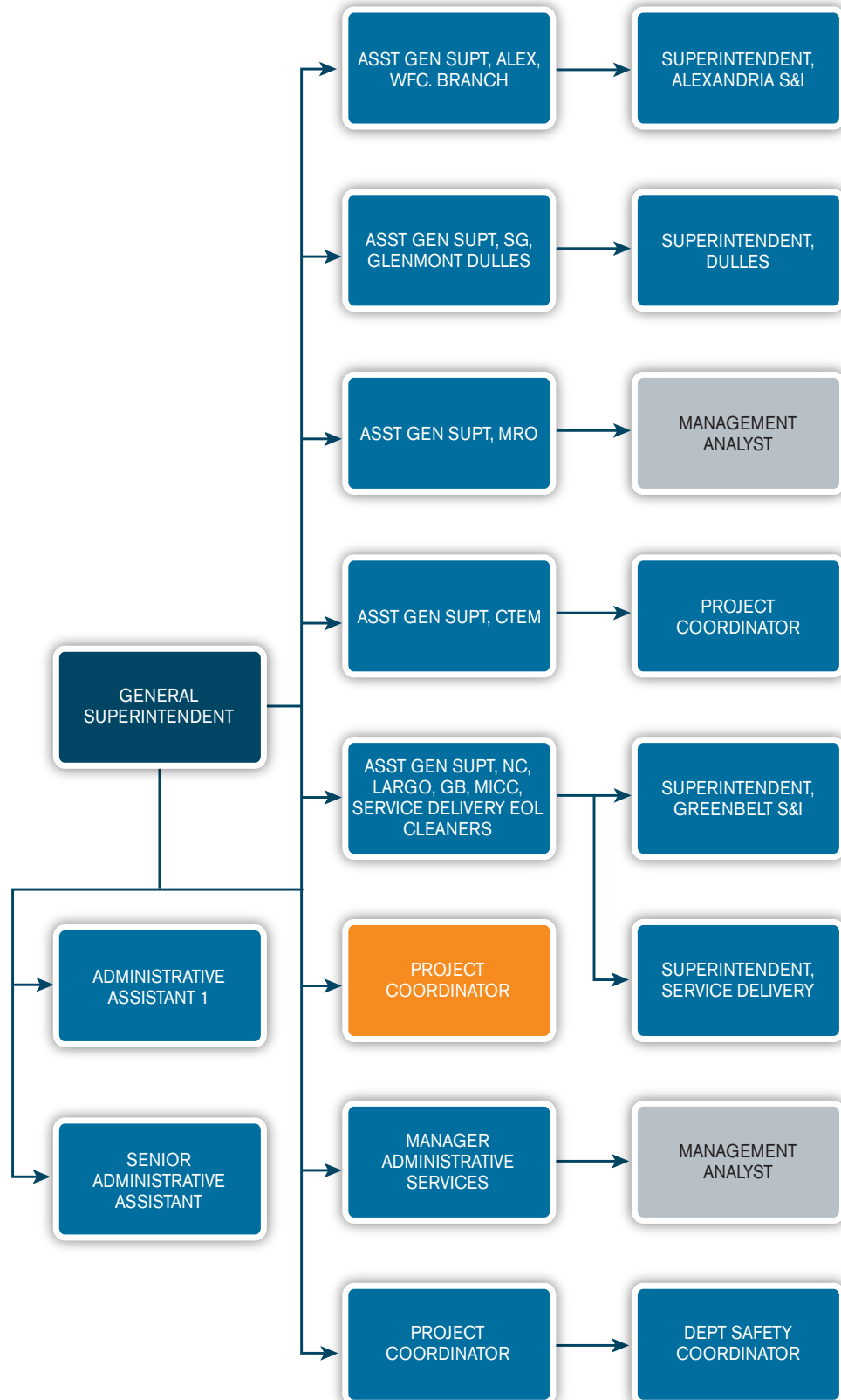
Current Organizational Structure

Office of Vehicle Program Services, Rail Fleet



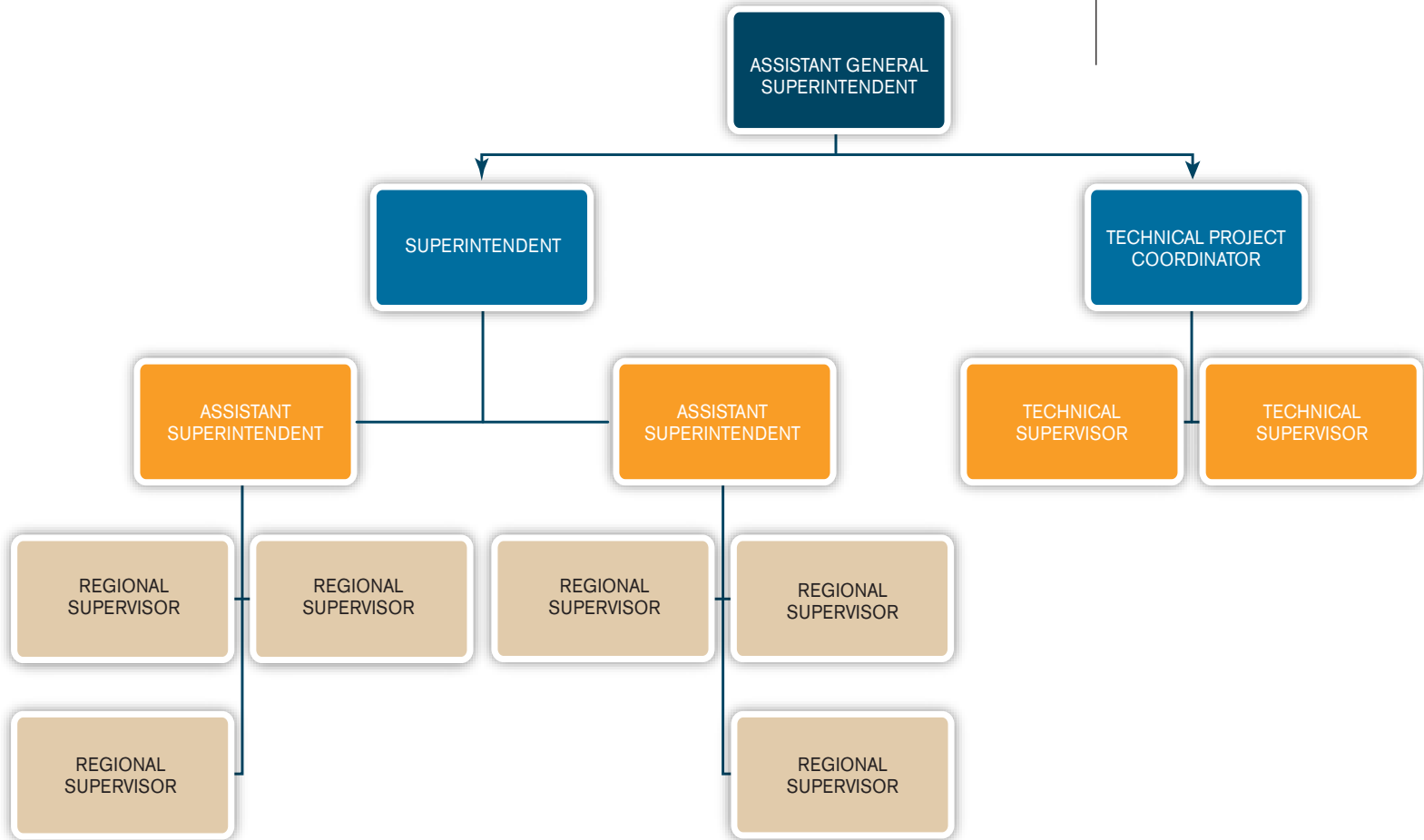


Office of Car Maintenance, Rail Fleet



Office of Car Track Equipment Maintenance, Rail Fleet

CTEM Organization Chart





What the **WMSC** Found

What the **WMSC** Found

Positive Practices

This audit also identified several positive practices, or success stories, some of which were the direct result of the WMSC's oversight. However, both positives detailed below are the result of Metrorail's own work. The WMSC encourages Metrorail to continue these positive practices.

- 1. Hot Works Permits** – All permits observed were within date and no areas requiring a permit were missing one.
- 2. Calibration** – Shop tool calibration is occurring as required. (Previous subject of finding/CAP C-0276: Metrorail is using equipment that is not calibrated in accordance with its policies and procedures, including for inspection and maintenance of components with a direct impact on safety.)

Required Modifications to Existing Corrective Action Plans Identified During this Audit

The WMSC appreciates the progress Metrorail has made towards correcting findings and recommendations of the **2024 Revenue Vehicles (Railcar) Program Audit**. The present audit identified two of the same deficiencies covered by an existing open corrective action plan: C-0270 that was created to address issues from the 2024 audit. The WMSC provided details at the present audit's exit conference on April 7, 2026 and gave Metrorail an opportunity to submit additional relevant information and documentation, prior to communicating the proposed modification to Metrorail.

The present audit identified the same issues that C-0270 was originally created to address; therefore, the corrective action plan modification process in WMSC Program Standard (Section 9.C.4, CAP Modifications) was necessary to ensure that C-0270 can sufficiently address those issues. Metrorail subsequently developed a revised corrective action plan, and the WMSC approved the implementation of the modified corrective action plan on June 11, 2026.

The present audit identified two of the same deficiencies covered by an existing open corrective action plan: C-0270 that was created to address issues from the 2024 audit.



Metrorail requested to close C-0270 on December 26, 2025, nearly six months earlier than anticipated. Despite this effort, which is appreciated by the WMSC, two of the same issues from the 2024 audit were noted during the onsite observations for the present audit.



► **C-0270 (Open)**

Metrorail is not carrying out railcar maintenance and inspection tasks as specified by its procedures. (**2024 Revenue Vehicles (Railcar) Program Audit**, finding 1.) This included several different tasks: back-to-back measurements, daily inspections, blue signal/flag protection, and daily inspections/safety tests.

Corrective action plan C-0270 was developed to address these issues and was approved by the WMSC on September 19, 2024. Metrorail requested to close C-0270 on December 26, 2025, nearly six months earlier than anticipated. Despite this effort, which is appreciated by the WMSC, two of the same issues from the 2024 audit were noted during the onsite observations for the present audit. This necessitated the re-evaluation and modification of C-0270.

C-0270 Nonconformance Identified During Current Audit

Daily Inspections

The WMSC conducted observations of Metrorail personnel completing Daily Inspections of railcars on February 26, 2026 at Alexandria Yard and on April 1, 2026 at Greenbelt Yard. Metrorail's personnel are to complete the daily inspections in accordance with Metrorail procedure CENV WI DI0001, Daily Inspection. (The August 1, 2025 version of the document was in effect at the time of the present audit.)

At Alexandria Yard on February 26, 2026, two Metrorail employees were carrying out daily inspections on multiple train consists. One individual was observed conducting daily inspections at Greenbelt Yard on April 1, 2026 on multiple train consists.

At all of these observations, the personnel conducting the daily inspections did not have any SOPs, procedures or notes with them. The procedure is currently 30 pages in length with varying steps that vary by railcar series. The WMSC observed several steps that were omitted, including:

- 2.3.18. Check to see if the fuse indicators show any blown fuse. Report if the indicator has popped out.
- 2.3.7. Visually inspect each brake discs for signs of cracks, excessive wear, or other damage.
- 2.3.8. Visually inspect all mounting bolts of each brake disc and associated safety tabs/wires for irregularities.
- 2.3.9. Inspect all brake pads for an approximate minimum thickness of ¼ inch.
- 3.1.7. Check the operation of the radio by performing a radio transmission check on the local yard channel only.
- 3.8.11. Inspect floor heater assemblies for trash or debris. If found, turn off the floor heater circuit breaker, attach red tags, and report to supervisor.
- Inspect for wheel defects in the visible portions of each wheel: unusual wear patterns, cracks, flats, spalling, and/or other damage. All instances of wheel defects should be reported.

Blue Signal/Flag Protection

In the **2024 WMSC Audit of Revenue Vehicles (Railcar) Program**, there were noted issues with Metrorail's Blue Signal/Flag Protection procedures, Metrorail SOP 301.20, Blue Signal Protection Program. The WMSC observed personnel not following these procedures during the current audits observations at Greenbelt Yard on February 13, 2026, Alexandria Yard on February 17, 2026, Dulles Yard on February 18, 2026, and Branch Ave Yard on February 25, 2026.



The WMSC observed:

- Use of flags, not lights, on Shop Apron entering the shop during non-daylight hours.
- Differing use of blue flags inside/outside of shops.
- Flags were not always placed at the 10-foot distance the SOP requires.
- Flags were at times placed inside of shop doors, at other times, outside of shop doors.
- In some cases, flags were used on both sides of a train consist and only one side at others.

The WMSC also witnessed issues with this procedure during **an inspection at Shady Grove Yard on March 19, 2026**. Per the Inspection Report, "At the conclusion of the inspection, WMSC Inspector identified employees working on a train located within the S&I Shop on track 9 south. The workers failed to properly install required blue flag protection. WMSC Inspectors contacted the S&I Shop supervisor, and the flags were installed."

Workers failed to properly install required blue flag protection. WMSC Inspectors contacted the S&I Shop supervisor, and the flags were installed.



Findings and **Minimum** Corrective Actions

Findings and Minimum Corrective Actions

► Finding #1: Metrorail has not updated periodic inspection manuals to account for new cameras installed on railcars.

Metrorail has completed a program to add inward and outward facing cameras/video recording and in-operator-cab microphone/audio recording to its 6000-series railcars as a result of corrective action plan C-0146. The 7000-series railcars will also receive this same upgrade. The safety improvement represented by the new video and audio need to be maintained for that safety benefit to be sustained. For all of its railcar maintenance, Metrorail has standardized periodic inspection and maintenance, which must be updated to account for modifications to the railcars.

Requirement:

Metrorail maintains its railcar fleets through various periodic inspections. Metrorail's A-Inspection – 7000-series (Revision 14.0, dated February 6, 2024) states in section 40.16 "INSPECT PASSENGER AREA – Ensure that the covers of the interior destination signs and cameras are unobstructed. Use a flashlight to determine if the lenses of the interior cameras are visible. Camera lenses should be clearly visible through transparent covers. In case of any graffiti or blemish marks, use the LEXAN 9034 product to clean the cover."

The equivalent periodic inspection for the 6000-series railcars A-Inspection – 6000 Series (Revision 14.0, dated June 14, 2024), includes no remarks about cameras.

Nonconformance:

As part of corrective action plan C-0146, Metrorail installed inward and outward facing cameras and associated recording equipment in the 6000-series railcars. The 6000-series were introduced on the WMATA Rail System on October 3, 2006. As of January 21, 2026, all 182 6000-series railcars have been completed, and for the first time, Metrorail is now able to monitor video from the railcars from its control center in addition to video and audio recordings that will aid future safety event investigations.



Metrorail is set to begin installing similar video and audio capabilities on the 7000-series railcars as well. The 7000-series were introduced on the WMATA Rail System on April 14, 2015. Those 748 railcars started service with in-operator-cab video and outward facing video; however, the cars lack audio capability altogether, and the existing video is limited in angle and image quality.

The importance of this work cannot be overstated and the WMSC appreciates Metrorail's years of effort. The new equipment constitutes a modification to the 6000-series railcars that must be inspected and maintained.

None of the 6000-series periodic inspection manuals reviewed during the audit contemplated the presence of cameras or microphones or any related components. In documents provided after the April 7, 2026 Exit Conference for the present audit, Metrorail presented updates to address cameras in its regular maintenance procedures. The new video and audio capabilities on the 6000-series have been in use on some of the railcars for over a year without defined maintenance.

Metrorail has completed a program to add inward and outward facing cameras/video recording and in-operator-cab microphone/audio recording to its 6000-series railcars as a result of corrective action plan C-0146.



Metrorail must ensure that its regular inspection and maintenance program has procedures in place to appropriately inspect and maintain the new audio and video capabilities.

The 7000-series periodic inspection manuals are based on the camera equipment that the railcars initially entered service with starting in 2015, but do not account for the new camera or microphone equipment that will soon be installed across the 748-car 7000-series fleet.

This finding also interplays with finding #4, which finds that Metrorail's Periodic Inspection procedures have not been reviewed or updated in accordance with Metrorail's procedures. Metro revised the applicable 6000-series A-, B-, and C-inspection procedures during this audit, on March 27, 2026, and provided them to WMSC on April 7, 2026. The revised procedures address the installed camera equipment. The current 7000-series procedures remain accurate and up to date; the planned upgrades remain in validation and have not been installed. This addresses some of the minimum corrective action, however, does not address ensuring that all installed cameras have the intended visibility and that both cameras and microphones are functioning.

◆ **Minimum Corrective Action:**

Metrorail must ensure that its regular inspection and maintenance program has procedures in place to appropriately inspect and maintain the audio and video capabilities installed on the 6000-series and 7000-series railcars. This must include ensuring that all installed cameras have the intended visibility and that both cameras and microphones are functioning prior to railcars being put into service each day.

► **Finding #2: Metrorail's portable lifting jacks are not inspected or otherwise maintained as required.**

To conduct various inspections and maintenance on roadway maintenance machines, Metrorail uses two different types (from two different manufacturers, Neuro and Whiting) of electrical lifting jacks to facilitate personnel access underneath railcars. Ensuring the proper operation and function of these jacks is vital to personnel safety as they lift and suspend roadway maintenance machines above workers.

Requirement:

Metrorail did not provide inspection or maintenance plans or criteria for its two manufacturer types of portable lifting jacks that are used to inspect and maintain roadway maintenance machines. Therefore, Metrorail lacks an inspection and maintenance program for the portable lifting jacks necessary for the safe operation of the jacks.

Nonconformance:

At the February 17, 2026 observation at Alexandria Yard, the WMSC observed lifting jacks used to lift roadway maintenance machines. Personnel onsite indicated the jack maintenance, for the two types of jacks on site, are no longer supported by the manufacturers. Therefore, could not confirm maintenance standards or inspection criteria to verify safe operation.

On March 3, 2026, the WMSC requested that Metrorail "Provide the current inspection and maintenance plans and procedures for equipment jacks utilized by Car Track Equipment Maintenance for Roadway Maintenance Machines as of March 3, 2026."





Metrorail must ensure that its maintenance program meets the stated OEM maintenance going forward.

