



Inspection Form

Form WMSC-IR-1

Washington Metrorail Safety Commission

Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20200901-WMSC-MAL-2		
	2020	09	01				
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	
	[REDACTED]		[REDACTED]	[REDACTED]		[REDACTED]	
	[REDACTED]		[REDACTED]	[REDACTED]		[REDACTED]	
	[REDACTED]		[REDACTED]	[REDACTED]		[REDACTED]	
	[REDACTED]		[REDACTED]	[REDACTED]		[REDACTED]	
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)	8					
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								
	N/A		N/A											



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Description	<p>The 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 related to compliance with Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as equipment maintenance activities, special tools, and documentation.</p> <p>The following document was reviewed: <u>CENV's Consolidated PI Tools List</u></p> <ul style="list-style-type: none"> ○ Reviewed CENV's consolidated PI special tools list and compared those requirements to S&I shop submissions on special tools and the following information is provided (See Attachment #1). ○ Review of CENV's and S&I Shops submissions show many missing special tools such as brake pad slack adjuster go/no-go gauge, coupler hook buff and pull go gauge, door height check gauge, coupler alignment tool, propulsion line contactor gauge, air spring height go/no-go gauge, door adjustment gauge, etc., which are specified in the Original Equipment Manufacturer (OEM) Periodic Inspections manuals provided to WMATA and are required to adhere to warranty requirements, reliability goals, and to ensure the safety of railcars. ○ Special tools requirements are divided into fourteen tasks to match the corresponding periodic inspection being performed on a railcar. See attached list of special tools sorted by tasks, quantities on hand, and desired quantities, which were used to create the following list of missing special tools. <li style="margin-left: 40px;">○ Task 10 - Undercar Cleaning - Missing zero (0) special tool <li style="margin-left: 40px;">○ Task 20 - Trucks and Couplers - Missing fifteen (15) special tools <li style="margin-left: 40px;">○ Task 25 - Ultrasonic Leak Detection - Missing zero (0) special tool <li style="margin-left: 40px;">○ Task 30 - Undercar Electrical - Missing seven (7) special tools <li style="margin-left: 40px;">○ Task 35 - Propulsion - Missing five (5) special tools <li style="margin-left: 40px;">○ Task 40 - Interior - Missing three (3) special tools <li style="margin-left: 40px;">○ Task 50 - HVAC - Missing one (1) special tool <li style="margin-left: 40px;">○ Task 60 - Lubrication - Missing one (1) special tool <li style="margin-left: 40px;">○ Task 65 - High Speed Coupler - Missing zero (0) special tool <li style="margin-left: 40px;">○ Task 70 - Brake Rates - Missing zero (0) special tool <li style="margin-left: 40px;">○ Task 80 - Air Spring and Carbody Height Checks - Missing four (4) special tools <li style="margin-left: 40px;">○ Task 90 - Doors - Missing twenty-four (24) special tools <li style="margin-left: 40px;">○ Task 100 - Major Cleaning - Missing zero (0) special tools <li style="margin-left: 40px;">○ Task 110 - Pre-Revenue Checks - Missing zero (0) special tool ○ The consolidated PI tools list states that some special tools were ordered back in October 2017 but shows that they have not been received. ○ WMATA is requested to implement a plan to procure or manufacture missing special tools and provide an interim solution until the missing special tools are received and provided to the applicable S&I Shops. If a special tool is listed on the consolidated PI special tools list, but is not required to perform PI functions, please state requirement as "not required". WMATA is requested to provide WMSC with copy of the plan and interim solution by October 30, 2020. ○ Please provide WMSC with updated consolidated PI special tools lists as new special tools are procured or manufactured and added to the list. Please include the status of calibration records for those special tools that required calibration. 	Number of Defects	8
		Recommended Finding?	No
		Remedial Action Required?	No
		Recommended Reinspection?	No
Remedial Action	N/A		
Effective Practices	<p>Effective Practices</p> <ul style="list-style-type: none"> ○ Collaborating with other departments and tracking lessons learned is an excellent approach to reduce railcar incidents. 		



