



Inspection Form

Form WMSC-IR-1

Washington Metrorail Safety Commission

Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20200807-WMSC-MAL-1		
	2020	08	07				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	CMNT	Sub-Department	Greenbelt Building H
Rail Agency Department Contact Information	Name		Email	Office Phone		Mobile Phone	
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Inspection Location	Greenbelt Commissioning Facility – Building H, E99 5801 Sunnyside Ave, College Park, MD 20740						

Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	VM-WI-PI					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	2					
Recommended Finding	No					
Remedial Action Required¹	No					
Recommended Reinspection	No					

Activity Summaries

Inspection Activity #	1	Inspection Subject					Virtual inspection			Activity Code			VM	WI	PI
Job Briefing Employee Name/Title	WMATA Inspection				Accompanied Inspector?	N/A	Out Brief Conducted	N/A	Time	Virtual	Outside Shift	No			
Related Reports	N/A				Related CAPS / Findings										
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference					
	MetroRail Safety Rules and Procedures Handbook (MSRPH). Section 4– Safety Rules.														
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	WMSC Office	Track Type	At-grade	Tunnel	Elevated	N/A				
		X										X			
Line(s)	E99	Track Number		N/A		Chain Marker and/or Station(s)		From		To					
								N/A		N/A					
Vehicles	Head Car Number		Number of Cars		Equipment		N/A								



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	N/A	N/A			
Description	<p>WMSC Inspector conducted a virtual rules compliance inspection of the Greenbelt Commissioning Facility, Building H. The inspector requested numerous documents from daily activities performed at this facility for compliance with Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as equipment maintenance activities, special tools, and documentation.</p> <p>General Information:</p> <ul style="list-style-type: none"> ○ WMSC’s inspector requested and received several documents from the Greenbelt Commissioning facility. <p>The following documents were reviewed:</p> <p><u>CENV 8K Specification Changes Based on 7000 series Lessons Learned 20080506</u></p> <ul style="list-style-type: none"> ○ Reviewed CENV’s 8K Specification Changes Based on 7000 series Lessons Learned and the following information is provided. Keeping a list of lessons learned is an excellent approach to prevent the same problem from re-occurring on future procurement programs. See Attachment #1. ○ This document identifies some 7000 series lessons learned that were used to create the 8K technical specification, but it does not include other lessons learned identified on 7000 series railcars such as: ○ Wheels out of round issue. Add to the list lessons learned. Include a validation test to prevent this problem from re-occurring. ○ Operator’s sun visor blocking cab camera. Add to the list of lessons learned. ○ Inter-car barrier issues. Sacrificial link and premature wear link issues. Add to the list of lessons learned. ○ Excessive weight of 7000 series railcars issue. Add to the list of lessons learned. ○ Excessive current draw of 7000 series railcars issue. Add to the list of lessons learned. ○ Implemented on 7000 series railcars. Both doors open with the activation of the emergency release button. Keep as lessons learned. ○ Implemented on 7000 series railcars. Side doors threshold plate has drainage holes at the bottom to allow water and rocks to drain out of the railcar. Keep as lessons learned. ○ Special tools timeless delivery issue. Add to the list of lessons learned. ○ CENV is requested to keep an up-to-date list of lessons learned to ensure previous problems do not re-occur. <p><u>CENV’s List of Railcars Safety Concerns.</u></p> <ul style="list-style-type: none"> ○ Reviewed CENV’s List of Railcars Safety Concerns and the following information is provided. ○ Keeping a list of railcars safety concerns is an excellent approach to identify and track the status of railcars safety issues. Issues identified on this list are: ○ Adding Video Surveillance System to 6K railcars. ○ Complete the stop and proceed software implementation and hazard analysis on 6K railcars. ○ Complete implementation of an upgraded Digitrol braking system on 2K3K series railcars. ○ CENV is procuring a new software to perform detailed measurement of wheels to determine the cause of the wheels out of round issue. ○ <u>Not included:</u> Include the stop and proceed software implementation and hazard analysis on 2K3K railcars. 			Number of Defects	2
				Recommended Finding?	No
				Remedial Action Required?	No
				Recommended Reinspection?	No



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	<ul style="list-style-type: none"> ○ The list of railcars safety concerns identifies issues, status, and action taken. WMSC will address CENV's safety concerns at the next CENV Zoom meeting. 		
Remedial Action	N/A		
Effective Practices	Effective Practices <ul style="list-style-type: none"> ○ Keeping a list of lessons learned is an excellent approach to prevent the same problem from re-occurring on future procurement programs. 		