On March 17, 2026, Metrorail responded to that request with a document covering the jacks in question; however, the preventive maintenance form provided was listed as “Revision 0” and dated the same day, March 17, 2026, indicating that the form was created in response to our inquiry.

One of the forms provided, PM-2209-1433 Railquip Neuro Quarterly PM_Fillable, states in the title it is to be used for “Railquip & Neuro Portables;” however, the form later says to “Refer to Whiting O&M Manual for detailed procedures,” which is another jack manufacturer.

On April 17, 2026, in response to the April 7, 2026 Exit Conference, Metrorail provided a list of work orders related to jack equipment maintenance; however, the work orders did not provide any details on what maintenance was conducted. There were no checklists or other documents attached to these work order numbers. The WMSC appreciates Metrorail’s desire to review the jacks. Metrorail provided the applicable portable-lift O&M manuals during the audit after this issue was raised in the Exit Conference, however, WMSC’s remaining concerns relate to the inspection criteria, checklists, and documentation of completed maintenance.

◆ **Minimum Corrective Action:**

Metrorail must review each type of portable lifting/jacking equipment in its inventory and ensure that it has all original equipment manufacturer (OEM) manuals and materials for each model in its inventory, and any other documentation necessary to inform on what is the proper inspection and maintenance. Then, Metrorail must ensure that its maintenance program meets the stated OEM maintenance going forward. Depending on the nature of the necessary recurring maintenance, personnel may need to be trained on the requirements for maintenance of each different type of jack.

► **Finding #3: Metrorail’s railcar periodic inspection manuals are not reviewed on the required document control cadence.**

To mitigate practical drift and ensure that procedures match current practice Metrorail’s quality management procedures require that documents be reviewed at least every two years. This is important because WMATA is a large, complex organization that “assure[s] it is meeting the requirements of its stakeholders, particularly those of its riding customers, member jurisdictions, and the regulations established by oversight bodies.” Quality Management System Plan (Revision 2.0, September 2021.)

Requirement:

Metrorail’s Quality Management System Plan (Revision 3.0, October 31, 2023), section 3.2 states “Metro Organizations and projects include procedures for receiving, transmitting, reviewing, approving, disseminating, and archiving critical documents in their respective [quality management plans]. These procedures are reviewed and revised in accordance with





Metrorail must ensure that Railcar Maintenance procedures align with the requirements of its Quality Management System Plan.

the Organizational Document Control Procedures or at least every two years unless there are process changes that necessitate an earlier review. This applies to both hardcopy and electronic documents.”

Nonconformance:

The following Railcar Maintenance Periodic Inspection procedures do not meet the two-year review/revision cycle as required by Metrorail’s Quality Management System Plan:

Document Number/Name	Last Review Date
CENV WI 18CISP C-Inspection – 2000/3000 Series	December 11, 2023
CENV WI 15CISP C-Inspection – 6000 Series	December 11, 2023
CENV WI 15BISP B-Inspection – 6000 Series	December 11, 2023
CENV WI 14CISP C-Inspection – 7000 Series	December 11, 2023
CENV WI 14AISP A-Inspection – 7000 Series	December 11, 2023
CENV WI 18AISP A-Inspection – 2000/3000 Series	December 11, 2023
CENV WI 15AISP A-Inspection – 6000 Series	December 11, 2023
CENV WI 14BISP B-Inspection – 7000 Series	December 11, 2023
CENV WI 18BISP B-Inspection – 2000/3000 Series	December 11, 2023

Metrorail did provide SOP 202.14 and PI Review Committee agendas evidencing its process and progress for reviewing and updating periodic inspection procedures, including monthly committee reviews, technical evaluations, and revision controls. As discussed in finding #1 of this report, Metrorail had installed new cameras in all of its 6000-series railcars but none of the periodic inspection manuals were updated accordingly. Metrorail provided updated 6000-series A-, B-, and C-inspection procedures on April 7, 2026. Task 40 (Interior) was updated on March 27, 2026, to address the newly installed camera equipment. Metro therefore incorporated camera-related process changes into the applicable periodic inspection procedures.

♦ Minimum Corrective Action:

Metrorail must ensure that Railcar Maintenance procedures align with the requirements of its Quality Management System Plan. Metrorail should set timelines and schedules for review of its periodic inspection procedures to ensure that they are reviewed and revised in accordance with stated review and update requirements.



At Dulles Yard, the WMSC observed none of the emergency water supply systems related to the eye-wash stations within the Service and Inspection Shop were signed as inspected.



► **Finding #4: Metrorail is not inspecting or testing eye-wash stations in accordance with manufacturer instructions.**

Eye-wash stations are located near locations where certain work has the potential for foreign debris inadvertently entering the eyes of personnel conducting the work. Metrorail's railcar service and inspection shops have several different types of eye-wash stations installed throughout these facilities. The stations come with instructions stating the valves must be tested and signed off weekly to ensure their intended functionality. Following the manufacturer instructions ensures eye-wash stations will function as intended, when needed.



Requirement:

Title 29, U.S. Code of Federal Regulations section 1910.151 states "Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use."

The federal Occupational Safety and Health Administration's [website](#) provides an [InfoSheet \(DSTEM OSHA 3818-07 2015\)](#) providing additional details:

"Eyewash stations used in workplaces must be maintained to prevent injury and illness to workers. This InfoSheet provides updated information on eyewash station hazards. Eyewash stations are critical emergency safety equipment intended to mitigate eye injuries when control methods do not prevent exposure to a physical or chemical irritant or a biological agent. The ANSI standard for eyewashes specifies that eyewashes must be capable of delivering tepid flushing fluid to the eyes not less than 1.5 liters per minute (0.4 gpm) for 15 minutes after a single movement and subsequent hands-free operation. Whether the eyewash station is permanently connected to a source of potable water (i.e., plumbed) or has self-contained flushing fluid, improper maintenance may present health hazards that can worsen or cause additional damage to a worker's eye."

Nonconformance:

Metrorail employs several types of eye-wash stations in its railcar service and inspection shops. Manufacturers provide instruction on how these devices are to be maintained. However, at the Dulles Yard, there are several eye wash stations installed with the instructions to "Test-operate valve(s) each week and sign below. Report any malfunctions immediately."

At the February 18, 2026 observation at Dulles Yard, the WMSC observed none of the emergency water supply systems related to the eye-wash stations within the Service and Inspection Shop were signed as inspected. And the WMSC observed the emergency water system supplying eyewash and shower stations had not been tested since September 29, 2021, despite an indicated weekly inspection being required.



The shop inspection checklists do not state criteria or steps to ensure that each eye-wash station is functioning as intended.

The shop inspection checklists do not state criteria or steps to ensure that each eye-wash station is functioning as intended and no instructions from the specific eye-wash station manufacturer instructions were evidently considered as part of the maintenance plan.

The WMSC also completed several recent inspections that identified varying issues with eye-wash station maintenance:

WMSC Inspection Report 20260319, dated March 23, 2026, inspected Shady Grove Yard (A99) Car Wash on March 19, 2026 and identified:

- The plumbed eye wash decontamination station located on the south end of the car wash is broken and filled with debris.
- The eye-wash station on the wall adjoining the S&I shop is not functioning. It is covered with a white substance that obstructs the eye flushing liquid from freely flowing.

WMSC Inspection Report 20260402, dated April 6, 2026, inspected Greenbelt Yard (E99) Car Wash on April 2, 2026 and identified:

- At eye wash station #1, there was no installation or expiration sticker on the installed cartridge. In addition, the replacement fluid containers did not have expiration dates on the three-replacement cartridges.
- At eye wash station #2, there was no installation or expiration sticker on the installed cartridge. The eye wash fluid container installed was empty, and the replacement fluid containers did not have an expiration date on the one replacement cartridge.
- At Eye Wash Station #2, access to the emergency eye wash station is obstructed due to the storage of chemical containers.
- Eye wash station #3 was not connected to the wall of the car wash facility and was not operable. The fluid replacement containers were without labeling indicating installation, replacement, and inspection dates.

WMSC Inspection Report 20260403B, dated April 6, 2026, inspected Branch Ave Yard (F99) Car Wash on April 3, 2026 and identified:

- At the eye wash station, the expiration date on the installed container lapsed in 2016. The four replacement fluid containers have an expiration date ranging from 2016 to 2017.
- Two fixed eye wash stations, painted yellow, were identified as nonfunctional during testing performed by the WMSC.



Metrorail's 7000-series railcars were designed and entered service with diagnostic software that permitted personnel in the control center to remotely diagnose issues and make determinations on corrective action.



♦ **Minimum Corrective Action:**

Metrorail must inventory all eye-wash stations in each service and inspection shop and ensure the original equipment manufacturer (OEM) instructions for inspection and maintenance occur as stated. Metrorail must identify the department responsible for ensuring this occurs. If the stated inspection or maintenance is of the type not normally performed by the determined department, Metrorail must ensure that personnel tasked with carrying out the maintenance are properly trained on the requirements.

Recommendation #1: Metrorail should re-acquire the type of remote diagnostic capabilities the 7000 series originally started service with.

Metrorail's 7000-series railcars were designed and entered service with diagnostic software that permitted personnel in the control center to remotely diagnose issues and make determinations on corrective action.

Requirement:

WMATA Public Transportation Agency Safety Plan, Version 6.0, December 31, 2025, Section 1.3.3 states "Maintaining the system in a State of Good Repair is the foundation for Metro to produce consistent, repeatable outcomes that create an environment conducive to a safe experience." Metrorail should use all available tools to diagnose issues and prevent possible hazards. There should not be safety events exacerbated by inoperable tools that are designed to prevent such issues.

Identified Issue:

During interviews for the present audit, personnel confirmed that there were issues with the software originally in use for remote diagnostics on the 7000-series railcars, and as a result, the remote diagnostics are no longer operable. The specific reason why it is not functioning was not provided to the WMSC. Similarly, the WMSC is not aware of work in progress to return the feature to operability.

As evidenced during at least one safety event, this software could be used to effectively and efficiently diagnose and resolve railcar issues:

WMSC Investigation Report **W-0116**, was for a runaway train and customer evacuation event near Rhode Island Ave-Brentwood Station that occurred on March 26, 2021. That investigation report detailed.



A preliminary investigation revealed that the brake malfunction was misdiagnosed in the affected railcars, as personnel cut out the wheel trucks on the incorrect railcars. This resulted in a friction condition between the train wheels and brake pads, which caused smoke to emit from the affected wheel trucks.

“During the event, [the Car Maintenance (CMNT)] Desk reviewed the Fleet wise software data, which identifies failures of respective trains via remote access. The CMNT desk called the OPS 1 Button RTC to provide troubleshooting assistance. The CMNT Desk was relocated at Branch Ave Service and Inspection shop for COVID-19 mitigation. The screenshot below shows how the CMNT Desk remotely receives trouble information from the field; this image is captured from the trouble codes being sent from the disabled train. CMNT utilized an application called Fleet Wise to assist in the troubleshooting efforts for the disabled train. The Button RTC was able to identify that the problem cars were 7302 and 7303. After several failed attempts, the Button RTC reported they received a report that a customer exited the train; however, when they monitored the platform camera, they were able to see that the customer made it to the platform at Rhode Island Avenue.”

In another safety event on Tuesday, January 20, 2026, at 15:48 hours, it was identified that an eight-car, 7000-series train arrived at Capitol South Station on Track 2 and reported a stuck holding brake condition on the consist. The rail vehicle operator reported to the radio rail traffic controller that their train control display screen showed their lead married pair of railcars experienced a brake malfunction. The train was able to move and continued to experience a brake malfunction while traveling from Capitol South Station to McPherson Square Station and was reported as experiencing dragging and stuck brakes. When the train arrived at McPherson Sq Station, it was emitting smoke from underneath the train.

A preliminary investigation revealed that the brake malfunction was misdiagnosed in the affected railcars, as personnel cut out the wheel trucks on the incorrect railcars. This resulted in a friction condition between the train wheels and brake pads, which caused smoke to emit from the affected wheel trucks. Fan activation was requested between L'Enfant Plaza Station and Rosslyn Station and personnel contacted District of Columbia Fire and Emergency Services.

The preliminary probable cause of the Fire/Smoke from the Rail Vehicle at McPherson Sq Station event on January 20, 2026 was an analogue converter failure in the railcar's front wheel truck. Additionally, the rail vehicle operator failed to identify the correct trouble code on the train control display screen, which resulted in the incorrect wheel trucks being cut out, and the train moved through several stations with brakes dragging.

Recommendation #2: Metrorail should conduct a staffing assessment for the machinist position that accounts for current facilities, railcars, and maintenance requirements.

Recommendation 3 from the **2024 WMSC Audit of Revenue Vehicles (Railcar) Program** recommended “Metrorail should update its railcar maintenance staffing assessment to account for current facilities, railcars, maintenance requirements, and other operational changes. The WMSC observed instances described above of individuals performing tasks alone that are required to be performed with at least one other person, but it was unclear whether that was due to inadequate staffing or the separate acceptance of noncompliance with rules and procedures described in Finding 1 (of the report).”



To ensure railcar maintenance tasks occur as required by the railcar maintenance program, Metrorail should ensure it has sufficient personnel to maintain railcars in a state of good repair.

Metrorail conducted a risk assessment for the 2024 recommendation rather than a corrective action plan; however, during the present audit, the WMSC continues to see concerns with staffing of Metrorail's Office of Railcar Maintenance.

Requirement:

WMATA Public Transportation Agency Safety Plan, Version 6.0, December 31, 2025, Section 1.3.3 states "Maintaining the system in a State of Good Repair is the foundation for Metro to produce consistent, repeatable outcomes that create an environment conducive to a safe experience." To ensure railcar maintenance tasks occur as required by the railcar maintenance program, Metrorail should ensure it has sufficient personnel to maintain railcars in a state of good repair.

Identified Issue:

During the present audit, the WMSC requested Metrorail's staffing assessment for the Office of Railcar Maintenance; however, none was provided.

In the **2024 WMSC Audit of Revenue Vehicles (Railcar) Program**, the WMSC recommended that Metrorail conduct a staffing assessment. Metrorail elected to conduct a risk assessment at that time, which is (and was) permitted under the WMSC Program Standard (Section 5.E.4). Metrorail ultimately determined that it would accept the risks listed within the risk assessment and did not create a corrective action plan to address the recommendation. The risk assessment dated June 20, 2024 noted that "Rail Fleet has 952 employees including mechanics, car cleaners, supervisors, and superintendents." At the time of the present audit, Rail Fleet has 909 employees.

The 2024 risk assessment also stated:

"The four hazards identified were rated as 3D, 3D, 3C, and 3C¹, which are all yellow risks. Per Metro's Agency Safety Plan, level-changing mitigations are not required if approved at the Vice President level, or above. At this time, Rail Fleet leadership has chosen to accept this risk without additional mitigations.

The consensus from the risk assessment team and department leadership is that it is premature to invest the resources required to conduct a staffing assessment when the current staffing levels do not accurately reflect Rail Fleet's allocation of personnel. Rail Fleet currently does not have personnel filling all the allocated personnel control numbers for the roles cited in the WMSC's report. Metro has had restrictions on hiring due to budget constraints, which has led to a reduction in workforce in Rail Fleet. Once fully staffed, Rail Fleet may revisit the need for a staffing assessment if issues cited by the WMSC persist."

¹ The four hazards identified by Metrorail in its Rail Fleet Staffing Risk Assessment Report, dated June 20, 2024 were Insufficient personnel to safely perform maintenance tasks (Rated 3D), Insufficient personnel to oversee the performance of maintenance tasks (Rated 3D), Personnel unable to attend worker safety and maintenance skills training (Rated 3C), and Fatigued Employees (Rated 3C).

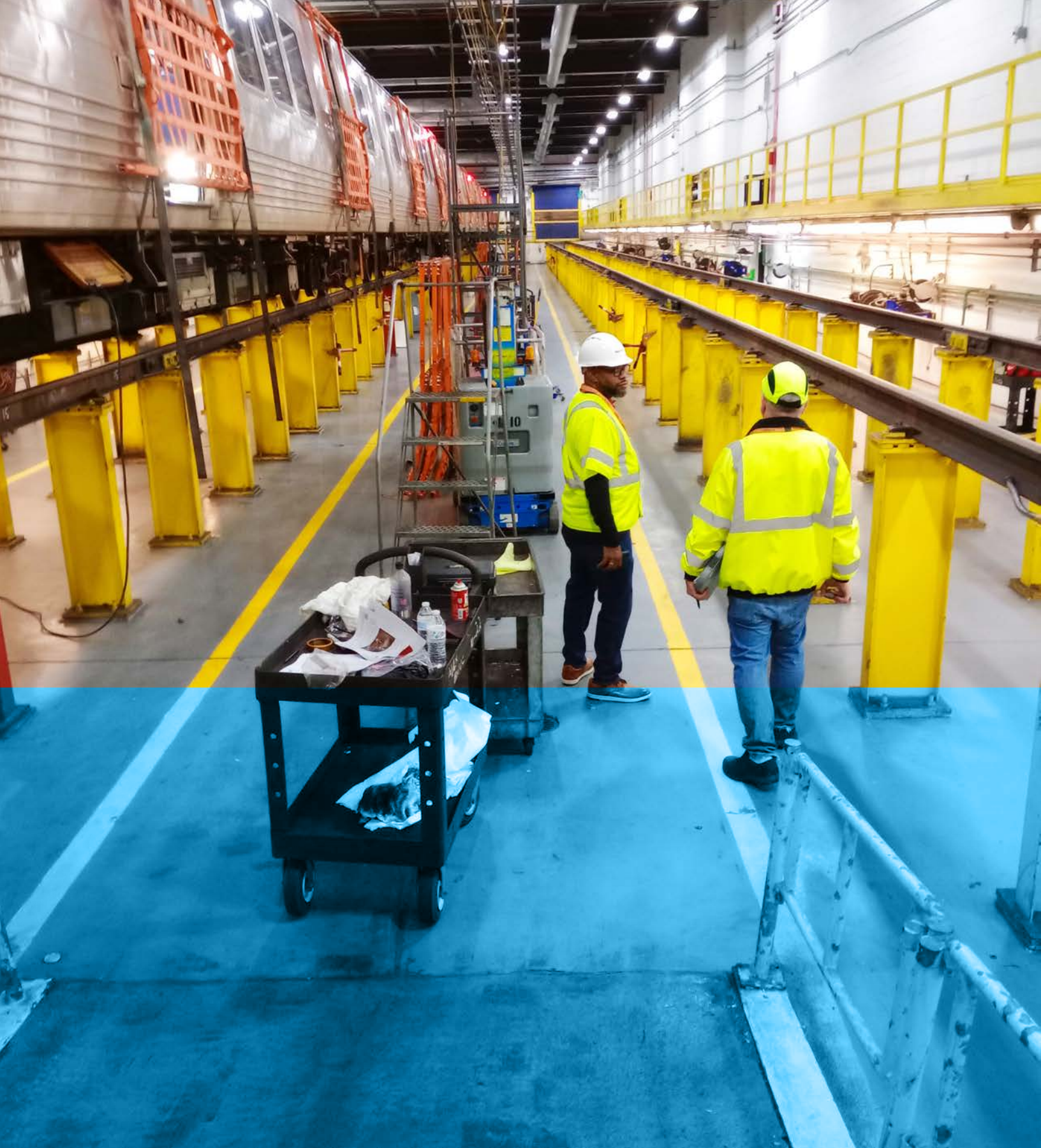
During the 2024 WMSC Revenue Vehicles Audit, Railcar Maintenance listed 30 AA Mechanic – Machinists, the most experienced level of Machinist, and now, during the present audit (two years later), 16 AA Mechanic – Machinists are listed.

