



WMSC Inspection Report 20250113B

ISSUED 1/16/2025

Inspection Details

Title: ATO Operation, Train Operations, and Station Berthing

Location: Union Station (B03)

Date: 01/13/2025

Time: 6:00am to 7:00am

Unannounced

Risk-Based (Safety Certification Oversight)

Automatic Train Operation (ATO)

Overview

A Washington Metrorail Safety Commission (WMSC) inspector conducted a risk-based inspection on the Red Line at Union Station to verify the implementation of return to Automatic Train Operation (ATO). On December 9, 2024, the WMSC issued a Letter of Concurrence for Automatic Train Operation & Return to Design Speed on the Red Line. The inspection intended to verify proper rail vehicle alignment with the 8-car marker when berthing the station.

Between 6:00am and 7:00am on January 13, 2025, a total of 21 Metrorail trains serviced Union Station—nine on track 1 and twelve on track 2. The Rail Vehicle Operators are required to stop at the 8-car marker at the far end of a station platform. SOP 40 requires Rail Vehicle Operators in section 6.3.1 to adjust short stops to the 8-car marker.

6.3.1 When a train is approaching the station and stops short, the Rail Vehicle Operator shall adjust the train's position in Mode 2 Level 1 to align it with the platform at the eight (8)-car marker position.

Of the twenty-one trains that serviced Union Station during this 1-hour inspection, four stopped short of the 8-car marker and one serviced the station from that improper stopping point. Only one of the four contacted the control center as required.

Defects and Corrective Actions

WMSC Inspections identify safety issues that may be classified as defects, findings, or recommendations. Findings and recommendations are defined by Program Standard Section 5.E.2 and 5.E.3, respectively. Ordinarily, issues identified in a WMSC inspection report are classified as



defects. Defects are specific safety issues of non-conformance/non-compliance that are identified and that require remedial action.

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

Defect 1

Procedure or Instruction Number: SOP 40 (Procedure for Platform Berthing, Station Servicing and Overruns) dated August 15, 2023 section 3.11 states “Properly Berthed – Precise positioning and stopping of Class 1 rail vehicles with the front of the train aligned with the eight (8)-car marker position.” WMSC Inspector observed, while riding aboard a train, that the Operator stopped short (at the 6-car marker) and performed an alignment adjust to the 8-car marker. When this occurs, Procedure or Instruction Number: SOP 40 states that the rail vehicle operator must do the following:

- 6.3.1.1.1 Activate the ATO STOP pushbutton if train is operated in Mode 1;
- 6.3.1.1.2 Contact RTC for permission to change operating mode from Mode 1 to Mode 2 Level 1;
- 6.3.1.1.3 Make sure vehicles are at a complete stop prior to changing operating modes;
- 6.3.1.1.4 Announce over public address (PA) system, “Your attention please, this train will move forward”;
- 6.3.1.1.5 Sound the horn;
- 6.3.1.1.6 Properly berth train at the eight (8)-car marker position;
- 6.3.1.1.7 Depending on the Door Selector Mode position, follow the appropriate door opening procedures outlined in 6.2 of this SOP;
- 6.3.1.1.8 If in Mode 1, contact RTC to report a Station Stop Misalignment so it can be monitored for recurrence.

From the inspector’s vantage point (while riding the train into Union Station), the rail vehicle operator did not follow section 6.3.1.1.4 “announce over public address (PA) system, “Your attention please, this train will move forward”.

Subsequent to the field portion of this inspection, a review of the radio (Ops 1) also identified that the rail vehicle operator did not follow section 6.3.1.1.2 “Contact RTC for permission to change operating mode from Mode 1 to Mode 2 Level 1” as no contact was made over radio to the control center.

Hazard Rating: 2E



Defect 2

Procedure or Instruction Number: SOP 40 section 3.11 states “Properly Berthed – Precise positioning and stopping of Class 1 rail vehicles with the front of the train aligned with the eight (8)-car marker position.” The inspector observed a train service Union Station on track one that stopped short of the 8-car marker. When this occurs, Procedure or Instruction Number: SOP 40 states that the rail vehicle operator must do the following:

- 6.3.1.1.1 Activate the ATO STOP pushbutton if train is operated in Mode 1;
- 6.3.1.1.2 Contact RTC for permission to change operating mode from Mode 1 to Mode 2 Level 1;
- 6.3.1.1.3 Make sure vehicles are at a complete stop prior to changing operating modes;
- 6.3.1.1.4 Announce over public address (PA) system, “Your attention please, this train will move forward”;
- 6.3.1.1.5 Sound the horn;
- 6.3.1.1.6 Properly berth train at the eight (8)-car marker position;
- 6.3.1.1.7 Depending on the Door Selector Mode position, follow the appropriate door opening procedures outlined in 6.2 of this SOP;
- 6.3.1.1.8 If in Mode 1, contact RTC to report a Station Stop Misalignment so it can be monitored for recurrence.