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Attachment 1 – CENV's Consolidated PI Tools List

	B	C	H	I	J	K	L	M	N	O	P	Q	Y	Z	AA	AB	AC
1	Highlight = updated information 01/08/2020		SERVICEABLE TOOLS ON HAND					DESIRED QTY ON HAND					QTY ORDERED		SOURCE		
2																	
3	WMATA Drawing Number	Description	ALEX	GB	NC	SG	WFC	ALEX	GB	NC	SG	WFC	Date	Qty	Mach	Comm	Other
4													Order	Order	Shc		
5	TASK 10 - Undercar Cleaning																
6	TASK 20 - Trucks and Couplers																
7		AAR Narrow Flange Steel Wheel Gauge	8	1	3	4	4	6	6	6	6	6				X	
8		Calibrated Back-to-Back Gauge (Incremental)	3	3	3	3	3	6	6	6	6	6				X	
9		Torque Wrench														X	
10	WDE000837	Brake Pad Slack Adjuster Go/No-Go Gauge	0	0	0	0	0	3	6	6	3	3			X		
11	WDE000634	Brake Pad Thickness Go/No-Go Gauge	0	0	0	0	0	6	6	6	6	6	10/5/2017	50	X		
12	WDE000548	Pin Gauge Set	0	0	2	0	0	6	6	6	6	6	10/5/2017	25	X		
13		Calipers	5	4	3	8	9	6	6	6	6	6				X	
14		Pi Tape	7	1	5	6	2	6	6	6	6	6				X	
15	WDX000295	Shoe Height Tool - 3.75"	1	1	1	1	1	3	3	3	3	3	10/5/2017	15	X		
16	WDE000733	Shoe Height Tool - 3.5"	1	1	1	1	2	3	3	3	3	3	10/5/2017	14	X		
17		Stopwatch	0	0	0	0	0	6	6	6	6	6				X	
18		0.005 in Feeler Gauge (Extended)	4	1	0	1	0	6	6	6	6	6				X	
19		Straight Edge	0	0	0	0	0	6	6	6	6	6	10/5/2017	35		X	
20		Dial Indicator	0	0	2	2	2	6	6	6	6	6				X	
21	WDE000539	Rubber Compression Condemning Limit Gauge	0	0	1	0	0	1	3	3	1	1	10/5/2017	15	X		
22	WDE000554	Coupler Hook Buff and Pull Go Gauge	0	2	1	0	0	6	6	6	6	6		18	X		
23	WDE000619	Coupler Hook Buff and Pull No-Go Gauge	0	2	1	0	0	6	6	6	6	6		18	X		
24	WDE000620	Coupler Hook Height/Width "No-Go" Gauge	2	0	0	0	1	6	6	6	6	6		18	X		
25	WDE000553 or WDE000784	Throat Opening No-Go Gauge(Welded)	2	2	1	1	0	6	6	6	6	6		15	X		
26	WDE000555 or WDE000618	Throat Opening No-Go Gauge(Bolted)															
27	7K	Parallel Gauge Tool	0	0	0	0	0	3	3	3	3	3				X	
28	WDE000552	Guide Pin Go/No-Go Gauges	0	0	0	0	0	6	6	6	6	6	10/5/2017	35	X		
29	WDE000695	Coupler Hook Extension Tool	1	0	0	1	1	3	1	3	3	3	10/5/2017	15	X		
30		Calibrated Spring Scale (50 lbs range) for use with WDE000695	1	0	0	1	1	6	6	6	6	6				X	
31	TASK 25 - Ultrasonic Leak Detection																
32		Ultrasonic Diagnostic Tool	2	2	1	2	1	6	6	6	6	6				X	
33	TASK 30 - Undercar Electrical																
34		Torque Wrench														X	
35		Digital Multimeter														X	
36	WDE000843	Handle for Electrical Couplers	0	0	0	0	0	3	3	3	3	3			X		
37		Pneumatic Horn Muffler															X
38		DC Power Supply	2	1	1	2	2	6	6	6	6	6				X	
39		Thermometer	0	0	0	0	0	6	6	6	6	6				X	
40	WDE000550	Glass Tube	0	0	0	0	0	3	3	3	3	3	10/5/2017	30	X		