Multiple personnel interviewed for this audit expressed concerns regarding railcar maintenance staffing and succession planning, including specific concerns regarding experienced machinists. During the 2024 WMSC Revenue Vehicles Audit, Railcar Maintenance listed 30 AA Mechanic – Machinists, the most experienced level of Machinist, and now, during the present audit (two years later), 16 AA Mechanic – Machinists are listed.

In response to WMSC requests on this issue, Metrorail replied that “Our stakeholders in Fleet have requested feedback on the general structure, format, and content of the [Car Track Equipment Maintenance] Manpower Assessment which was submitted as part of the second document request (item #12) of the WMSC Audit of Revenue and RMM Vehicles. Fleet recognizes that this request revealed a lack of similar documentation for [Car Maintenance] and have begun development of a similar assessment, and welcomes any feedback early in the planning process.” The WMSC is encouraged by Metrorail’s early efforts to address this recommendation.

Next Steps

Metrorail is required to propose corrective action plans to address each finding, recommendation and corrective action plan modification no later than 30 days after the issuance of this report. (Program Standard Section 9.C.3.a.) Each proposed corrective action plan must include several elements, including but not limited to, specific and achievable planned actions to remediate the deficiency, the person responsible for implementation, and the estimated date of completion. (Section 9.C.2.) Each proposed corrective action plan must be approved by the WMSC prior to Metrorail’s implementation.



Appendices

Appendix A

Appendix A: WMSC Corrective Action Plan Review

As part of the present audit, the WMSC reviewed all corrective action plans created to address past findings relevant to the present audit's scope. The current list of open WMSC corrective action plans may be found at: **CAPs – Washington Metrorail Safety Commission (WMSC)**. Below is a summary of each corrective action plan reviewed during the present audit.

CAP NUMBER: C-0084 (Closed)

FINDING: Metrorail is not following and does not have effective safety certification and acceptance procedures for new RMMs. There is no Metrorail-wide safety certification procedure to implement the SSCP.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 1.

ADDRESSED + PRESENT AUDIT:

To address this finding, Railcar Engineering coordinated with the Office of Safety to develop a RMM-specific procedure to the acceptance of RMMs. From there a list of RMMs that did not go through safety certification was created to identify any deficiencies. Ongoing training was established for applicable personnel to ensure there is awareness of the process that RMMs must go through for safety certification and acceptance. C-0084 was closed on July 10, 2024. As part of the present audit, the WMSC reviewed acceptance and certification documentation for five vehicles received since January 1, 2023, which did not identify any nonconformance regarding acceptance or safety certification.

CAP NUMBER: C-0085 (Closed))

FINDING: Metrorail does not always follow safety certification or safety approval process requirements for modifications to existing RMMs..

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 2.

ADDRESSED + PRESENT AUDIT:

To address this Railcar Engineering updated its Equipment Configuration SOP to include the Office of Safety in the notification of engineering changes to RMMs. The WMSC closed C-0085 on April 5, 2022. The present audit did not identify any nonconformance regarding safety approval process requirements for modifications to existing RMM.



CAP NUMBER: C-0086 (Closed)**FINDING:** Metrorail is not following its engineering change procedures.**SOURCE:** 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 3.**ADDRESSED + PRESENT AUDIT:**

The Office of Railcar Engineering updated its Equipment Configuration Change SOP to include the Office of Safety in the notification of engineering changes. All applicable staff were notified of the changes. The WMSC closed C-0086 on March 4, 2022. The present audit did not identify any nonconformance regarding engineering change procedures.

CAP NUMBER: C-0087 (Closed)**FINDING:** Metrorail is not utilizing reliability data for its RMMs, including the specific nature of any failure, which prevents WMATA from realizing the safety benefits of a complete, ongoing analysis program.**SOURCE:** 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 4.**ADDRESSED + PRESENT AUDIT:**

Metrorail implemented reliability reports that are consistent with existing formats, which include issues that drive unreliability and failure trends and help to identify and mitigate safety risks and distributed to relevant departments. C-0087 was closed on September 15, 2022. The present audit reviewed reliability reports and confirmed the distribution and review of the information by supervisory personnel interviewed.

CAP NUMBER: C-0088 (Closed)**FINDING:** Equipment operators are not fully trained on each type of vehicle they may be directed to operate. Some training has not included sufficient hands-on experience.**SOURCE:** 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 5.**ADDRESSED + PRESENT AUDIT:**

Metrorail conducted a job analysis to determine the minimum number of certified operators required on each type of RMM for operations and continued safety-related maintenance. Additional Equipment Operator training was scheduled to ensure that personnel were trained on the equipment they are operating on. The WMSC closed C-0088 on February 9, 2023. The current training matrix includes a list of each type of equipment that Operators must be trained on and the re-qualification requirements.

CAP NUMBER: C-0089 (Closed)**FINDING:** Equipment operator certifications for specific vehicles do not expire or require recertification.**SOURCE:** 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 6.**ADDRESSED + PRESENT AUDIT:**

To address this finding, Metrorail's Technical Training and Development department developed a training matrix for refresher and recertification training for all RMM equipment. The WMSC closed C-0089 on March 4, 2022. The present audit reviewed equipment operator and vehicle flag persons certification records, including actual past written and practical testing records and did not identify any nonconformance.



CAP NUMBER: C-0090 (Closed)

FINDING: Supervisors or others have no way of confirming while in the field whether an operator is properly trained to operate a specific RMM.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 7.

ADDRESSED + PRESENT AUDIT:

Metrorail's Technical Training and Development distributed the Equipment Operators Certification report to all Track and Structures Supervisors, Assistant Superintendents and Superintendents. In addition to the report, training records were made accessible through kiosks to personnel in the field. The WMSC closed C-0090 on March 9, 2023.

The WMSC reviewed the log of currently certified Equipment Operators along with a sampling of qualification / certification records as part of this audit and did not identify nonconformance.

CAP NUMBER: C-0091 (Closed)

FINDING: Metrorail risks key safety and maintenance work coming to a halt due to insufficient succession planning and training.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 8.

ADDRESSED + PRESENT AUDIT:

Metrorail's Track and Structures Department completed a job analysis to determine the minimum number of certified operators required for each type of RMM. From there, Technical Training and Development created a training matrix for operators including the certification and re-certification frequency. This is all tracked through Metrorail's training system. The WMSC closed C-0091 on April 7, 2023.

See Recommendation 2 of this report, which focuses on railcar maintenance, rather than RMM maintenance, but points to succession planning and training for key personnel, which Metrorail should evaluate.

CAP NUMBER: C-0092 (Closed)

FINDING: Metrorail does not have a procedure for the inspection of contractor hi-rail vehicles.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 9.

ADDRESSED + PRESENT AUDIT:

Metrorail created and approved SOP 101.01, Procedures for Inspection of Contractor Rail Vehicles for Roadway Usage. The WMSC closed C-0092 on August 30, 2021. The current version of this procedure along with corresponding hi-rail inspection records were reviewed as a part of the present audit and as a part of CAP C-0242, which the WMSC closed on January 6, 2026, and neither identified any nonconformance related to the inspection of contractor hi-rail vehicles.

CAP NUMBER: C-0093 (Closed)

FINDING: Employees responsible for maintenance of certain components and systems of WMATA-owned hi-rail vehicles are not trained on how their maintenance work could affect the hi-rail systems or operations.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 10.

ADDRESSED + PRESENT AUDIT:

Technical Training and Development worked to create a training course to train heavy truck and equipment mechanic personnel and non-revenue frontline managers on the effect of rubber tire vehicle maintenance on hi-rail vehicles. The WMSC closed C-0093 on November 24, 2021. No new findings or recommendations were noted for hi-rail vehicles during this audit.





CAP NUMBER: C-0094 (Closed)

FINDING: Metrolink applies certain railcar rules to RMM maintenance and engineering that create unnecessary complications or contradictions.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 11.

ADDRESSED + PRESENT AUDIT:

Railcar Engineering conducted a full review of documents relating to RMM maintenance and engineering. One out of the 19 documents reviewed did have contradictions between railcar and RMM maintenance and was subsequently updated. The WMSC closed C-0094 on March 4, 2022. The present audit did not identify any nonconformance related to the inspection of contractor hi-rail vehicles.

CAP NUMBER: C-0095 (Closed)

FINDING: CTEM mechanics get only limited training on specific vehicles that would assist them in moving and maintaining RMMs, and do not get adequate refresher training.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 12.

ADDRESSED + PRESENT AUDIT:

Technical Training and Development updated the CTEM training matrix to include all major subsystems and yard moves. Updated curriculum was created for each course offered to ensure they covered the required movements. The WMSC closed C-0095 on September 15, 2022. Personnel interviewed as part of the present audit confirmed the use of newer, improved training curriculum materials.

CAP NUMBER: C-0096 (Closed)

FINDING: There is no clear way for field personnel to identify WMATA owned RMMs that have been inspected and deemed safe for use, and there is no way for field personnel to identify any safety restrictions that may be required for non-WMATA owned RMMs that have been allowed into the Metrolink system.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, finding 13.

ADDRESSED + PRESENT AUDIT:

To address this Car Track Equipment Maintenance (CTEM) now provides daily notification of RMM abnormal condition and restriction to all CTEM Notification email recipients. CTEM also applies equipment failure service tags when WMATA RMM are affected. The WMSC closed C-0096 on November 24, 2021. Personnel interviewed for the present audit confirmed the daily notification of RMM abnormal conditions and restrictions is reviewed and distributed daily and vehicles are tagged if not allowed into service.

CAP NUMBER: C-0097 (Closed)

FINDING: Metrorail does not have a single, clear, complete safety procedure for the securement of vehicles using chocks.

SOURCE: **2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training**, finding 14.

ADDRESSED + PRESENT AUDIT:

To address this, Railcar Engineering reviewed the current procedures for the securement of vehicles and revised its Rules and Procedures Handbook. The WMSC closed C-0097 on November 24, 2021. The WMSC continues to monitor vehicle securement throughout our oversight programs. The WMSC cited issues with roadway maintenance machine securement during several recent inspections:

- An **August 9, 2025 Inspection of a Green Line Shutdown and RWP** identified that:
 - Prime Mover 43, located at Naylor Road (F09) platform, track 2, was parked and unattended with no chocks on the wheels (see photos 4 and 5). Metrorail Operating Handbook section 11.12.1–5 (Securing Roadway Maintenance Machines) states “Operators shall secure Roadway Maintenance Machines while they are stopped in the work area...by placing wheel chocks, stops and by applying handbrakes.”
- An **October 23, 2025 RWP Inspection** identified that:
 - A Track and Structures crew did not secure a prime mover with wheel chocks when stopped for long periods of time as required by the Metrorail Operating Rulebook section 11.12.1 which states “Operators shall secure Roadway Maintenance Machines while they are stopped within the work area.”
- An **October 24, 2025 RWP Inspection** identified again that:
 - A Track and Structures crew did not secure a prime mover with wheel chocks when stopped for long periods of time as required by the Metrorail Operating Rulebook section 11.12.1 which states “Operators shall secure Roadway Maintenance Machines while they are stopped within the work area.”
- A **March 12, 2026 Roadway Maintenance Machine Inspection at Alexandria Yard** found:
 - 13 RMMs stored at Alexandria Yard (C99) were not in compliance with PO-25-21, RMM vehicles were secured with a wheel chock only on one axle at each end of the consist, but 9.9.5 (b) clearly states workers must “Place chocks on one axle at each end of the car. Chocks should be placed on the same side of the vehicle whenever possible.” Therefore, all the RMM in the consist represent a car that needs individual chocks added to the front and rear axle or the car. There were no sets of chocks (front and rear axle) present on all RMM cars inspected.

On February 9, 2026 Metrorail issued Permanent Order PO-25-01 which revised the RMM vehicle storage requirements.

The original language stated: “9.9.5 When storing Roadway Maintenance Machines, Operators shall:

- a) Set parking brakes on all wheeled units in the consist,
- b) Apply wheel stops or chocks to both sides of one (1) axle of each truck in the consist.
- c) Perform a “walk-around” inspection to ensure brakes are properly applied, chocks or stops are in place, and no equipment is fouling any other tracks.”

This was revised to: “9.9.5 When storing Roadway Maintenance Machines, Operators shall:

- a) Set parking brakes on all wheeled units in the consist.
- b) Place chocks on one axle at each end of the car. Chocks should be placed on the same side of the vehicle whenever possible.
- c) Perform a “walk-around” inspection to ensure brakes are properly applied, chocks are in place, and no equipment is fouling any other tracks.”

Metrorail also added the definition of “stored” to the MOR glossary, defining “stored” as “Equipment is placed out of service and secured for an extended period of time.” The WMSC will continue to monitor this issue throughout our oversight activities.





CAP NUMBER: C-0098 (Closed)

FINDING: Several Metrorail preventive maintenance instructions do not include acceptable tolerances for required measurements.

SOURCE: 2021 Audit of Roadway Maintenance Machine (RMM) Inspection, Maintenance and Training, recommendation 1.

ADDRESSED + PRESENT AUDIT:

To address this recommendation, Railcar Engineering added tolerances as dictated by the manufacturers or tools, for measured values to all existing preventative maintenance manuals. The WMSC closed C-0098 on July 11, 2025.

CAP NUMBER: C-0134 (Closed)

FINDING: Metrorail's 6000-Series rehabilitation program, including coupler overhaul work, was implemented by CMOR, CENV and CMNT without safety certification and approvals required by WMATA's SSCPP.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 1.

ADDRESSED + PRESENT AUDIT:

The Office of Safety provided the certified items list (CIL) for the 6000-series rehabilitation work to the Safety Certification Review Committee (SCRC) for approval. Additional training was provided for relevant staff on safety certification and the process. The WMSC closed C-0134 on April 29, 2025.

CAP NUMBER: C-0135 (Closed)

FINDING: SAFE approved SMP [scheduled maintenance program] documentation that was incomplete and that did not match approved forms, and Metrorail did not comply with safety certification requirements defined in the SSCPP.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 2.

ADDRESSED + PRESENT AUDIT:

The Office of Safety created the certified items list (CIL) to the Safety Certification Review Committee (SCRC) for review and approval. A tracking log process was created to ensure version control of the CIL moving forward. The WMSC closed C-0135 on September 29, 2022.

CAP NUMBER: C-0136 (Closed)

FINDING: 6000-Series cars that underwent rehabilitation were put into service without SAFE approval.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 3.

ADDRESSED + PRESENT AUDIT:

Railcar Maintenance worked with the Office of Safety to ensure that all 6000-series cars properly underwent rehabilitation. The certificates of compliance for each new certification package were submitted to the WMSC. The WMSC closed C-0136 on March 26, 2025.

CAP NUMBER: C-0137 (Closed)

FINDING: Metrorail removed the coupler overhaul from the 6000-Series SMP process without documenting that change or completing a review of that change by the SCRC.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 4.

ADDRESSED + PRESENT AUDIT:

Metrorail updated its SOP 200-18 "The Development of Certified Elements and Items List" to incorporate the process for changing a Certified Items List, when needed. The WMSC closed C-0137 on March 26, 2025.

CAP NUMBER: C-0138 (Closed)

FINDING: Metrorail does not require or receive all necessary OEM documentation, parts or tools.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 5.

ADDRESSED + PRESENT AUDIT:

Vehicle Engineering created a process to review the technical specifications for all future railcar procurements to include language that all special tools and equipment are needed in inventory at all railcar maintenance shops. For current railcars, an overall inventory was conducted to ensure the shops have all OEM-listed special tools. The WMSC closed C-0138 on February 8, 2024. During the present audit, personnel in interviews and onsite observations confirmed access to all required tools, parts and documentation.



CAP NUMBER: C-0139 (Closed)

FINDING: The 7000 Series rehabilitation and subsystems overhaul program is being developed without full SAFE coordination, involvement or approval.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 6.

ADDRESSED + PRESENT AUDIT:

The Office of Safety developed the Certified Items List (CIL) and then implemented it in advance of the 7000-series Scheduled Maintenance Program (SMP) certification. The WMSC closed C-0139 on February 10, 2026, during the present audit.

CAP NUMBER: C-0140 (Closed)

FINDING: The responsibilities of CMOR's Incident Investigation Team and CMOR's separate unusual occurrence response personnel conflict and are not clearly defined.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 7.

ADDRESSED + PRESENT AUDIT:

CMOR developed a documented process to delineate responsibilities between the Incident Investigation Team and Vehicle Engineering. The WMSC closed C-0140 on March 4, 2022. The present audit did not identify any nonconformance regarding the incident investigation team.



CAP NUMBER: C-0141 (Closed)

FINDING: Metrorail does not have adequate document control practices for car maintenance job plans.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 8.

ADDRESSED + PRESENT AUDIT:

To address this, Metrorail developed a documented process to standardize the method to review and enter Car Maintenance job plans in Maximo. Car Maintenance published all approved job plans list on its employee resources webpage. The WMSC closed C-0141 on October 13, 2022. The present audit did not identify any nonconformance regarding document control of job plans.