From the inspector’s vantage point (now from the platform), the operator made no effort to adjust the improper alignment of the six-car consist. The rail vehicle operator did not announce over public address (PA) system, “Your attention please, this train will move forward” (section 6.3.1.1.4), sound the horn (section 6.3.1.1.5), or properly berth train at the eight (8)-car marker position (6.3.1.1.6).

Subsequent to the field portion of this inspection, a review of the radio (Ops 1) also identified that the rail vehicle operator did not follow section 6.3.1.1.2 “Contact RTC for permission to change operating mode from Mode 1 to Mode 2 Level 1” as no contact was made over radio to the control center.

Hazard Rating: 2E

Defect 3

Inspector observed a 6-car consist, (7K Series) to service Union Station on track one stopped short of the 8-car marker in conflict with SOP 40 6.3. The rail vehicle operator then adjusted alignment and serviced the station at the 8-car marker. When this occurs, Procedure or Instruction Number: SOP 40 states that the rail vehicle operator must do the following:

- 6.3.1.1.1 Activate the ATO STOP pushbutton if train is operated in Mode 1;



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- 6.3.1.1.2 Contact RTC for permission to change operating mode from Mode 1 to Mode 2 Level 1;
- 6.3.1.1.3 Make sure vehicles are at a complete stop prior to changing operating modes;
- 6.3.1.1.4 Announce over public address (PA) system, “Your attention please, this train will move forward”;
- 6.3.1.1.5 Sound the horn;
- 6.3.1.1.6 Properly berth train at the eight (8)-car marker position;
- 6.3.1.1.7 Depending on the Door Selector Mode position, follow the appropriate door opening procedures outlined in 6.2 of this SOP;
- 6.3.1.1.8 If in Mode 1, contact RTC to report a Station Stop Misalignment so it can be monitored for recurrence.

From the inspector’s vantage point (from the platform), the rail vehicle operator did not announce over public address (PA) system, “Your attention please, this train will move forward” (section 6.3.1.1.4) or sound the horn (section 6.3.1.1.5).

Subsequent to the field portion of this inspection, a review of the radio (Ops 1) also identified that the rail vehicle operator did not follow section 6.3.1.1.2 “Contact RTC for permission to change operating mode from Mode 1 to Mode 2 Level 1” as no contact was made over radio to the control center.

Hazard Rating: 2E

Defect 4

Procedure or Instruction Number: SOP 40 section 3.11 states “Properly Berthed – Precise positioning and stopping of Class 1 rail vehicles with the front of the train aligned with the eight (8)-car marker position.” The inspector observed a train service Union Station on track one that stopped short of the 8-car marker. When this occurs, Procedure or Instruction Number: SOP 40 states that the rail vehicle operator must do the following:

- 6.3.1.1.1 Activate the ATO STOP pushbutton if train is operated in Mode 1;
- 6.3.1.1.2 Contact RTC for permission to change operating mode from Mode 1 to Mode 2 Level 1;
- 6.3.1.1.3 Make sure vehicles are at a complete stop prior to changing operating modes;
- 6.3.1.1.4 Announce over public address (PA) system, “Your attention please, this train will move forward”;
- 6.3.1.1.5 Sound the horn;
- 6.3.1.1.6 Properly berth train at the eight (8)-car marker position;



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6.3.1.1.7 Depending on the Door Selector Mode position, follow the appropriate door opening procedures outlined in 6.2 of this SOP;

6.3.1.1.8 If in Mode 1, contact RTC to report a Station Stop Misalignment so it can be monitored for recurrence.

From the inspector's vantage point (from the platform), the rail vehicle operator did not announce over public address (PA) system, "Your attention please, this train will move forward" (section 6.3.1.1.4) or sound the horn (section 6.3.1.1.5).

Subsequent to the field portion of this inspection, a review of the radio (Ops 1) was able to confirm that this was train ID 125 with lead car 7004 (pictured below). Train ID 125 was confirmed to be operating in ATO. The rail vehicle operator contacted the control center but did not request to change modes as required by section 6.3.1.1.2 "Contact RTC for permission to change operating mode from Mode 1 to Mode 2 Level 1". The rail vehicle operator also did not report the misalignment to the control center.

Hazard Rating: 2E

Photo



Next Steps

Please respond by **Tuesday, January 21, 2025**, to acknowledge receipt and to convey responses to the WMSC regarding what, if any, actions will be or have been taken in response.