



## Inspection Form

**Form WMSC-IR-1**

Washington Metrorail Safety Commission

**Agency/Department Information**

<b>Inspection Date</b>	YYYY	MM	DD	<b>Report Number</b>	20200624-WMSC-MAL-1		
	2020	06	24				
<b>Rail Agency Name</b>	Washington Metropolitan Area Transit Authority			<b>Rail Agency Department</b>	CMNT	<b>Sub-Department</b>	West Falls Church Yard
<b>Rail Agency Department Contact Information</b>	<b>Name</b>		<b>Email</b>	<b>Office Phone</b>		<b>Mobile Phone</b>	
	██████████ ██████████		██████████ ██████████	██████████ ██████████		██████████ ██████████	
<b>Inspection Location</b>	West Falls Church S&I Shop - Railyard K99 7253 Idylwood Road Falls Church, Virginia 22043						

**Inspection Summary**

Inspection Activity #	1	2	3	4	5	6
<b>Activity Code</b>	VM-WI-PI					
<b>Inspection Units</b>	1					
<b>Inspection Subunits</b>	1					
<b>Defects (Number)</b>	1					
<b>Recommended Finding</b>	No					
<b>Remedial Action Required<sup>1</sup></b>	No					
<b>Recommended Reinspection</b>	No					

**Activity Summaries**

Inspection Activity #	1	Inspection Subject	Shop / Yard Inspection Observation				Activity Code		VM	WI	PI
<b>Job Briefing Employee Name/Title</b>		WMATA Inspection	<b>Accompanied Inspector?</b>	N/A	<b>Out Brief Conducted</b>	N/A	<b>Time</b>	Virtual	<b>Outside Shift</b>	No	
<b>Related Reports</b>		N/A	<b>Related CAPS / Findings</b>								
<b>Related Rules, SOPs, Standards, or Other</b>	<b>Ref</b>	<b>Rule or SOP</b>		<b>Standard</b>		<b>Other / Title</b>		<b>Checklist Reference</b>			
		MetroRail Safety Rules and Procedures Handbook (MSRPH). Section 4- Safety Rules									
<b>Inspection Location</b>	<b>Main Track</b>	<b>Yard</b>	<b>Station</b>	<b>OCC</b>	<b>RTA Facility</b>	<b>WMSC Office</b>	<b>Track Type</b>	<b>At-grade</b>	<b>Tunnel</b>	<b>Elevated</b>	<b>N/A</b>
		X									X
<b>Line(s)</b>	K99	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>			<b>From</b>		<b>To</b>		
							N/A		N/A		
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>		N/A				
	N/A		N/A								



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<b>Description</b>	<p>WMSC Inspector conducted a Rules Compliance observation at the West Falls Church (WFC) S&amp;I Shop and Yard Facilities. The inspector requested several documents from daily Periodic Inspections (PIs) activities performed at the S&amp;I Shop and yard for compliance with Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as equipment maintenance activities, special tools, and documentation.</p> <p>General Observations:</p> <ul style="list-style-type: none"> <li>Much of the information requested from WFC, Brentwood, and Shady Grove was not received at the time this report was issued and will be included in the next report.</li> <li>WFC is the only facility that is currently working to bring 2K and 3K railcars out of cold storage condition. Cold storage condition is defined in SOP 1.17, Managing Personnel and Work Assignments in Rail Yards.</li> <li>Personnel at WFC have more time to perform PIs on railcars, because they do not have to get railcars ready for revenue service daily. WFC facility is isolated from the rest of the system due to the Orange and Silver Line shutdown.</li> <li>Approximately 100 of the 180 2K and 3K railcars will complete full PIs by the end of this week at WFC. The 2K railcars will also go through full PIs.</li> <li>The total number of 2K and 3K railcars in the fleet is down to 356 railcars from 364 due to accidents.</li> <li>Once the railcar goes through full PIs, the railcar goes back to storage, in a ready for revenue service condition.</li> <li>The remaining 2K and 3K railcars, located at other yards will stay in the cold storage condition.</li> <li>WMATA expects to return staffing levels back to normal later in July. Once the staffing levels return to normal, WMATA expects to return the raining railcars, in cold storage, back to full revenue service condition in four weeks.</li> </ul> <p>Periodic Inspections and Procedures</p> <ul style="list-style-type: none"> <li>Received four completed Periodic Inspections A-2 for railcars 3192-93, 3162-63, 3248-49, and 3200-01, after coming out of the cold storage condition. These railcars were kept in cold storage since March 2020.</li> <li>Reviewed these Periodic Inspections and noted some inconsistencies under the completed Task # 40 checklist for railcars 3248 and 3192. Some of the fields such ATC ground rack measurements, VMS wheel diameters for the A and B railcars, and the wheel wear validation field were left blank (Attachment 1). See properly completed fields for railcars 3200 and 3162 (Attachment 2).</li> <li>Periodic Inspection A-2 included Daily Periodic Inspections Checklist for cleaning (Attachment 3).</li> <li>Periodic Inspection A-2, Tasks # 10 through 110 and Post PI Checklist. See attached Photo 4.</li> </ul> <p>Future visits</p> <ul style="list-style-type: none"> <li>WMSC will be performing virtual visits due to the COVIC-19 epidemic.</li> </ul>	<b>Number of Defects</b>	1
		<b>Recommended Finding?</b>	No
		<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		
<b>Effective Practices</b>	Effective Practices		