CAP NUMBER: C-0142 (Closed)

FINDING: Metrorail does not have a systematic process to ensure that mechanics and engineers are trained for the specific tasks they are assigned to perform.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 9.

ADDRESSED + PRESENT AUDIT:

Railcar Engineering conducted a training assessment to determine the minimum training needs for mechanics and engineers that resulted in a new training matrix which outlines the minimum training requirements for each position. The WMSC closed C-0142 on November 2, 2023. The present audit reviewed all relevant training matrices defining the requirements for each position, along with the training records for mechanics and engineers and did not identify any nonconformance.

CAP NUMBER: C-0143 (Open)

FINDING: Metrorail does not consistently follow a standard process to address wheels out-of-round, to prevent cars with wheels out-of-round from operating, and to identify and address the root causes of wheels out-of-round.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 10.

ADDRESSED + PRESENT AUDIT:

Railcar Engineering updated its existing Maintenance Service Instructions (MSI) for wheel set profiling to ensure that maintenance personnel have proper instructions for out-of-round wheels. Metrorail worked with an external consultant to evaluate the possible root causes of the wheels out-of-round and identify possible mitigations. Metrorail is in the process of implementing the identified mitigations. The anticipated closure date for C-0143 is September 26, 2026.



CAP NUMBER: C-0144 (Closed)

FINDING: Metrorail does not clearly define the proper use of engineering modification instructions (EMIs), service bulletins (SBs), and other railcar engineering change documents.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 11.

ADDRESSED + PRESENT AUDIT:

Railcar Engineering worked to update procedures related to Engineering Modification Instructions (EMI), Engineering Requests (ER) and Service Bulletins (SB). The WMSC closed C-0144 on March 21, 2024. The present audit reviewed engineering documents to include EMI and did not identify any nonconformance.

CAP NUMBER: C-0145 (Closed)

FINDING: Metrorail utilizes multiple versions of the same inspection form that do not all include the same pass/fail criteria.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, finding 12.

ADDRESSED + PRESENT AUDIT:

Railcar Engineering reviewed and updated the Periodic Inspection (PI) checklists requiring revision to ensure consistency across all Class 1 rail vehicle fleets, shops & mechanics. Personnel were trained on the updates. The WMSC closed C-0145 on May 4, 2023.

Finding 1 of this report relates to this subject, as Metrorail must ensure that procedures aligned, where possible, to cover all necessary maintenance tasks.

CAP NUMBER: C-0146 (Open)

FINDING: Metrorail railcars do not include inward-and outward-facing audio and image recorders in all operating compartments.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, recommendation 1.

ADDRESSED + PRESENT AUDIT:

Vehicle Engineering Services developed a project plan for camera and audio recording equipment procurement, installation, and testing for 6000 and 7000 series railcars. As of January 2026, all 6000-series railcars have new inward-and outward-facing audio and image recorders. As part of CAP verification, the WMSC has observed the outputs of the new audio and image recorders that are now on the 6000-series railcars and confirmed the equipment satisfies the requirements of C-0146. At the time of this report, the 7000-series is in progress. The anticipated closure date for C-0146 is April 28, 2028.

CAP NUMBER: C-0147 (Closed)

FINDING: Part numbers are not being consistently entered in Maximo Work Orders for 7000 Series railcars.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, recommendation 2.

ADDRESSED + PRESENT AUDIT:

To address this recommendation, Metrorail updated the Maximo application with a new code list. Audit forms were created to check component code usage, and records were provided to show the quality check process. The WMSC closed C-0147 on November 29, 2023. The present audit did not identify any nonconformance regarding the consistency of work orders being entered into Maximo.



CAP NUMBER: C-0148 (Closed)

FINDING: Some WMATA job descriptions have not been reviewed in more than 20 years.

SOURCE: 2021 Audit of Revenue Vehicle (Railcar) Program, recommendation 3.

ADDRESSED + PRESENT AUDIT:

Metrorail's Human Capital Department created a documented procedure that requires that managers with direct reports are responsible for reviewing and updating job descriptions periodically to ensure they reflect current practices and requirements. The WMSC closed C-0148 on April 7, 2023. The present audit did not identify any nonconformance regarding job descriptions.

CAP NUMBER: C-0149 (Closed)

FINDING: WMATA has not fully implemented sufficient protections against the unauthorized movement of trains with zero speed commands.

SOURCE: 2016 FTA Safety Directive 16-5.

ADDRESSED + PRESENT AUDIT:

Originally issued by the Federal Transit Administration in 2016 as CAP: FTA-RED-16-003-B. On October 11, 2021, the WMSC initiated a modification to include hazard analysis and implementation on the 2000/3000 series railcar fleet; the CAP was re-numbered to C-0149.

To address this Metrorail installed a stop and proceed mode software update for the 2000 and 3000 series railcar fleets. The WMSC closed C-0149 on July 27, 2023. The present audit did not identify any nonconformance regarding unauthorized movement of trains with zero speed commands.

CAP NUMBER: C-0240 (Open/Overdue)

FINDING: Metrorail does not ensure the use of adequate fall protection when working on or around RMM.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, finding 1.

ADDRESSED + PRESENT AUDIT:

To address this finding, Metrorail's Occupational Safety and Health Department developed a fall protection program, to include risks and hazards for personnel working on and around Roadway Maintenance Machines (RMMs). This was received by the WMSC on February 23, 2024 as Actionable Item #1. The CAP contained 4 additional actionable items to demonstrate training, promotion and compliance with the new program. On April 18, 2024 Metrorail informed the WMSC that "As you are aware, on March 8, 2024, WMATA emailed WMSC in an effort to informally resolve a matter concerning the scope of the WMSC's audit of WMATA's Fitness for Duty and Occupational Health Programs. Since then, WMSC issued a subpoena dated April 8, 2024, seeking records and information pertaining to the referenced programs. In light of this development, WMATA intends to pause further discussion of the matters subject to the subpoena until the subpoena is resolved. This includes:

1. Responding to ongoing requests from WMSC for occupational safety and health data.
2. Submitting a revised draft for CAP #WMSC-24-C0255.
3. **Delaying upcoming deliverables for actionable items associated with CAPs listed in the attached document."**

C-0240 was listed in the document included in the communication. Since then, the WMSC has not received any further deliverables on this CAP.

On April 4, 2025, the WMSC issued a **Notice of Non-Compliance**, and an updated **Notice of Non-Compliance on September 15, 2025**, as deadlines were missed for providing the previously agreed upon deliverables.

C-0240 remains open and unaddressed by WMATA to the WMSC's knowledge pending the resolution of this issue.



CAP NUMBER: C-0241 (Closed)

FINDING: Metrorail is not effectively tracking and mitigating hazards related to RMM maintenance and operations in accordance with its PTASP.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, finding 2.

ADDRESSED + PRESENT AUDIT:

To address this finding, Metrorail implemented its new Safety Management System and provided training to personnel on it. The WMSC is currently receiving data on the hazards and mitigations in the system. The WMSC closed C-0241 on June 2, 2026.



CAP NUMBER: C-0242 (Closed)

FINDING: Metrorail has not documented its practices regarding adjustments to its contractor RMM inspection procedures.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, finding 3.

ADDRESSED + PRESENT AUDIT:

To address this Metrorail updated its SOP 101.01 'Procedures for Inspection of Contractor Class 2 Rail Vehicles for Roadway Usage' to include updates to the contractor Roadway Maintenance Machines inspection procedure to reflect current practice. The WMSC closed C-0242 on January 6, 2026, during the present audit.

CAP NUMBER: C-0243 (Closed)

FINDING: Metrorail does not have a process and assigned resources to inspect and maintain the hi-rail gear on hi-rail vehicles owned by WMATA as required to ensure the vehicles' safe operation.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, finding 4.

ADDRESSED + PRESENT AUDIT:

To address this finding, Track & Structures will partner with Procurement to award a multi-year contract for annual preventative maintenance inspections and corrective maintenance processes for its Hi-Rail equipment. This CAP was closed on September 26, 2025. Records of hi-rail maintenance equipment inspection documentation were reviewed just prior to the start of this audit.

CAP NUMBER: C-0244 (Closed)

FINDING: Metrorail is not reviewing its RMM-related procedures as required.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, finding 5.

ADDRESSED + PRESENT AUDIT:

The WMSC found several documents related to RMMs and RMM maintenance that were not reviewed in several years, outside of Metrorail's requirements for review. The Railcar Quality Assurance & Warranty Compliance updated its overall configuration management procedure. Metrorail updated 6 SOPs along with its related document control log. This CAP was closed on September 26, 2025. See Finding 3 of the present audit for a related finding on railcar maintenance.

CAP NUMBER: C-0245 (Closed)

FINDING: Metrorail has the opportunity to more effectively collect and proactively utilize reliability data to ensure safe and effective operations.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, recommendation 1.

ADDRESSED + PRESENT AUDIT:

Metrorail updated its SOP 'RCMP-RPA-P08-00 Class 2 Rail Vehicle Performance Analysis and Tracking Procedure' to include the tracking of engine hours. The WMSC closed C-0245 on April 4, 2025. The present audit did not identify any nonconformance regarding use of reliability data.

**CAP NUMBER: C-0246 (Closed)**

FINDING: Metrorail can improve safety and reliability by documenting and formalizing a process for starting and checking equipment on a regular basis that is not being regularly used.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, recommendation 2.

ADDRESSED + PRESENT AUDIT:

Vehicle Program Services developed a documented process for the long-term storage of Rail Maintenance Machines. The WMSC closed C-0246 on December 2, 2024. The present audit did not identify any nonconformance regarding the starting and checking of equipment not being regularly used.

CAP NUMBER: C-0247 (Closed)

FINDING: Metrorail is utilizing back-to-back gauges for RMM wheelsets that it has determined are insufficient to accurately make such a measurement on other rail vehicles.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, recommendation 3.

ADDRESSED + PRESENT AUDIT:

Metrorail provided a risk assessment for this recommendation rather than a corrective action plan. As permitted by the **WMSC Program Standard, Section 5.E.4**, this recommendation was subsequently closed on November 30, 2023.

CAP NUMBER: C-0248 (Closed)

FINDING: Metrorail has not implemented a documented process for decommissioning RMMs, including a process to ensure that vehicles to be decommissioned are no longer needed to carry out work activities and that those vehicles are properly and safely disposed of.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, recommendation 4.

ADDRESSED + PRESENT AUDIT:

Car Maintenance updated its Rail Vehicle Retirement and Disposition Procedures to include an interdepartmental process to ensure that roadway maintenance machines to be decommissioned are no longer needed to carry out work activities and that those vehicles are properly and safely disposed of. The WMSC closed C-0248 on October 21, 2024.



CAP NUMBER: C-0249 (Closed)

FINDING: Metrorail can improve the effectiveness of training and available operational manuals by providing a consistent, complete format that documents operational restrictions and allows personnel to identify where to look for such information, and by incorporating these improvements into a recurring troubleshooting training.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, recommendation 5.

ADDRESSED + PRESENT AUDIT:

Technical Skills Training documented a process that outlines training formats, delivery methods, and curriculum components for roadway maintenance machines (RMM) training. All RMM training was updated to the new format. The WMSC closed C-0249 on July 11, 2025. During the present audit, training personnel confirmed the use of the new curriculum, citing it as an improvement over the previous versions.

CAP NUMBER: C-0250 (Closed)

FINDING: Metrorail has an opportunity to improve safety through effective interdepartmental coordination to fully utilize available safety data, technology, and contracts.

SOURCE: 2023 Audit of Roadway Maintenance Machines Program, recommendation 6.

ADDRESSED + PRESENT AUDIT:

The Office of Safety established a monthly coordination meeting for Operations and Infrastructure departments to address and mitigate potential safety concerns. As part of Metrorail's Safety Management System, personnel were designated as Safety Risk Coordinators, the main point of contact for safety-related matters in individual offices, including infrastructure, operations and administrative offices. The WMSC closed C-0250 on June 9, 2025. During the present audit, the Safety Risk Coordinator for Railcar Maintenance was interviewed and discussed the ongoing cooperation and coordination efforts. Records of Rail Fleet-wide safety committee meetings were also provided.

CAP NUMBER: C-0270 (Open)

FINDING: Metrorail is not carrying out railcar maintenance and inspection tasks as specified by its procedures.

SOURCE: 2024 Audit of Revenue Vehicles (Railcar) Program, finding 1.

ADDRESSED + PRESENT AUDIT:

See report section: 'Required Modifications to Existing Corrective Action Plans Identified During this Audit' for additional information on C-0270.



CAP NUMBER: C-0271 (Open)**FINDING:** Metrorail is training railcar personnel on outdated procedures.**SOURCE:** [2024 Audit of Revenue Vehicles \(Railcar\) Program](#), finding 2.**ADDRESSED + PRESENT AUDIT:**

To address this, Technical Training and Development conducted a comprehensive review of materials used in trainings offered to railcar personnel to identify documents that are outdated or provide conflicting information to current procedures and requirements. Metrorail personnel are currently in the process of revising the training to match current procedures. The anticipated closure date for C-0271 is February 12, 2027.

CAP NUMBER: C-0272 (Not Received/Developed)**FINDING:** Metrorail is not meeting life-safety and occupational safety and health requirements in railcar maintenance facilities.**SOURCE:** [2024 Audit of Revenue Vehicles \(Railcar\) Program](#), finding 3.**ADDRESSED + PRESENT AUDIT:**

Metrorail did not provide a CAP related to this finding, stating that "Please note that we have not submitted a CAP proposal for Finding #3 in light of WMATA's May 6, 2024 objections to the WMSC's Subpoena for records relating to the WMSC's audit of WMATA's Fitness for Duty and Occupational Health Programs. We understand there are ongoing discussions between WMATA and WMSC relating to the scope of WMSC's authority to oversee and enforce workplace safety and health matters, which would include the items raised in Finding #3 of this audit."

On October 18, 2024, the WMSC issued a [Notice of Non-Compliance for C-0272](#). For full details see [WMSC.gov/Official Actions](#). C-0272 remains open and unaddressed by WMATA to the WMSC's knowledge pending the resolution of this issue.

CAP NUMBER: C-0273 (Open)**FINDING:** Metrorail is not identifying and mitigating hazards related to railcars and railcar personnel.**SOURCE:** [2024 Audit of Revenue Vehicles \(Railcar\) Program](#), finding 4.**ADDRESSED + PRESENT AUDIT:**

Car Maintenance, Rail Fleet revised its Standard Operating Procedure (SOP) 301.07, Class 1 Vehicle Re-rail Procedures, to include requirements for securing equipment during transport, excess equipment storage procedures, specifically for re-rail equipment. From there, re-rail equipment was properly secured in trailers to ensure safe transport. Metrorail also ensured that all hazards noted as a part of the audit are included within its Safety Management System. C-0273 remains open and is expected to be completed with re-rail equipment added to remaining trailers, and submitted for closure consideration in August 2026.

CAP NUMBER: C-0274 (Closed)**FINDING:** Metrorail is not following its operational certification requirements for Car Maintenance Road Mechanics.**SOURCE:** [2024 Audit of Revenue Vehicles \(Railcar\) Program](#), finding 5.**ADDRESSED + PRESENT AUDIT:**

To address this finding, Metrorail revised the Metrorail Operating Rulebook to exclude Car Maintenance Road Mechanics from operating rail vehicles on mainline. The training matrix for Car Maintenance Road Mechanics was revised to include clearer requirements on their training as they will no longer be certified to operate trains. The WMSC closed C-0274 on November 7, 2025. The present audit interviewed road mechanics who confirmed they are no longer certified to operate trains on the mainline.

CAP NUMBER: C-0275 (Closed)

FINDING: Metrorail is not following industry standard electrostatic discharge protection practices for railcar components.

SOURCE: 2024 Audit of Revenue Vehicles (Railcar) Program, finding 6.

ADDRESSED + PRESENT AUDIT:

To address this, Metrorail created an Electrostatic Discharge Protection Maintenance Service Instruction (MSI) for Railcar maintenance tasks. Equipment needed to be purchased including electrostatic protective sleeves/bags for equipment storage. The WMSC closed C-0275 on January 7, 2025. During the present audit, the WMSC verified usage of the electrostatic discharge protective equipment during onsite observations.



CAP NUMBER: C-0276 (Closed)

FINDING: Metrorail is using equipment that is not calibrated in accordance with its policies and procedures, including for inspection and maintenance of components with a direct impact on safety.

SOURCE: 2024 Audit of Revenue Vehicles (Railcar) Program, finding 7.

ADDRESSED + PRESENT AUDIT:

Car Maintenance updated its SOP covering Precision Measuring Devices, Shop Equipment, and Special Tools, to include calibration requirements, training, and oversight responsibilities. Personnel were trained on the revised requirements. Based upon this, Shop Superintendents were tasked with reviewing calibration logs and equipment in use to ensure all equipment is being calibrated, if required. The WMSC closed C-0276 on November 14, 2025. The present audit did not identify any nonconformance related to equipment calibration and even identified a positive practice: all precision measuring devices in use at each of the onsite observations were within their stated calibration period. (Positive Practice 2.)

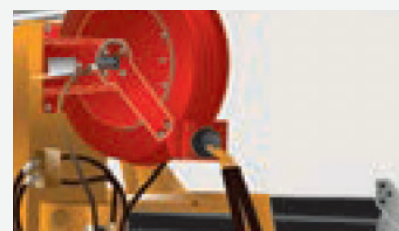
CAP NUMBER: C-0277 (Closed)

FINDING: Metrorail is not tracking the shelf life of railcar parts that decay over time and therefore have a limited shelf life.

SOURCE: 2024 Audit of Revenue Vehicles (Railcar) Program, recommendation 1.

ADDRESSED + PRESENT AUDIT:

Car Maintenance updated its Standard Operating Procedure on Shelf-Life Management to enhance the process and oversight of shelf-life scoped items including how expired items are discarded. The WMSC closed C-0277 on December 17, 2025. The WMSC verified this CAP through review of storage areas at an onsite observation at Alexandria Yard on February 17, 2026.





CAP NUMBER: C-0278 (Closed)

FINDING: Metrolink could improve the effectiveness of its maintenance tasks by proactively providing training records to supervisors of employees newly assigned to their shift or location.

SOURCE: 2024 Audit of Revenue Vehicles (Railcar) Program, recommendation 2.