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41		SAFT Filler Pistol	0	2	0	0	0	6	6	6	6	6							
42	WDB000111	Coupler Pin Alignment Tool	2	0	2	0	1	3	3	3	3	3	10/5/2017	15	X				
43		Universal Test Fitting	0	0	0	0	0	1	3	3	1	1						X	
44		Air Pressure Gauge	4	2	2	4	4										X		
45		EPCU Drain Fitting	0	2	0	0	0	1	3	3	1	1						X	
46	TASK 35 - Propulsion																		
47		Digital Multimeter																X	
48	WDE000841	Armature Gap Gauge, Sécheron 4H3S2028	0	0	0	0	0	3	3	3	3	3			X				
49	WDE000842	Main Contact Tip Gauge, Sécheron 4H3S2029	0	0	0	0	0	3	3	3	3	3			X				
50	7K	Interlock Overtravel Gauge, Sécheron 4H3S2030	0	0	0	0	0	3	3	3	3	3			X				
51		Plastic Putty Knife															X		
52		3" Spiral Tube Brush															X		
53		1/4" Nylon Tube Brush															X		
54		PTU Laptop with Connecting Cables																X	
55		0.090 in Feeler Gauge						1	1	3	1	1					X		
56	WDE000810	Line Contactor Special 0.8mm Gauge	0	0	0	0	0	3	3	3	3	3	10/5/2017	30	X				
57		Dynamometer or Pull Gauge with Wire Loop, 20 kg (44 lbs)	0	0	0	0	0	3	3	1	3	3					X		
58	TASK 40 - Interior																		
59		Digital Multimeter																X	
60		PTU Laptop with Connecting Cables																X	
61		ATC PTD Test Plug	3	1	1	1	2	3	3	3	3	3						X	
62		RF Power Meter 3030	0	0	0	0	0	3	3	3	3	3					X		
63		Radio Dummy RF Load w/ cables						3	3	3	3	3					X		
64		Long Reach Aligner	0	0	0	0	0	3	3	3	3	3					X		
65	TASK 50 - HVAC																		
66		PTU Laptop with Connecting Cables																X	
67		Thermal (Infrared) Gun	2	1	2	0	2	6	6	6	6	6					X		
68	TASK 60 - Lubrication																		
69	WDE000838	Dipstick Gauge	0	0	0	0	0	6	6	6	6	6			X				
70		Grease Gun	13	13	5	8	16	3	3	3	3	3					X		
71		Grease Brush	3	3	3	2	4										X		
72		Paint Brush	3	3	3	2	4										X		
73		Torque Wrench	5	5	6	7	5										X		
74	TASK 65 - High Speed Coupler																		
75		1/8 in Grease Fitting	10	8	6	7	8										X		
76	TASK 70 - Brake Rates																		
77		Direct Reading Gauges - Brake Rates	5	2	2	6	4										X		
78		PTU Laptop with Connecting Cables																X	
79	TASK 80 - Air Springs and Carbody Height Checks																		
80	WEM190173-8-2	Go/No-Go Gauge, Air Spring Height	0	0	0	0	0	1	3	1	1	1	10/5/2017	12	X				
81	WDM180140-8-2	Breda Air Bag Go/No-Go Gauge	0	0	0	0	0	3	1	1	3	3	10/5/2017	16	X				
82	WDE000819	Go/No-Go Gauge, Air Spring Height						3	3	3	3	3			X				
83	WDE000549	Threshold Height T-Square Gauge	0	0	0	1	2	6	6	6	6	6	10/5/2017	20	X				
84	WDE000840	Threshold Height Reference Bar	0	0	0	0	0	6	6	6	6	6	10/5/2017	15	X				
85		Caliper & Ruler															X		
86		Digital Pressure Gauges	5	2	2	6	3										X		
87	TASK 90 - Doors																		
88		Starrett Depth Gauge 237M	0	0	0	0	0										X		
89	WDE000398	Door Adjustment Gauge SK-07-11	1	0	0	3	2	3	3	1	3	3	10/5/2017	30	X				
90	WDE000382	Door Height Gauge						3	3	1	3	3			X				
91	WDE000392	Door Guide Thickness Gauge						3	3	1	3	3			X				
92	WDE000394	1mm 3mm Door Go/No Go Gauge						3	3	1	3	3			X				
93	WDE000401	Door Spindle Nut Tool						3	3	1	3	3			X				
94	WDE000403	Door 17mm Spanner Wrench						3	3	1	3	3			X				
95	WDE000406	Bulkhead Door Pivot Wrench						3	3	1	3	3			X				
96	WDE000404	Door 15mm Spanner Wrench						3	3	1	3	3			X				
97	WDE000405	Door 17.2mm Angled Wrench						3	3	1	3	3			X				
98	WDE000410	Door Jack						3	3	1	3	3			X				
99	WDE000411	Door Cam Stud Wrench						3	3	1	3	3			X				