Attachment 1 – Specification Changes Based on 7000 series Lessons Learned

8k Specification Changes Based on 7k Lessons Learned 20180506

Potential Changes to the 7k Technical Specification
to Create the 8k Technical Specification

Page 1

Spec Section	7k Page	Topic	Change	Reason	Requested By	Complexity for option cars	WMATA Immediate Desire	Date Added to List	Implementation Date
1.7.2	1-11	Brake Control	Add train-wide distributed braking	Provides greater ability to compensate for failures	Initial review of 7k by 7k team	high	low	N/A	4-Sep-19
2		Communication Management	Add Communication Management Plan or refer in other doc.	Clarity	WMATA	low	low	N/A	4-Sep-19
2.2	2-1	Documents in PDF	In addition to formal paper transmittal, require all submittals to be supplied as searchable pdfs, with signature pages as scanned pdfs. Allow exception for 3D drawings. (or possibly put this in 2.2.2.	Same as 7k actual.	Initial review of 7k by 7k team	as-built		N/A	4-Sep-19
2.2	2-1	No Hard copies	Based on review from WMATA legal, eliminate hard copy letters	Effort reduction	Initial review of 7k by 7k team	low	high	N/A	4-Sep-19
2.4	2-4	Warranty personnel	Call for three warranty engineers: lead, mechanical, and electrical	More warranty support	Stakeholder review	med	high	N/A	4-Sep-19
2		Providing 3D Drawings	The OEM shall provide WMATA with a Top Level 3D Assembly of the "A" car and of the "B" Car, including all 3D Part Files. These files can be provided in a native SolidWorks files, a Catia file, or a 3D Imported Solid Model (i.e., either a .STEP or .Parasolid) file.	This will be helpful to CENV in the future should modifications have to be made or when certain dimensions are needed.	WMATA (ASI)	low	med	N/A	4-Sep-19
3.7.9.3.10	3-28	HVAC high ambient	Add condition of freezing rain for fresh air intake. May not go here.	Practical requirement. Reconfirmed 4/2018.	Initial review of 7k by 7k team	as-built		N/A	4-Sep-19
3.10.6.2	3-65	Test reporting	Reference should be to Quad instead of married-pair.	Consistency	Initial review of 7k by 7k team	na		N/A	4-Sep-19
5.1.3.7.110. New		FAI - Buy America Check	It was suggested that records confirming Buy America compliance be made available for inspection at FAI	WMATA QA Review	Stakeholder review	low	low	N/A	4-Sep-19
8		Special Tools	Include part number of special tools in the manuals	Aide to maintenance	Stakeholder review	high	med	N/A	4-Sep-19
9.3.8		BTE Installation	instead of after base order, say 1 year after first car CA		Stakeholder review	na		N/A	4-Sep-19
10.8.1 10.10.3			Don't put drain tubes near the jacking pads	7k lesson learned	Stakeholder review	high	low	N/A	4-Sep-19
10.9		Barriers	Use 7k Between-car-barriers		Stakeholder review	as-built		N/A	4-Sep-19
10.19.2	10-36	Exterior car number	Add car number to roof, parallel to corrugations.		Initial review of 7k by 7k team	low	med	N/A	4-Sep-19
12.6		Electric Coupler	Require coupler supplier to provide an appropriate number of alignment gauges to check proper positioning of contacts following repair		Stakeholder Review	low	med	N/A	4-Sep-19
14.5.3		Floor height adjustment	7k air spring adjustment arrangement is very beneficial and language should require the same or equivalent system that does not require shimming.		Stakeholder review	as-built		N/A	4-Sep-19
15.7.10		Braking Resistors	Have a cage on all sides	Protection	Stakeholder review	med	low	N/A	4-Sep-19
16.4.6.3		Status indicators	Item three calls for a tri-color LED. It's too hard to distinguish. Use three separate indicators.	7k issue	Stakeholder review	high	low	N/A	4-Sep-19
18.2.6		Heated windshield	Right side only		Stakeholder review	as-built		N/A	4-Sep-19
20.2. 20.2.4.2		Stop and Proceed	Update to new Stop and Proceed functionality	Fleet consistency	Stakeholder review	high	low	N/A	4-Sep-19
22.3.2.4)		Video files	Videos should include a flag corresponding to PEI press.	Improve tracing on incidents	Stakeholder review	high	low	N/A	4-Sep-19

¹ The rail transit agency must provide WMSC with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing WMSC verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	Date 08/07/2020
Inspector in Charge – Name Manuel Lopez	Inspection Team Manuel Lopez