ADDRESSED + PRESENT AUDIT:

Metrolink updated its Standard Operating Procedure 302.04, Attaining Job Classification Training Requirements, to ensure that supervisors and other necessary management personnel are provided with training information for newly assigned personnel prior to the start of that individual's first shift under that supervisor and management. A dashboard was created to view the training records for all Car Maintenance employees at any time, rather than strictly the supervisor's direct reporting employees. The WMSC closed C-0278 on July 7, 2025. Personnel interviewed during the present audit confirmed access to the dashboard to review training for any employee, not just current direct reporting employees.

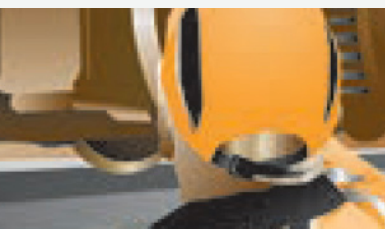
CAP NUMBER: C-0279 (Closed)

FINDING: Metrolink should update its railcar maintenance staffing assessment to account for current facilities, railcars, maintenance requirements, and other operational changes.

SOURCE: 2024 Audit of Revenue Vehicles (Railcar) Program, recommendation 3.

ADDRESSED + PRESENT AUDIT:

As permitted by the **WMSC Program Standard, Section 5.E.4**, Metrolink completed a risk assessment in lieu of providing a corrective action plan for this recommendation. Recommendation #2 of this report outlines an additional, related, recommendation of this audit regarding staffing and workload assessment of railcar maintenance personnel.



Appendix B

Appendix B: Metrorail Internal Safety Review, Internal Review, and Associated Corrective and Preventive Action Plan Review

In 2025, Metrorail's Quality Department completed audits of both the Office of Car Maintenance and the Office of Car Track Equipment Maintenance. A summary of the findings of each of these audits and related corrective action plans are described below. The WMSC will continue to monitor the progress of these CAPs as part of our oversight.

Internal Safety Review, Office of Car Maintenance, Rail Fleet, dated December 30, 2025

There were 7 total findings of this internal safety review which resulted in 6 corrective action plans. One finding is a repeat of a WMSC finding which was in the process of being addressed at the time of the field assessments of the internal audit. As the report for this Internal Safety Review was issued on December 30, 2025 and the WMSC document request was due on January 7, 2026, some of the corrective action plans were still in draft at the time of review of the report.

► **Finding #1: FS-CMNT-25-01: Shop equipment is not being inspected at the required frequency.**

Metrorail's Quality Department found that equipment like sandblasting cabinets, which are used for abrasive cleaning, and can present respiratory hazards if they are not functioning properly, were not being inspected as required. Between January 2022 and June 2025, a 42-month period, each cabinet should have received 42 inspections, however, the review showed that the completion rate for cabinets reviewed ranged from 28% to 100% complete when all should be at 100%.

Internal Corrective Action Plan:

QICO-CMNT-25-01: Perform and document monthly inspections of all media blasting cabinets as outlined in job plan.

Metrorail intends to update the current cabinets to ensure 100% completion and implement an updated plan moving forward. This CAP is expected to be completed by January 8, 2027.

► **Finding #2: FS-CMNT-25-02: Gaps exist in environmental compliance monitoring and waste management practices.**

Metrorail's Environmental Safety Standard Operating Procedures (ESOP) require that "The Weekly Walkabout includes a compilation of waste storage and disposal requirements that must be reviewed and addressed on a weekly basis. The Weekly Walkabout must include all hazardous waste and non-hazardous waste storage areas at your facility. ECOs, or their designee(s), must complete the Weekly Walkabout checklist on a weekly basis and ensure that copies are kept in the facility environmental files."

During the field assessments and document reviews conducted for this internal safety review one Car Maintenance facility (Shady Grove) could not provide any completed Weekly Walkabout checklists; and two locations (Brentwood and West Falls Church) had weekly inspection checklists that were not signed by the Superintendent (designated ECO), as required.

ESOP section 4-1 states: "The first general rule is that you should never store any of the different (i.e., incompatible) groups of materials together."

At two out of the five Car Maintenance shops assessed (Dulles and Greenbelt), hazardous and non-hazardous waste were not properly segregated. Specifically, drums containing non-hazardous waste were observed inside a hazardous waste shed.



Internal Corrective Action Plan

QICO-CMNT-25-02: Enforce consistent systemwide procedures for environmental waste management and associated recordkeeping.

This CAP includes re-training for all personnel on the ESOP requirements and then review of inspection records to ensure that the re-training has taken hold and requirements are being followed as outlined. This CAP is expected to be completed by December 18, 2026.

► Finding #3: FS-CMNT-25-03: Low training compliance identified across multiple safety-related courses in Car Maintenance.

Metrorail's Public Transportation Agency Safety Plan section 5.1.1 states that: "Each department is responsible for establishing training requirements and assuring that the necessary training is accomplished."

To assess this, Metrorail's Quality department reviewed data from Metrorail's training records system and found that Metrorail personnel were not keeping up with Forklift Re-certification evaluations, hazardous waste management training, and storm water pollution training. Completion percentages varied by training and group.

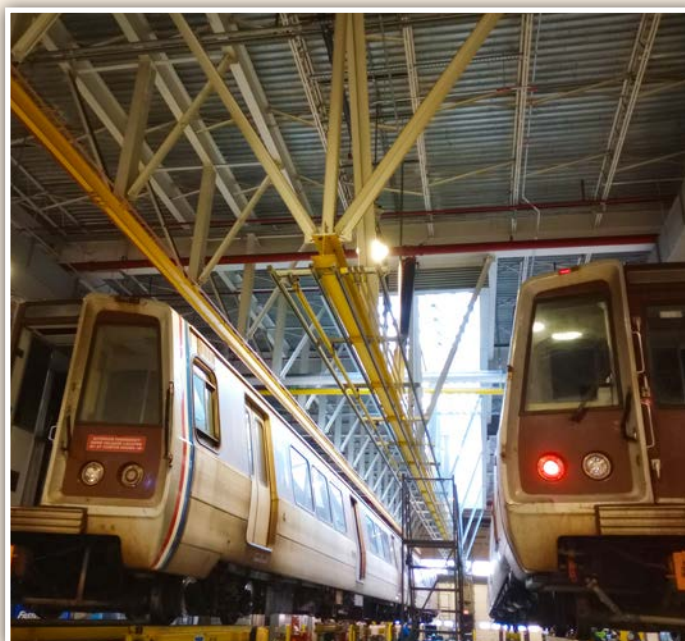
Internal Corrective Action Plan

QICO-CMNT-25-03: Enforce compliance with departmental training requirements.

Metrorail is reviewing overall how these training requirements are reviewed, tracked and enforced through its Car Maintenance Training SOP. This CAP is expected to complete by October 15, 2027.

► Finding #4: FS-CMNT-25-04: Safety Briefings were not consistently conducted or documented as required.

Metrorail's SOP 301.27, 'Managing Safety Briefings' section 3.6.7, states that Supervisors are responsible for conducting and documenting "a Safety Briefing (SB) (Attachment C) with Contractor, Vendor, Visitor, or WMATA personnel (not assigned to [Office of Car Maintenance, Rail Fleet] CMNT or [Office of Car Track Equipment Maintenance] CTEM) to perform a support activity at a CMNT or CTEM facility."



During field assessments, two out of seven visited Car Maintenance shops did not provide a safety briefing or acknowledgment of potential hazards in the area to Quality personnel; six out of seven shops did not document visitor safety briefings; and all eight shops were using outdated versions of the Safety Briefing forms. While newer revisions were available, older versions continued to be used, which does not comply with document control requirements.

Internal Corrective Action Plan

QICO-CMNT-25-04: Reinforce existing safety briefing delivery and documentation requirements.

This CAP will include re-training for all personnel on the proper completion of a safety briefing. Records will be collected and reviewed after that is complete to ensure adherence to the requirements. This CAP is expected to complete by October 9, 2026.

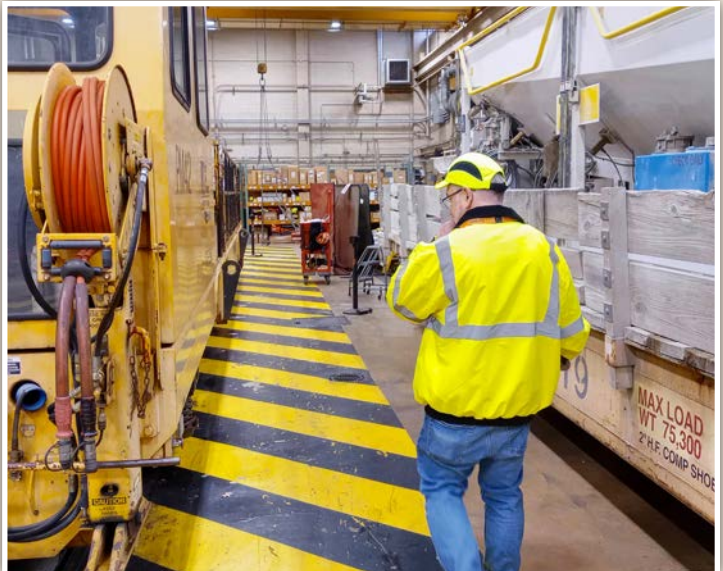
► Finding #5: Uncalibrated precision measuring devices found in use and storage across Car Maintenance shops.

Metrorail's SOP 303.05 'Management of Tools and Equipment' outlines the requirements for managing and maintaining precision measuring devices. Section 6.2.4 and 6.2.5 state that the "PMD Monitor arranges

for calibrated PMDs to be recalibrated by an authorized calibration lab on the intervals configured in Maximo. PMD Monitor verifies the authorized calibration lab has applied a new calibration label and provided a new certificate of calibration.”

Quality observed several instances of uncalibrated precision measuring devices at two Car Maintenance shops.

The WMSC identified this as well in the **WMSC Audit of Revenue Vehicles (Railcar) Program (5/21/24)**, under finding #7. As the observations for Metrorail’s internal audit were completed prior to completion of the related CAP, WMSC-24-C0276, no additional corrective action plan was created.



► **Finding #6: FS-CMNT-25-06: Daily Shop Safety Inspection and Housekeeping Checklists are not consistently maintained or available for review.**

Metrorail’s SOP 302.07 Rev. 6.0 ‘Duties and Responsibilities for Superintendent and Assistant Superintendent’, Section 6.2.9, states that Superintendents must “ensure the CMNT Daily Shop Safety Inspection and Housekeeping Checklist is completed and properly filed.”

Metrorail’s Quality Department observed that only one of nine shops sampled were using the CMNT Daily Shop Safety Inspection and Housekeeping Checklist, identified as CMNT Form 51.007 rev. 2.0. The remaining shops could not produce any records for review.

Internal Corrective Action Plan

QICO-CMNT-25-05: Enforce the use of daily inspection checklists, supported with references in governing procedures.

This CAP will revise the above-mentioned SOP to ensure that personnel are directed to use the correct form and that it is clear who is responsible for completing it. This CAP is scheduled to complete by June 12, 2026.

► **Finding #7: FS-CMNT-25-07: Car Maintenance personnel are not maintaining Metrorail Operating Rulebooks used while on duty.**

Section 1.5 of the Metrorail Operating Rulebook (MOR) requires that all operational employees maintain and carry a current version of the MOR while on duty.

Metrorail’s Quality Department reviewed MORs carried by personnel onsite and found that 18 out of 20 (90%) were not up to date and that there was no process to verify whether rulebooks are up to date.

Internal Corrective Action Plan

QICO-CMNT-25-04: Develop a process to verify currency of MORs used by Car Maintenance personnel.

To address this, Car Maintenance will send a re-instruction memo to all personnel to ensure that personnel are aware of the requirements and introduce spot checks to ensure personnel have the current rules with them. This CAP is expected to complete by October 9, 2026.

Internal Safety Review, Car Track Equipment Maintenance, Rail Fleet, dated December 30, 2025

There were 7 total findings of this internal safety review which will result in 7 corrective action plans. As the report for this internal Safety Review was issued on December 30, 2025 and the WMSC document request was due on January 7, 2026, some of the corrective action plans were still in draft at the time of review of the report.

► **Finding #1: FS-CTEM-25-01: Training requirements are not clearly defined for Car Track Equipment Maintenance employees.**

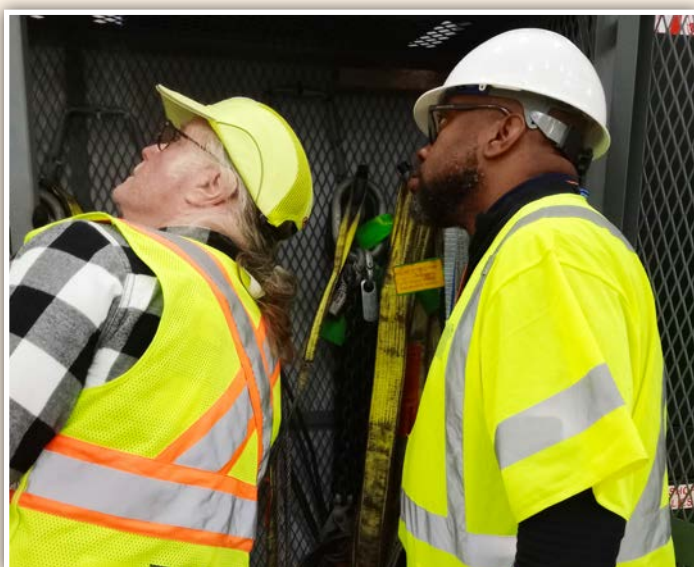
Metrorail's Public Transportation Agency Safety Plan, Section 5.1.1 states, "Each department is responsible for establishing training requirements and assuring that the necessary training is accomplished."

The Quality Department reviewed training records for Car Track Equipment Maintenance personnel and observed no evidence of initial fall protection course (FPI) completion. However, the same records indicate that 58 of 61 possible employees had completed advanced fall protection training (FPA), despite FPI being a prerequisite for this class. Records indicated that the initial class was last offered in 2017.

There was also confusion surrounding training requirements. Personnel indicated that Car Track Equipment Maintenance and Car Maintenance training requirements are entirely separate, while others indicated that Car Maintenance training requirements apply to Car Track Equipment Maintenance personnel. The requirements do, in fact, differ.

Internal Corrective Action Plan

QICO-CTEM-25-01: Update the Car Track Equipment Maintenance training matrix with accurate class codes and add fall protection training as a required training and remove superseded or outdated versions from circulation.



Car Track Equipment Maintenance will update its training SOP to ensure that it is accurate and then inform personnel on the updated training requirements. This CAP is scheduled to complete by November 6, 2026.

► **Finding #2: FS-CTEM-25-02: Quality control inspections are not conducted, documented, and stored as required by procedure.**

Car Track Equipment Maintenance SOP 401.01 Quality Control Program for Roadway Maintenance Machines and Small Equipment, Rev. 3, Sections 6.2.2 and 6.3.1 require Superintendents, Assistant Superintendents, Supervisors, or their designees to complete quality control inspections (QCIs) using CTEM Form 50.984 and to upload them to the associated work order in Maximo.

Quality personnel reviewed 115 quality control inspections completed between January and March of 2025 and found that 6 forms had missing or incorrect work orders on them, 73 QCI forms were not attached to the associated work order in Maximo, and 70 had the employee identification field incorrectly completed.

Internal Corrective Action Plan

QICO-CTEM-25-02: Complete and maintain Quality Control Inspection (QCI) documentation as required by applicable procedures.

This CAP will include revising the Quality Control Program procedures and providing training to applicable personnel on the new procedures. Records will be reviewed to ensure adherence to the revised SOP. This CAP is expected to complete by March 19, 2027.

► **Finding #3: FS-CTEM-25-03: Preventive maintenance is being performed and documented with corrective maintenance work orders.**

The CTEM Maximo Guide, Rev. 3.4 gives separate documentation instructions for preventive maintenance work orders vs. corrective maintenance work orders. Metrorail's Quality personnel reviewed 189 work orders

completed between January and March of 2025, and found that 42 (22%) were CM work orders that included documentation for PM activities, as evidenced by PM checklists attached.

Internal Corrective Action Plan

QICO-CTEM-25-03: Enforce separate documentation for preventive and corrective maintenance activities.

CTEM will revise the Maximo Guide to make clearer guidance on completion of Maximo work orders for preventive maintenance vs. corrective maintenance and then re-instruct personnel. This CAP is expected to complete by November 13, 2026.

► **Finding #4: FS-CTEM-25-04: Daily shop inspections are not conducted as required in departmental SOPs.**

Car Maintenance SOP 302.07 Superintendent and Assistant Superintendent Duties, Rev. 6, Section 6.2.9 states: "Ensure the CMNT Daily Shop Safety Inspection and Housekeeping Checklist is completed and properly filed."

Metrorail's Quality personnel found that 1 shop could not provide records of daily shop inspections and 3 other shops were documenting the shop inspections on the proper form (CMNT Daily Shop Safety Inspection and Housekeeping Checklist (Form 51.007)).

Internal Corrective Action Plan

QICO-CMNT-25-05: Develop a control that provides detailed guidance on completing shop inspection documents and improves compliance with daily shop inspection requirements.

The CTEM Maximo Guide will be revised with additional instructions on completion of the Daily Shop Safety Inspection and Housekeeping Checklist. Personnel will be trained on the new guidance. This CAP is expected to complete by December 4, 2026.

► **Finding #5: FS-CTEM-25-05: Maximo work orders are missing required elements.**

Car Track Equipment Maintenance SOP 401.02 Procedures for Recording Work Order(s) for Roadway



Maintenance Machine(s), Rev. 5, Sections 6.4 requires Car Track Equipment Maintenance supervisors to "review memo field data entered by technicians for completeness and summarize actions taken in task long descriptions."

Metrorail's Quality Department found that 66% of work orders reviewed for the audit were missing long descriptions as described in the CTEM Maximo Guide, 78% of work orders did not have labor memos completed for every labor entry, and 74% of the work orders did not have their associated QCI documentation attached.

Internal Corrective Action Plan

QICO-CTEM-25-04: Implement controls that effectively mitigate the risk of closure for work orders containing inaccurate or missing information.

This CAP will require revision to the procedure and then re-training for all CTEM personnel. This CAP is expected to complete by September 11, 2026.