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100	WDE000408	Door Offset Spanner Wrench					3	3	1	3	3				X		
101	WDE000409	Door Lower Bump Stop Wrench					3	3	1	3	3				X		
102		Feeler Gauge (1.2mm to 2.2mm)					3	3	3	3	3				X		
103	WDE000118	Anti Rattle Block Gauge / Door Height Gauge					3	3	3	3	3				X		
104		Straight Edge					3	3	3	3	3					X	
105	WDE000817	Nose Seal Gauge					3	3	3	3	3				X		
106	WDE000752	Push/Pull Force Gauge Adapter	0	1	0	1	1	6	6	3	6	6	10/5/2017	20	X		
107	WDE000388	3/8" Flat Plate Obstruction	1	0	0	5	0	6	6	3	6	6	10/5/2017	7	X		
		Steel Rule	0	0	0	0	0									X	
108																	
109	WDE000548	Pin Gauge Set	3	2	0	3	0								X		
		Feeler Gauge	2	0	0	2	2	3	3	1	3	3				X	
110		Feeler Gauge	2	0	0	2	2	3	3	1	3	3				X	
111		Torque Wrench	3	3	2	1	3	3	3	1	3	3				X	
112		PTU Laptop with Connecting Cables	24	9	10	23	18	24	9	10	23	18					X
113		Dynamometer	0	0	0	0	0	1	1	3	1	1				X	
114		0.040 in. Feeler Gauge	0	0	0	0	0	1	1	3	1	1				X	
115	TASK 100 - Level III - Major Cleaning																
116		Plastic Putty Knife	0	0	9	0	0									X	
117		Swiffer™ type mop	0	0	0	0	0									X	
118		Swiffer™ type mop pads	0	0	0	0	0									X	
119		Steam Cleaner	0	0	0	0	0									X	
		Microfiber Cloth	0	0	0	0	0									X	
120																	
121		Monitor Safe Cloth	0	0	0	0	0									X	
122		Vacuum	3	3	3	3	3									X	
123		Shampoo	1	2	0	6	3									X	
124		Mop with Plastic Frame	0	0	0	0	0									X	
		Brushes	0	0	0	0	0									X	
125																	
126		Mop Head (Large)	0	0	0	0	0									X	
127		Mop Head (Small)	5	5	5	5	5									X	
128	TASK 110 - Pre-Revenue Checks																
129		Seal Press	25	20	22	20	20	3	3	3	3	3					
130		VMS Seal Press, McMaster-Carr P/N 2012T1 with "VMS" engraved on dies	2	1	2	1	1	3	3	3	3	3					

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 09/01/2020
Inspector in Charge – Name Manuel Lopez	Inspection Team Manuel Lopez	