► **Finding #6: FS-CTEM-25-06: Safety briefings are not conducted, documented, and reviewed as required by procedure.**

Car Maintenance SOP 301.27 Safety Briefing Procedures, Rev. 1, Section 3.5.4 requires that Superintendents conduct documented, regular audits of daily safety briefings (DSBs) and pre-job safety briefings (PJSBs).

During audit observations, Metrorail found that of 4 Car Track Equipment Maintenance shops, only 1 shop had a signoff from the Superintendent on the DSB due to them

being present for it. No other safety briefing forms that were reviewed had any evidence that they were reviewed by the Superintendent. Personnel stated there was confusion on the review requirement. All four shops were noted as using outdated job safety briefing forms as well.

Internal Corrective Action Plan

QICO-CMNT-25-04: Develop a control that ensures compliance with daily and pre-job safety briefings in accordance with departmental SOPs. This corrective action plan was still in development/review at the time of our document requests for this audit.

► **Finding #7: FS-CTEM-25-07: Tool inspection documentation by Car Track Equipment Maintenance supervisors showed multiple compliance gaps, including missing comments on non-compliances, incorrect or missing dates and signatures, and failure to report issues per SOP 403.01 requirements.**

Car Track Equipment Maintenance SOP 403.01 Procedures for Controlling Shop Tools and Mandatory Personnel Tools, Rev. 2, Section 6.1.1 states that Supervisors are to complete an audit of every mechanic's tools twice a year using Form 51.005 and

when issues are found, they are to be reported to the applicable Superintendent.

The Quality Department reviewed 95 completed tool checklists for Car Track Equipment Maintenance mechanics, completed between June and December of 2024 and found that:

- 8 of the 95 checklists noted non-compliances with an employee's tools. Of these 8 checklists, 7 were missing comments regarding the non-compliances.
- 11 checklists were found to have electronic signatures from the Supervisor completing the form with a date that was before the date that the tool inspection was completed.
- 8 checklists were missing the name and/or the signature of the supervisor completing the inspection.
- 4 checklists were missing the date that the inspection was completed.

Internal Corrective Action Plan

QICO-CMNT-25-05: Develop a control that ensures compliance with tool inspection documentation standards. This corrective action plan was still in development/review at the time of our document requests for this audit.



Appendix C and D

Appendix C: Personnel Interviewed

OFFICE OF CAR MAINTENANCE, RAIL FLEET

- Assistant Superintendent (3)
- Department Safety Coordinator
- General Superintendent
- Mechanic AA (6)
- Shift Supervisor Car Maintenance (3)
- Shop Supervisor, Car Maintenance
- Superintendent (3)
- Superintendent, MICC Controllers/Road Mechanics
- Superintendent, Service Delivery
- Supervisor Railcar Maintenance and Inspection (2)

OFFICE OF CAR TRACK EQUIPMENT MAINTENANCE, RAIL FLEET

- Assistant General Superintendent
- Assistant Superintendent
- Mechanic AA (4)
- Project Coordinator
- Regional Supervisor (2)

- Superintendent

OFFICE OF RAIL TRANSPORTATION

- Rail Vehicle Operator (2)

OFFICE OF TRACK AND STRUCTURES

- Equipment Operator (2)

OFFICE OF VEHICLE PROGRAM SERVICES, RAIL FLEET

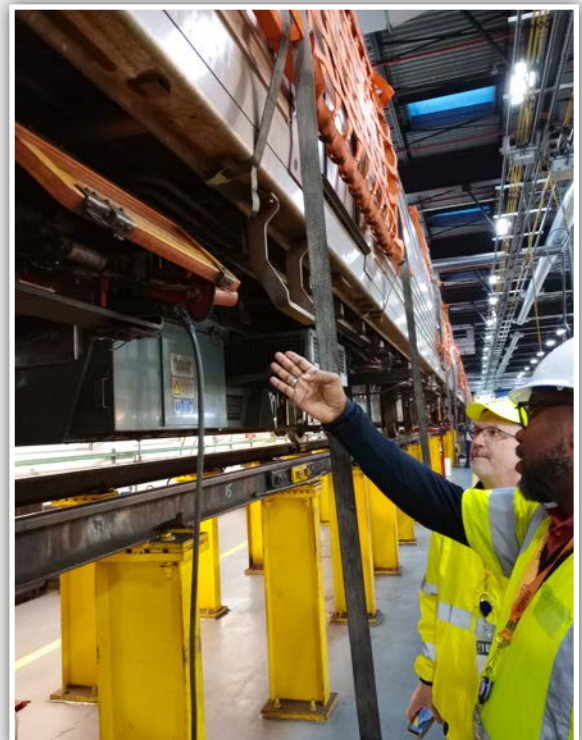
- Chief Fleet Officer
- Deputy Chief Mechanical Officer, New Car Program
- Deputy Chief Mechanical Officer, Engineering Rail Vehicles
- Senior Program Manager
- Senior Vehicle Engineer (2)
- Project Manager, 8K
- Project Manager, RMM

TECHNICAL TRAINING AND DEVELOPMENT

- Technical Training and Development Instructor (2)

Appendix D: Site Visits

- ◆ February 13, 2026: S&I Shop – Greenbelt Railyard
- ◆ February 17, 2026: S&I Shop and CTEM Shop – Alexandria Railyard
- ◆ February 18, 2026: S&I Shop and CTEM Shop – Dulles Railyard
- ◆ February 19, 2026: S&I Shop – West Falls Church Railyard
- ◆ February 24, 2026: Road Mechanic Operations – Various Locations
- ◆ February 25, 2026: S&I Shop – Brentwood Railyard
- ◆ February 25, 2026: S&I Shop – Branch Avenue Railyard
- ◆ February 26, 2026: Daily Inspections – Alexandria Railyard
- ◆ April 1, 2026: Daily Inspections – Greenbelt Railyard
- ◆ April 1, 2026: Back-to-Back Measurement – Greenbelt Railyard
- ◆ April 2, 2026: Back-to-Back Measurement – Shady Grove Railyard



Appendix E

Appendix E: Documents Reviewed

ORGANIZATIONAL CHARTS AND DEPARTMENT RESPONSIBILITIES:

- CENV Contractor Roster (no date)
- CENV Employee Roster (no date)
- CENV Division Description (no date)
- CMNT Contractor Roster (no date)
- CMNT Employee Roster (no date)
- CMNT Organizational Chart (no date)
- CTEM Division Description (no date)
- CTEM Organizational Chart and Employee Roster (no date)
- CTEM Seniority Employee Roster (no date)
- Office of Vehicle Program Services, Rail Fleet Organizational Chart (12/01/2025)

ROLES/RESPONSIBILITIES/JOB DESCRIPTIONS/STAFFING:

- CMNT Vacant Positions List (02/09/2026)
- Memorandum on CTEM Workforce Succession Plan (02/09/2026)
- WMATA CTEM Manpower Assessment Report (04/29/2019)

SAFETY CERTIFICATION:

- CDRL 17-11 Acceptance Test Plan (07/17/2025)
- RMM Safety Certification List (no date)
- SAT UTV Bridge Inspection Crane Tests (2023)

INTERNAL REVIEWS:

- Internal Safety Review: Office of Car Maintenance, Rail Fleet (12/30/2025)
- Internal Safety Review: Car Track Equipment Maintenance, Rail Fleet (12/30/2025)
- Overview of internal Corrective and Preventative Actions (01/02/2026)
- Internal Review: 7000-Series Holding Brake Pressure Switch (01/08/2025)
- Internal Review: Railcar Brake Disc Preventive Maintenance (12/17/2024)

INSPECTION AND MAINTENANCE:

- 2000 Series Railcar Performance Report (11/2023 to 03/2024)
- 3000 Series Railcar Performance Report (11/2023 to 11/2025)
- 6000 Series Railcar Performance Report (11/2023 to 11/2025)
- 7000 Series Railcar Performance Report (11/2023 to 11/2025)
- Alexandria Shop Safety Inspection Punch List (2023 to 2025)
- Branch Avenue Shop Safety Inspection Punch List (2023 to 2025)
- CMNT Form 50.951, CMNT Shop Safety and Health Inspection Checklist (03/06/2023)
- CMNT Form 51.007, Daily Shop Safety Inspection and Housekeeping Checklist (01/26/2022)
- CMNT Form 51.065, CTEM Shop Safety Inspection Checklist (10/16/2025)
- CMNT Shop Safety and Health Inspection, Greenbelt (11/04/2025)
- CMNT Shop Safety and Health Inspection, Greenbelt Building B (12/26/2025)
- CMNT Shop Safety and Health Inspection, Brentwood S&I (10/2025, 12/2025, 02/2026)



INSPECTION AND MAINTENANCE: (CONTINUED)

- CMNT Shop Safety and Health Inspections, Alexandria (06/2025 to 07/2025)
- CMNT Shop Safety and Health Inspections, Branch Avenue (06/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, Brentwood (06/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, Brentwood Machine Shop (06/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, Brentwood MRO (07/2025 to 09/2025)
- CMNT Shop Safety and Health Inspections, Dulles (06/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, Greenbelt Annex (06/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, Greenbelt Machine Shop (06/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, Greenbelt Paint Booth (06/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, Greenbelt Shop (06/30/2025, 08/2025, and 09/05/2025)
- CMNT Shop Safety and Health Inspections, Greenbelt Truck Shop (06/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, New Carrollton Building E (06/2025 to 08/2025)

- CMNT Shop Safety and Health Inspections, Shady Grove (06/02/2025 to 08/2025)
- CMNT Shop Safety and Health Inspections, West Falls Church (06/2025 to 08/2025)
- CMOR Protocol on CMNT Daily Shop Safety Inspections (01/05/2023)
- CTEM Equipment Maintained by PLNT List Inventory List (no date)
- CTEM Rail Vehicle Maintenance Equipment Inventory List (no date)
- Daily Inspection Maximo Records – Alexandria (02/16/2026 to 02/27/2026)
- Daily Inspection Maximo Records – Branch Ave (02/16/2026 to 02/27/2026)
- Dulles Shop Safety Inspection Punch List (2023)
- Greenbelt Annex Shop Safety Inspection Punch List (2023 to 2025)
- Greenbelt MRO Truck and Machine Shop Safety Inspection Punch List (2023 to 2025)
- Greenbelt Shop Safety Inspection Punch List (2023 to 2025)
- Maintenance of Way Vehicle Fleet Plan (08/2025)
- New Carrollton Shop Safety Inspection Punch List (2023 to 2025)
- Rail Car Availability Report (11/28/2025)
- Rail Fleet Status Report (11/28/2025)
- Railcar Fleet Performance Report (11/2023 to 11/2025)
- Railcar Work Orders in Defer Status (2023 to 2025)
- Railquip and Neuro Portables Quarterly Preventive Maintenance Checklist (03/17/2026)
- Revenue Vehicle CM Work Orders (2024 to 2025)
- RMM PM and Frequency Matrix (no date)
- RMM PM Work Orders Tracking Log (no date)
- Roadway Maintenance Machine CM Work Orders (2024-2025)
- Roadway Maintenance Machine Performance Report (11/2023 to 11/2025)
- Safety Coordinator FA Inspection Schedule (02/09/2026 to 03/06/2026)





INSPECTION AND MAINTENANCE: (CONTINUED)

- Scheduled Maintenance Program for Rail Fleet (12/09/2025)
- Shady Grove Shop Safety Inspection Punch List (2023 to 2025)
- West Falls Church Shop Safety Inspection Punch List (2023 to 2025)
- Whiting/Joyce Portable Lifts 10/12 Ton Monthly Preventive Maintenance Checklist (03/17/2026)
- WM7 PTU Software Versions Master List (06/30/2025)
- WMATA 7K BTE Software Configuration Master List (11/03/2025)
- WMATA On-Car SCI with Revision Levels Master List (09/09/2025)

TRAINING:

- CMNT OJT Records (no date)
- CMNT Training Calendar (02/12/2026 to 03/06/2026)
- CTEM Training Requirements Matrix (no date)
- CTEM Yard Moves Course Syllabus (02/2025)
- CTEM Yard Moves Recertification Course Syllabus (no date)

- Lessons Learned – Damage to Metro Equipment (01/2024 to 10/2025)
- Lessons Learned – Doors Opened Outside the Platform (01/25/2024)
- Lessons Learned – Employee Injury (12/2023 to 11/2025)
- Lessons Learned – Rail Vehicle Damage (08/08/2024)
- Memorandum on Training Instructor Training Requirements (01/07/2026)
- Revenue CMNT Transcripts (no date)
- SARE-05-0243, Daily Inspection 3K/6K/7K Training Presentation (05/22/2025)
- SARE-05-0246, Daily Inspection Design Document (05/20/2025)
- SARE-05-0247, Daily Inspection 3K/6K/7K Instructor Guide (07/23/2025)
- SARE-05-0248, Daily Inspection 3K/6K/7K Student Guide (06/05/2025)
- SARE-05-0249, Daily Inspection Post Training Written Assessment (05/20/2025)
- SARE-05-0251, Daily Inspection Post Training Practicum Assessment (05/20/2025)
- SARE-05-0597, Blue Signal Training Presentation (01/20/2024)
- SARE-05-0599, 7K Back-to-Back Training Roster Sheet (12/16/2025)
- SARE-05-0601, Practical Exam Score Sheet (11/26/2024)
- SARE-05-0602, Blue Signal Protection Course Syllabus (06/12/2024)
- SARE-05-0603, 7K Back-to-Back Course Syllabus (07/10/2024)
- SARE-05-0610, Blue Signal Protection Course Syllabus (12/31/2025)
- SARE-05-0611, Blue Signal Training Student Guide (12/31/2025)
- SARE-05-0612, Blue Signal Training Revision Log (12/31/2025)
- SARE-05-0613, Blue Signal Training Presentation (12/31/2025)

TRAINING: (CONTINUED)

- SARE-05-0614, Blue Signal Training Practical Exam Checklist (12/31/2025)
- SARE-05-0615, 7K Wheel Back-to-Back Revision Log (no date)
- SARE-05-0616, Wheel Back-to-Back Practical Exam Checklist (01/02/2025)
- SARE-05-0617, Wheel Back-to-Back and Journal Bearing Measurement Inspections (12/18/2022)
- SARE-05-0618, Wheel Back-to-Back and Journal Bearing Measurement Inspections Training Presentation (01/02/2025)
- SARE-05-0619, Wheel Back-to-Back Measurement and Journal Bearing Gap Measurement Recording Sheet (10/19/2022)
- SARE-05-0620, Back-to-Back Flowchart (01/02/2026)
- SARE-05-0621, Blue Signal Quiz (01/05/2026)
- Qualification List of Revenue Vehicles and RMM Equipment Operators (05/22/2026)
- Qualification List of Revenue Vehicles and RMM Vehicle Flag Persons (05/22/2026)
- Qualification Records of Equipment Operators and Vehicle Flag Persons (05/22/2026)

CHARTERS, MEETING MINUTES AND AGENDAS:

- Alexandria Railyard Safety Committee Meeting Minutes (01/2025 to 07/2025)
- New Carrollton FSC Attendance Sheets (01/2025 to 12/2025)
- New Carrollton Railyard Safety Committee Meeting Minutes (01/2025 to 12/2025)
- West Falls Church Railyard Safety Committee Meeting Minutes (01/2025 to 12/2025)

PROCEDURES/POLICIES/MANUALS/FORMS:

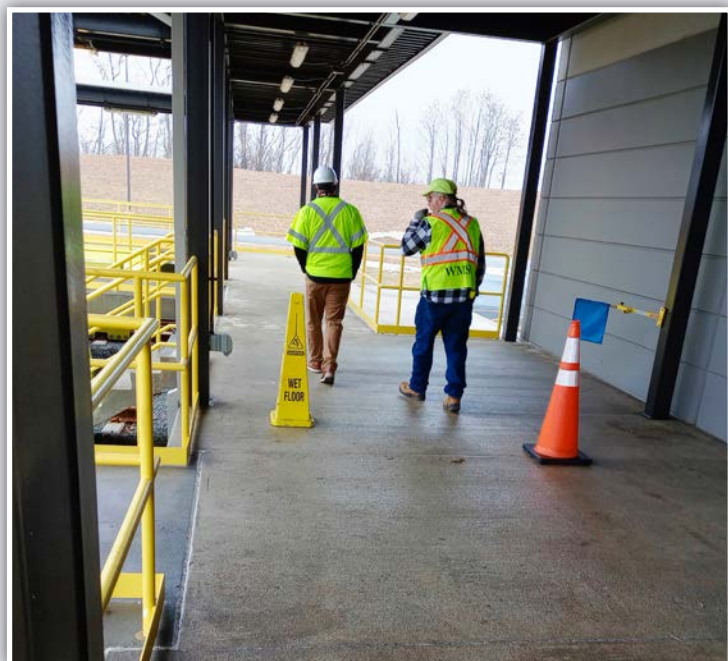
- CENV WI 14AISP, 7000 Series A-Inspection Manual (12/11/2023)
- CENV WI 14BISP, 7000 Series B-Inspection Manual (12/11/2023)
- CENV WI 14CISP, 7000 Series C-Inspection Manual (12/11/2023)



- CENV WI 15AISP, 6000 Series A-Inspection Manual (12/11/2023)
- CENV WI 15BISP, 6000 Series B-Inspection Manual (12/11/2023)
- CENV WI 15CISP, 6000 Series C-Inspection Manual (12/11/2023)
- CENV WI 15YISP, 6000 Series Y-Inspection Manual (08/09/2024)
- CENV WI 18AISP, 2000/3000 Series A-Inspection Manual (12/11/2023)
- CENV WI 18BISP, 2000/3000 Series B-Inspection Manual (12/11/2023)
- CENV WI 18CISP, 2000/3000 Series C-Inspection Manual (12/11/2023)
- CENV WI 18YISP, 2000/3000 Series Y-Inspection Manual (08/09/2024)
- CENV WI DI0001, 3000/6000/7000 Series Daily Inspection Manual (08/01/2025)
- CMNT Form 51.001, CMNT Minimum Tools Checklist – Mechanic (10/07/2025)
- CMNT Form 51.005, CTEM Mechanics Tools Checklist (12/23/2022)
- CMNT Form 51.011, CMNT Minimum Tools Checklist – Machinist (10/07/2025)

PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- CMNT Tool Inventory List (no date)
- CMNT WMATA Purchased Tool Inventory List (no date)
- CTEM WI 11PM01, Nordco Quad Drill Preventive Maintenance Manual (01/10/2025)
- CTEM WI 11PM02, Nordco Spike Driver Preventive Maintenance Manual (02/05/2025)
- CTEM WI 11PM03, Nordco Spike Puller Preventive Maintenance Manual (02/25/2025)
- CTEM WI 11PM04, Nordco Tripp Machine Preventive Maintenance Manual (08/15/2025)
- CTEM WI 11PM05, Nordco Tie Shear Preventive Maintenance Manual (08/15/2025)
- CTEM WI 11PM06, Jackson Spot Tamping Machine Preventive Maintenance Manual (01/03/2025)
- CTEM WI 11PM07, Kershaw Rotary Scarifier Preventive Maintenance Manual (12/18/2024)
- CTEM WI 11PM08, Core Drilling Equipment Flatcar Preventive Maintenance Manual (02/28/2025)
- CTEM WI 11PM09, Geismar 360 Preventive Maintenance Manual (04/21/2025)
- CTEM WI 11PM10, RCC Deicer Preventive Maintenance Manual (01/14/2025)
- CTEM WI 11PM11, Knox Kershaw Tie Crane Preventive Maintenance Manual (02/25/2025)
- CTEM WI 11PM12, Plasser Deicer Preventive Maintenance Manual (12/13/2024)
- CTEM WI 11PM13, Slab Lift Unit Preventive Maintenance Manual (01/03/2025)
- CTEM WI 11PM14, Pettibone Speedswing Preventive Maintenance Manual (04/10/2025)
- CTEM WI 11PM15, 44 Ton Locomotive Preventive Maintenance Manual (03/16/2021)
- CTEM WI 11PM16, Case Backhoe Preventive Maintenance Manual (01/14/2025)
- CTEM WI 11PM17, Hyundai Excavator Preventive Maintenance Manual (03/27/2025)
- CTEM WI 11PM18, Holland CWR Rail Train Preventive Maintenance Manual (05/05/2025)
- CTEM WI 11PM19, Plasser Vacavator Preventive Maintenance Manual (03/16/2021)
- CTEM WI 11PM21, John Deere Mini Excavator Preventive Maintenance Manual (04/25/2025)
- CTEM WI 11PM24, Plasser Prime Mover PMC-50 Preventive Maintenance Manual (11/14/2022)
- CTEM WI 11PM25, Metro 4x4 Tamping Machine Preventive Maintenance Manual (03/19/2021)
- CTEM WI 11PM26, Harsco Switch Tamping Machine Preventive Maintenance Manual (04/23/2025)
- CTEM WI 11PM27, Concrete Batch Plant Preventive Maintenance Manual (03/22/2021)
- CTEM WI 11PM28, Kershaw Ballast Regulator Preventive Maintenance Manual (04/18/2025)
- CTEM WI 11PM29, SwingMaster 5 Ton Preventive Maintenance Manual (04/30/2025)
- CTEM WI 11PM30, Plasser PMC-50 Welder Preventive Maintenance Manual (11/22/2021)
- CTEM WI 11PM31, Plasser Track Geometry Vehicle Preventive Maintenance Manual (04/15/2025)
- CTEM WI 11PM33, Harsco UTV-ALV Preventive Maintenance Manual (04/25/2025)
- CTEM WI 11PM34, Bobcat Skid Steer Preventive Maintenance Manual (04/09/2025)



PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- CTEM WI 11PM35, Harsco Jet Rodder Preventive Maintenance Manual (05/02/2025)
- CTEM WI 11PM36, Swingmaster 10 Ton Preventive Maintenance Manual (03/13/2025)
- CTEM WI 11PM37, CAT 302.5C Mini Excavator Preventive Maintenance Manual (03/12/2025)
- CTEM WI 11PM38, Doosan Loader Preventive Maintenance Manual (04/07/2025)
- CTEM WI 11PM39, Plasser Jet Rodder Preventive Maintenance Manual (04/18/2025)
- CTEM WI 11PM40, Kubota SVL75 Skid Steer Preventive Maintenance Manual (04/16/2025)
- CTEM WI 11PM42, Flat Car Preventive Maintenance Manual (04/18/2025)
- CTEM WI 11PM43, Geismar Equipment Preventive Maintenance Manual (04/05/2021)
- CTEM WI 11PM44, Small Equipment Preventive Maintenance Manual (04/05/2021)
- CTEM WI 11PM45, Badger Rail Cart RC80 40T Preventive Maintenance Manual (10/30/2023)
- CTEM WI 11PM46, Case TV380 Compact Track Loader Preventive Maintenance Manual (11/27/2023)
- CTEM WI 11PM47, Sperling Tie Cart Preventive Maintenance Manual (10/30/2023)
- CTEM WI 11PM48, Teleweld Rail Heater Preventive Maintenance Manual (11/16/2023)
- CTEM WI 11PM49, Robel Rail Destresser Preventive Maintenance Manual (10/30/2025)
- CTEM WI 11PM50, Kaeser M70 Screw Compressor Preventive Maintenance Manual (06/06/2023)
- CTEM WI 11PM51, Chicago Pneumatic Air Compressor Preventive Maintenance Manual (11/02/2023)
- CTEM WI 11PM52, Racine Dual Clip Applicator Preventive Maintenance Manual (10/24/2023)
- CTEM WI 11PM53, National 400 Series Cranes Preventive Maintenance Manual (11/14/2023)
- CTEM WI 11PM54, CTEM Special Measurements and Testing Guide Preventive Maintenance Manual (11/14/2023)
- CTEM WI 11PM55, Baldor Generator TS-80 Preventive Maintenance Manual (04/03/2025)
- CTEM WI 11PM59, Green Climber LV600 Preventive Maintenance Manual (10/30/2025)
- EMI 140240, 7K Replacement of Support Plate for Ladder (06/02/2025)
- EMI 140284, 7K System Map and Commercial Video Update (07/30/2025)
- EMI 140444, 7K Propulsion Control Unit Software Update 203 (11/08/2024)
- EMI 140445, 7K NVR Main Application Change 11.42 (07/24/2024)
- EMI 140446, 7K AAS Data Change Version 0.86 (08/01/2024)
- EMI 140447, 7K Replacement of Headlight Resistor (06/09/2025)
- EMI 140449, 7K Installation of Pressure Governors (07/31/2025)
- EMI 140450, New Led on the 7K Communications Control Panel (10/21/2025)
- EMI 140451, 7K Auto Announcement Software Update (AAS) to Version 0.89 (06/18/2025)
- EMI 140453, 7K APS LVPS Unit Label Decal (11/03/2025)



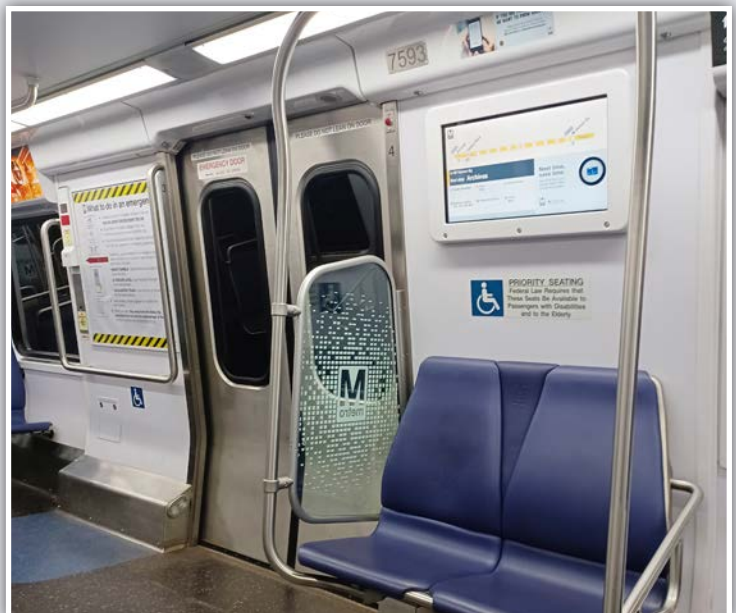
PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- EMI 140454, 7K PICU Software Update 21.07 (08/12/2025)
- EMI 150194, 5K Motorola 700 MHZ Radio and Antenna Installation (04/09/2024)
- EMI 150200, 6K DNSS Potomac Yard Upgrade (12/07/2023)
- EMI 150201, 6K Semi-Permanent Coupler-Grounding Upgrade (10/03/2023)
- EMI 150202, 6K Cab Door Grille (05/03/2024)
- EMI 150203, 6K Addition of Wetting Resistor for S1 and S4 Limit Switches (10/18/2024)
- EMI 150204, 6K HVAC Control Card Upgrade (02/21/2024)
- EMI 150207, 6K Disable Station Stop Cancel Pushbutton (08/28/2025)
- EMI 150208, 6K Emergency Ladder Upgrade (11/14/2025)
- EMI 180501, 3K Master Controller Cam Switch Partition Removal (05/06/2025)
- EMI 180513, 2-3K DNSS Potomac Yard Upgrade (12/07/2023)
- EMI 180515, 3K Addition of Wetting Resistor for S1 and S4 Limit Switches (10/18/2024)
- EMI 180516, 2-3K Reinforce Cab Door Grille (05/03/2024)
- EMI 180517, 2-3K Cable Terminal Stiffener Installation (01/29/2024)
- EMI 180518, 2-3K L&R Door Control Panels Modification Using EAO Series 51 PB (11/28/2023)
- EMI 180518, 2-3K Yard Horn/Buzzer Control Panel Modification Using EAO Series 51 PB (11/28/2023)
- EMI 180523, 3K Disable Station Stop Cancel Pushbutton (08/28/2025)
- EMI 180525, 3K Emergency Ladder Upgrade (11/14/2025)
- ETP 140114, 7K Installation of Ring Retainer for Bolster Bushing (06/05/2025)
- ETP 140124, 7K Addition of TS and vs Security Covers (11/20/2024)
- ETP 140135, 7K ATO Software Update 3.20 (04/24/2024)
- ETP 140135, 7K ATO Software Update 3.20 (04/24/2024)
- ETP 140142, 7K Universal Radial-Groove Long-Life Brake Pad (10/25/2024)
- ETP 140149, 7K Replacement of Holding Brake Pressure Switches (04/25/2025)
- ETP 140157, 7K Power Consumption Saving (06/02/2025)
- ETP 140164, 7K HVAC HEC Software for Bypass Valve Operation Counter (06/03/2025)
- ETP 140165, 7K Tread Applied Friction Modifiers for Wheel OOR Mitigation (12/04/2025)
- ETP 140166, 7K ATC version 6.1 Software Package (07/01/2025)
- ETP 140167, 7K Coupler Filter Bowl Cover Replacement (08/04/2025)
- ETP 140171, 7K Fresh Air Damper Gear Test (07/25/2025)
- ETP 140172, 7K Yellow Chevron Verification (09/17/2025)
- ETP 140173, 7K APTA 2025 Award Decals Installation (11/24/2025)



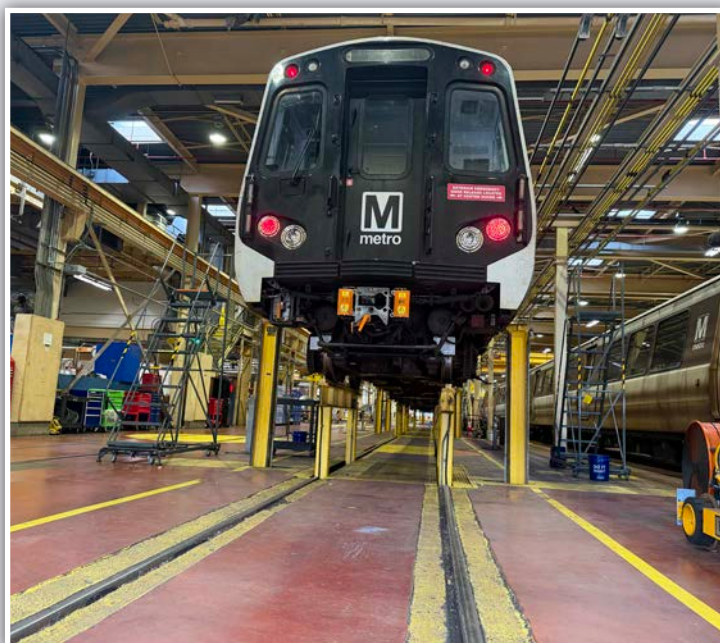
PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- ETP 140175, 7K Priority Seating Floor & QR Code Decals Installation (11/24/2025)
- ETP 140176, 7K MTPD (Metro Transit Police Department) Decals Installation (11/21/2025)
- ETP 150168, Wabtec D-4 AS Air Supply Unit (ASU) Improved and Fitted for 6K (12/06/2023)
- ETP 150182, 6K Muffler Installation at Air Reservoirs to Prevent Tinnitus (07/23/2024)
- ETP 150187, 6K Perform Operational Evaluation of LED Interior Overhead Lighting (06/11/2025)
- ETP 150193, 6K Convertor Functional Module (CFM) Diode Validation Test (10/08/2025)
- ETP 150194, 6K APTA 2025 Award Decals Installation (11/24/2025)
- ETP 150195, 6K MTPD (Metro Transit Police Department) Decals Installation (11/21/2025)
- ETP 180492, 3K ALP Bolt Assembly Investigation (06/27/2024)
- ETP 180493, 2-3K ATC Relay Interface Board Replacement Relays (04/18/2024)
- ETP 180493, 3K ATC Relay Interface Board Replacement Relays Test Results (01/09/2024)
- ETP 180498, 3K Evaluate Operation of Modified SCD Board (03/20/2025)
- ETP 180507, 3K APTA 2025 Award Decals Installation (11/24/2025)
- ETP 180508, 3K MTPD (Metro Transit Police Department) Decals Installation (11/21/2025)
- ETR-ETP 140023, 7K Temporary PCU Software V. 6001 for Troubleshooting CHKNC (11/20/2024)
- ETR-ETP 140058, 7K Aluminum Evaporator and Condenser Coils on Existing HVAC Units (07/23/2024)
- ETR-ETP 140076, 7K TCU Software Updates: MB04B V. 0.37 and CB12A_22 V. 56.18 (04/28/2025)
- ETR-ETP 140103, 7K On-Car Testing of Knorr Brake Pressure Governors (04/23/2025)
- ETR-ETP 140105, 7K Replacement of Speed Sensors (11/20/2024)
- ETR-ETP 140108, 7K Taillight Replacement (02/20/2024)
- ETR-ETP 140117, 7K New LED on Comm Control Panel (05/21/2025)
- ETR-ETP 140118, 7K Replacement of Obsolete Relay Valve (11/20/2024)
- ETR-ETP 140129, 7K Propulsion Control Unit Software Update 203 (05/31/2024)
- ETR-ETP 140130, NVR Main Application Change 11.40 (07/18/2024)
- ETR-ETP 140137, 7K Replacement of Headlight Resistor (01/15/2025)
- ETR-ETP 140138, 7K Open Gangway Inter-Car Data Measurement for Future 8K Fleet Technical Specifications (10/21/2025)
- ETR-ETP 140146, 7K APS/LVPS Unit Hazard Label Decal (06/18/2025)
- ETR-ETP 140150, 7K AAS Data Change 0.89 (06/13/2025)
- ETR-ETP 140151, 7K Special Announcement Software (04/29/2025)
- ETR-ETP 140153, 7K Battery Box Latch (11/26/2025)
- ETR-ETP 140158, 7K American Flag Decal (10/21/2025)
- ETR-ETP 140169, 7K CPD Software Update: System Map Update (12/03/2025)



PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- ETR-ETP 150145, 6K Brake Pad Qualification Test, Bremskerl, Reduced Disc (04/23/2024)
- ETR-ETP 150148, 6K Brake Pad Qualification Test, RFPC, Reduced Disc Concavity (07/30/2024)
- ETR-ETP 150151, 6K Qualification of Brake Pads from New Supplier, RFPC (04/24/2024)
- ETR-ETP 150155, 6K Solid Stick Flange Lubrication Test Plan (Mersen) (09/04/2025)
- ETR-ETP 150156, 6K Solid Stick Flange Lubrication Test Plan (Schunk) (09/04/2025)
- ETR-ETP 150157, 6K 700 MHZ Motorola APX8500 Radio-Antenna Installation (03/07/2024)
- ETR-ETP 150167, 6K Traction Motor Phase Cable Realignment (10/21/2024)
- ETR-ETP 150177, 6K Air Filter Evaluation for Enhanced Air Filtration (08/13/2025)
- ETR-ETP 150184, 6K Rotary Switch Replacement (09/29/2025)
- ETR-ETP 150188, 6K American Flag Decal (10/21/2025)
- ETR-ETP 150190, 6K Disable the Station Stop Cancel Pushbutton (08/04/2025)
- ETR-ETP 150192, 6K Emergency Ladder Upgrade (09/30/2025)
- ETR-ETP 180456, 2-3K VV-120T Oil-Less ASU Conversion to VV-120 Oil-Bath ASU (04/26/2024)
- ETR-ETP 180477, 2-3K Air Filter Evaluation for Enhances Air Filtration (08/13/2025)
- ETR-ETP 180489, 2-3K Yard Horn Test (03/26/2024)
- ETR-ETP 180496, 3K APS Inverter Bridge Snubber Capacitor (02/28/2025)
- ETR-ETP 180501, 3K American Flag Decal (10/21/2025)
- ETR-ETP 180502, 3K Digitrol Water Ingress Elimination (09/29/2025)
- ETR-ETP 180504, 3K Disable Station Cancel Pushbutton (08/04/2025)
- ETR-ETP 180506, 3K Emergency Ladder Upgrade (10/03/2025)
- MSI 000002, Back-to-Back Tools – Validation Procedure (02/27/2023)
- MSI 140016, 7K Pneumatic System Water Evacuation Procedure (02/19/2025)
- MSI 140017, 7K Traction Motor Overhaul and Test Procedure (05/30/2025)
- MSI 140023, Trimming Procedure 7K Kawasaki Trucks (08/28/2024)
- MSI 140024, 7K ASU Motor Overhaul (M18-32-4147) (10/31/2024)
- MSI 140026, Wheel Back-to-Back and Journal Bearing Measurements (02/28/2025)
- MSI 140031, 7K Using a Reference Bar to Check Car Threshold Height (06/21/2024)
- MSI 140032, 7K Wheelset Replacement Procedure (07/31/2025)
- MSI 140033, 7K Truck Assembly Replacement Procedure (01/26/2024)
- MSI 140034, 7K Gearbox Unit Overhaul Procedure (04/18/2024)
- MSI 140035, 7K Air Compressor Overhaul Procedures (08/12/2025)
- MSI 140042, 7K Inspection of Socket Joints Semi-Permanent Coupler (01/26/2024)



PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- MSI 140043, 7K Inspection of the Current Collector Assembly (02/15/2024)
- MSI 140044, 7K Collector Shoe Height Adjustment Gauge Procedure (06/21/2024)
- MSI 140045, 7K Gap Reducer Removal and Installation (04/17/2024)
- MSI 140046, 7K Current Collector Assembly Overhaul Procedure (10/15/2025)
- MSI 140049, 7K Line Contactor Unit Overhaul Procedure (03/04/2025)
- MSI 140053, 7K Obsolete Thermal Overload for Knorr ASU Motor Starter (02/21/2025)
- MSI 140054, 7K Automatic Door Operation (ADO) response Plan (07/05/2024)
- MSI 140055, 7K Knorr Brake Disc Replacement (05/01/2025)
- MSI 140057, 7K Fresh Air Damper Assembly Cleaning Procedure (12/30/2024)
- MSI 140058, 7K HVAC Control Box – Floor Heat Contactor Replacement and Test (11/20/2024)
- MSI 140058, 7K HVAC Control Box – Floor Heat Contactor Replacement and Test (11/20/2024)
- MSI 140058, 7K HVAC Control Box – Floor Heat Contactor Replacement and Test (11/20/2024)
- MSI 140060, 7K Sun Visor Adjustment (11/27/2024)
- MSI 140063, 7K ATC Antenna Normalization Procedures (09/24/2025)
- MSI 150049, 6K HVAC Seasonal Preparation Process (07/26/2024)
- MSI 150103, 6K Convertor Functional Module (CFM) Overhaul Procedure (03/27/2024)
- MSI 150103, 6K Electric Coupler Overhaul Procedure (03/20/2024)
- MSI 150119, 6K LPSU – ALXN/ALAN Power Supply Boards Capacitors Replacement (08/30/2024) – ALXN/ALAN Power Supply Boards Capacitors Replacement (08/30/2024)



- MSI 150120, 6K Air Compressor Motor Overhaul Procedure (11/04/2025)
- MSI 150127, 6K Primary Power (T-Cable) Build Procedure (12/05/2025)
- MSI 150130, 6K Semi-Permanent Coupler Removal and Installation Procedure (06/05/2024)
- MSI 150135, 6K APS Inverter Bridge Removal, Cleaning and Installation Procedure (04/17/2025)
- MSI 150138, 6K Propulsion Tach Shield Inspection and Repair (10/09/2025)
- MSI 150142, 6K Collector Shoe Height Adjustment Gauge Procedure (07/23/2024)
- MSI 150143, 6K Using a Reference Bar to Check Car Threshold Height (07/23/2024)
- MSI 150144, 6K Instructions for Troubleshooting Jerking in Propulsion Faults (10/24/2024)
- MSI 150146, PCC Relay Board Inspection and Repair Procedure (05/06/2025)
- MSI 150147, 6K APS Blower Motor Assembly and Bearing Replacement Procedure (05/22/2025)
- MSI 150149, 6K Water Ingress in Car Front End Roof Area (04/17/2024)

PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- MSI 150150, 6K Line Contactor Mounting Bolt Inspection and Verification (08/20/2024)
- MSI 150151, 6K Current Collector Overhaul Procedure (06/04/2024)
- MSI 150152, 6K Mist Eliminator Cleaning Procedure (05/16/2024)
- MSI 150153, 6K Obsolete Thermal Overload for Knorr ASU Motor Starter (02/21/2025)
- MSI 150154, 6K Automatic Door Operation (ADO) Response Plan (07/05/2024)
- MSI 150155, 6K HVAC PTE Monitoring and Testing Procedure (04/16/2025)
- MSI 150156, 6K HVAC Winter Seasonal Preparation Process (11/17/2025)
- MSI 150158, 6K High Speed Coupling Gear Mesh Qualification Used & New (09/22/2025)
- MSI 150166, 6K Propulsion Line & Precharge Contactor Replacement (06/10/2025)
- MSI 150167, 6K Rotary Switch (KAS1) Replacement (09/19/2025)
- MSI 150169, 6K ATO Module Replacement (11/24/2025)
- MSI 150171, 6K DNSS and NSS Electrolytic Capacitors Replacement (12/08/2025)
- MSI 150173, 6K HVAC System Check Job Plan for Hot car (12/05/2025)
- MSI 150176, 6K Old SAFT SRX195 Battery-On Car Assessment Procedure (10/28/2025)
- MSI 180117, 3K Incident Investigation, Passengers with Leg or Foot Caught Between Station Platform and Car Body (07/03/2024)
- MSI 180218, 2-3K XMA-24 Series Master Controller Overhaul Inspection & Test Procedure (11/06/2024)
- MSI 180233, 2-3K HVAC Seasonal Preparation Process (07/26/2024)
- MSI 180247, 2-3K Evaporator Motor/Blower Assembly Overhaul Procedure (12/06/2024)
- MSI 180254, 3K HVAC Compressor Condenser Unit Overhaul Procedure (08/07/2025)
- MSI 180258, 2/3K HVAC Evaporator Blower Motor Assembly Installation Procedures (12/27/2023)
- MSI 180262, 3K ALP Disc, ALP Hardware and Wheel Threaded Hole Service Procedure (05/12/2025)
- MSI 180272, 2-3K Quick Disconnect (QD) Overhaul Procedures (03/28/2024)
- MSI 180285, 3K Pneumatic System Water Evacuation Procedure (12/09/2024)
- MSI 180294, 3K Coupler Switch Unit Actuator Removal, Overhaul and Installation (12/18/2024)
- MSI 180297, 2-3K Electric Coupler Overhaul Procedure (03/27/2024)
- MSI 180298, 2-3K H-1A Pneumatic Portion Overhaul Procedure (05/22/2025)
- MSI 180316, 2-3K LPSU-ALNX/ALAX Power Supply Boards Caps Replacement (03/05/2024)
- MSI 180324, 2-3K LPSU-Relay Boards SBT16 and SBT18-Relay Replacement (03/27/2024)
- MSI 180329, 2-3K Close Control Unit Capacitors Overhaul Procedures (11/01/2024)
- MSI 180334, 3K Semi-Permanent (Drawbar) Coupler Removal and Installation (02/11/2025)
- MSI 180336, 2-3K HVAC Control Card Overhaul M18-34-3092 (RR All 31 Relays) (01/05/2024)



PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- MSI 180337, 3K APS Inverter Bridge and Pre-Charge Cleaning Procedure (12/18/2024)
- MSI 180338, 2-3K Propulsion Tach Shield Inspection and Repair (04/17/2024)
- MSI 180341, 3K Collector Shoe Height Adjustment Gauge Procedure (07/23/2024)
- MSI 180342, 2-3K Using a Reference Bar to Check Car Threshold Height (07/23/2024)
- MSI 180350, 3K HVAC Car Components Remove and Replace (10/22/2025)
- MSI 180352, 2-3K Side Door Operator Spindle Assembly Overhaul (12/20/2023)
- MSI 180354, 2-3K Truck Leveling Valve Overhaul Procedure (12/27/2023)
- MSI 180356, 3K Removal and Installation of Mechanical (Front) Coupler (09/25/2025)
- MSI 180357, 2-3K XB-1 Valve Overhaul Procedure (12/27/2023)
- MSI 180358, 2-3K H-7 Relay Valve Overhaul Procedure (12/27/2023)
- MSI 180359, 3K Front (Mechanical) and Semi-Permanent Coupler Validation Procedure (10/22/2024)
- MSI 180360, 2-3K R-7-D Magnet Valve Overhaul Procedure (04/24/2024)
- MSI 180361, 2-3K N-3-D Magnet Valve Overhaul Procedure (04/24/2024)
- MSI 180362, 2-3K N-3-E Magnet Valve Overhaul Procedure (12/21/2023)
- MSI 180363, 2-3K #8 Vent Valve Overhaul Procedure (12/21/2023)
- MSI 180364, 3K Air Spring Transducer Box Overhaul Procedure (06/26/2024)
- MSI 180365, 2-3K ½ Check Valve Overhaul Procedure (12/21/2023)
- MSI 180366, 2-3K 3/8 Check Valve Overhaul Procedure (04/04/2024)



- MSI 180367, 2-3K J-1 Relay Valve Overhaul Procedure (12/21/2023)
- MSI 180368, 3K ATO Module PC Boards SMP Special Instruction – Test & “Repair Tracker” Label Application (07/22/2025)
- MSI 180369, 3K Cab Heaters (Left & Right) On-Car Overhaul (10/14/2025)
- MSI 180370, 3K Line Contactor Mounting Bolt Verification (08/20/2024)
- MSI 180371, 3K Knorr VV-120 (Oil Bath) ASU Overhaul Procedure (02/19/2025)
- MSI 180373, 2K-3K Current Collector Overhaul Procedure (07/23/2024)
- MSI 180376, 3K Obsolete Thermal Overload for Knorr ASU Motor Starter (08/12/2024)
- MSI 180377, 3K Automatic Door Operation (ADO) Response Plan (07/05/2024)
- MSI 180379, 3K N3D & N3E Valves Identification (11/13/2024)
- MSI 180380, 3K HVAC Winter Seasonal Preparation Process (11/24/2025)
- MSI 180381, 3K APS Blower Fan Motor Bearing Replacement Procedure (11/20/2024)
- MSI 180384, 3K High Speed Coupling Gear Mesh Qualification Used & New (12/12/2024)

PROCEDURES/POLICIES/MANUALS/FORMS: (CONTINUED)

- MSI 180386, 3K Side Door Operator Overhaul – Limited Scope (10/27/2025)
- MSI 180387, 3K ATO Module Replacement (08/05/2025)
- MSI 180388, 3K HVAC System Check Job Plan for Hot Car (12/08/2025)
- MSI 180389, 3K Remove and Replace Procedure for HVAC Static Relays (09/26/2025)
- MSI 180390, 3K Off Truck Air Spring Assembly Requalification (12/08/2025)
- MSI 180392, 3K Tail-Eye/Draft Gear Rotation Adjustment (11/04/2025)
- MSI, 1809355, 2-3K Converter Functional Module (CFM) Overhaul Procedure (02/24/2024)
- SBB 649, 2-3K ALP Brake Disc Bolt Tightness Check (02/28/2024)
- SBB 650, 2-3K Emergency Ladder Support Anti-Skid Tape (12/05/2023)
- SBB 652, 2-3K Inspection and Verification of Current Collector Shoe Height and Tension (02/21/2024)
- SBB 653, 3K Brake Caliper Swivel Bracket Pin Inspection (08/14/2025)
- SBB 654, 3K Speed Sensor Gap Inspection (06/06/2025)
- SBB 655, 3K H1A Event Codes Update (08/12/2025)
- SBB 656, 3K Inoperative Digitrols Caused by Water Ingress (03/19/2025)
- SBB 657, 3K Disable Cancel Station Stop Push-Button (05/09/2025)
- SBB 658, 3K Discharge Contactor Arc Chute Inspection (09/29/2025)
- SBB 659, 3K Usage of CRC 5-56 and Lubriplate 110 Use in PI Task 30.12 (10/03/2025)
- SBE 151, 6K Emergency Ladder Support Anti-Skid Tape (12/05/2023)
- SBE 153, 6K Inspection and Verification of Current Collector Shoe Height and Tension (02/21/2024)
- SBE 154, 6K BACKR Circuit Inspection (06/14/2024)
- SBE 156, 6K Disable Cancel Station Stop Push-Button (05/09/2025)
- SBE 157, 6K Capacitor Discharge Contactor Arc Chute Inspection (09/29/2025)
- SBE 158, 6K Brake Discs Bolts Torque Inspection (09/29/2025)
- SBE 159, 6K Brake Disc Hub Safety Wire and Torque Stripe Inspection (09/29/2025)
- SBE 160, 6K Battery Case Inspection Procedure (10/03/2025)
- SBE 161, 6K Usage of CRC 5-56 in PI Procedure Task 30 (10/03/2025)
- SBF 125, 7K Auto Door and Cab Console PB Verification (08/12/2024)
- SBF 127, Proper 7K Series Train Consist for 6-Car and 8-Car Operation (12/08/2023)
- SBF 128, 7K Inspection of Current Collector Shoe Height and Tension (02/16/2024)
- SBF 130, 7K ATC Data Collection (09/12/2024)
- SBF 131, 7K Replacement of ATC Safety Relays (03/26/2025)
- SBF 132, 7K Brake Disc Bolts Torque Inspection (09/29/2025)
- SBF 133, 7K Brake Disc Hub Safety Wire and Torque Stripe Inspection (09/29/2025)
- SOP 303.05, Management of Tools and Equipment (08/26/2025)
- WMATA Public Transportation Agency Safety Plan (12/31/2025)



Appendix D

Appendix D: Public Transportation Agency Safety Plan Elements

This audit was based on the WMATA Public Transportation Agency Safety Plan (PTASP) effective December 31, 2024 (Rev. 5.0) and is guided by the below, relevant PTASP elements. The WMSC reserves the right to diverge from the below-highlighted elements if warranted.

1. General Requirements

- a. Transit Agency Information
- d. Safety Performance Targets (including Safety Performance Target Setting Methodology and Timeline, Safety Performance Targets, and System Reliability Targets)
- f. Development and Implementation of a Safety Management System (SMS)

2. Safety Management Policy

- a. Safety Management Policy
- b. Employee Safety Reporting Program
- c. Communication of the Safety Management Policy
- d. Necessary Authorities, Accountabilities, and Responsibilities (including Accountable Executive, SMS Executive, Agency Leadership and Executive Management, Key Staff, and Safety Committees)

3. Safety Risk Management

- a. Safety Risk Management Process (including Safety Hazard Identification, Safety Risk Assessment, and Safety Risk Mitigation)
- b. Ongoing Management of Safety Risk (including Occupational Safety and Health Risk Management, Operational Safety Risk Management, Safety Certification, and Environmental Risk Management)

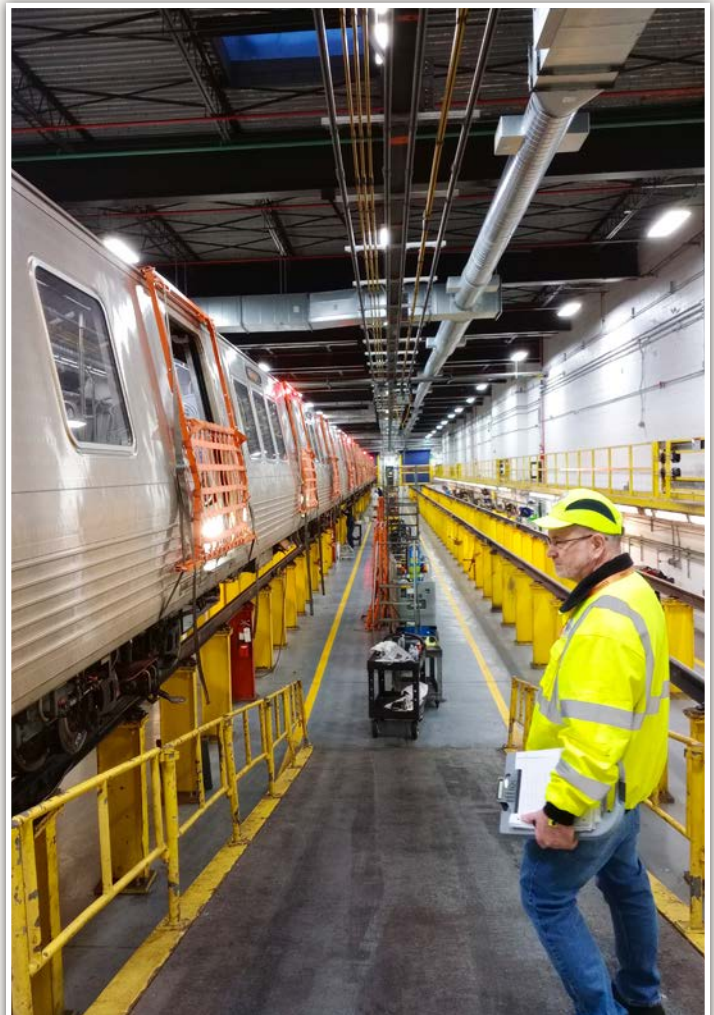
4. Safety Assurance

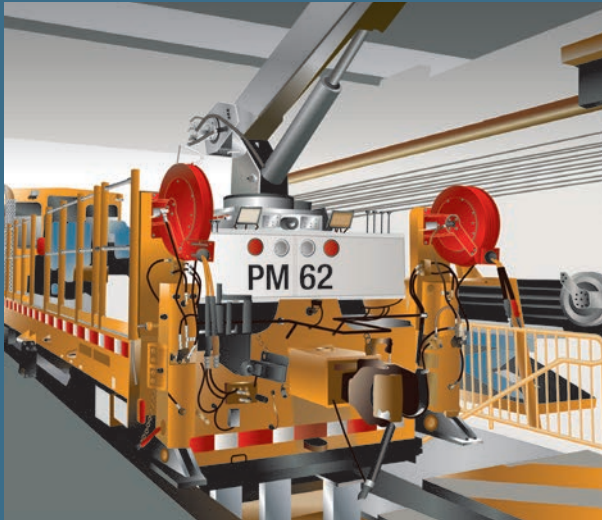
- a. Safety Performance Monitoring and Measurement (including Monitoring Operations and Maintenance Procedures, Monitoring of Operational Safety Risk Mitigations, Safety Investigations, Information Monitoring, and Emergency Risk Management)
- b. Management of Change
- c. Continuous Improvement
- d. Corrective Action Plans

5. Safety Promotion

- a. Competencies and Training (including Employee Safety Training, Safety Rules and Procedures Training, Contractor Safety, Training Recordkeeping, Compliance with Training Requirements, and SMS-specific Training Requirements)
- b. Safety Communication (including Direct Staff Communication, Hazard and Safety Risk Information, and Employee Safety Reporting Program Engagement)

6. Documentation





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