# Inspection Form

## Form WMSC-IR-1

Washington Metrorail Safety Commission

Photos: Attachment 1 – PI A-2 forms for railcars 3192 and 3248 with missing information

**M** TASK 40 Periodic Inspection 2000/3000 Series  
Washington Metropolitan Area Transit Authority

CHECKLIST TABLES

ATC Ground Rack Measurement (0.6Ω <=)	ATC Wheel Diameter	VMS Wheel Diameter A-Car	VMS Wheel Diameter B-Car
	28	27.93	28

Validate Wheel Wear	
Set	Verify

Discrepancy Found?  No (N)  Yes (Y) If Yes! Provide details on the Discrepancy Notice Form.

LEADMAN / CLERK DUTIES		
No.	Item:	Initials:
1	Prepare Sign-Off Sheet Packages	
2	Review ALL Car History, Deferrals / ETP / EMI / etc.	
3	Review the Fleet Logger	
4	Review for Missing Parts	
5	Distribute Recalls / Deferrals / Missing Parts / Request	
6	Enter Labor and Task Information	
7	Verify Package Completeness and Prepare for File	
8	PI Turnover	
Notes / Comments:		

**M** Periodic Inspection – 2000/3000 Series – V 5.0  
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CL40-3

6/16/2019

**M** TASK 40 Periodic Inspection 2000/3000 Series  
Washington Metropolitan Area Transit Authority

CHECKLIST TABLES

ATC Ground Rack Measurement (0.6Ω <=)	ATC Wheel Diameter	VMS Wheel Diameter A-Car	VMS Wheel Diameter B-Car
	28		

Validate Wheel Wear	
Set	Verify

Discrepancy Found?  No (N)  Yes (Y) If Yes! Provide details on the Discrepancy Notice Form.

LEADMAN / CLERK DUTIES		
No.	Item:	Initials:
1	Prepare Sign-Off Sheet Packages	
2	Review ALL Car History, Deferrals / ETP / EMI / etc.	
3	Review the Fleet Logger	
4	Review for Missing Parts	
5	Distribute Recalls / Deferrals / Missing Parts / Request	
6	Enter Labor and Task Information	
7	Verify Package Completeness and Prepare for File	
8	PI Turnover	
Notes / Comments:		

**M** Periodic Inspection – 2000/3000 Series – V 5.0

CL40-3



# Inspection Form

# Form WMSC-IR-1

Washington Metrorail Safety Commission

Photo 2 – PI A-2 forms for railcars 3200 and 3162 with completed fields

**M** TASK 40 Periodic Inspection 2000/3000 Series  
Washington Metropolitan Area Transit Authority

CHECKLIST TABLES

ATC Ground Rack Measurement (0.5Ω <)	ATC Wheel Diameter	VMS Wheel Diameter A-Car	VMS Wheel Diameter B-Car
.2	27.7	27.60	27.50

Validate Wheel Wear	
Set	Verify
_____	_____

Discrepancy Found?  No (N)  Yes (Y) If Yes! Provide details on the Discrepancy Notice Form

LEADMAN / CLERK DUTIES		
No.	Item:	Initials:
1	Prepare Sign-Off Sheet Packages	
2	Review ALL Car History: Deferrals / ETP / EMI / etc.	
3	Review the Fleet Logger	
4	Review for Missing Parts	
5	Distribute Recalls / Deferrals / Missing Parts / Request	
6	Enter Labor and Task Information	
7	Verify Package Completeness and Prepare for File	
8	PI Turnover	
Notes / Comments:		

**M** Periodic Inspection – 2000/3000 Series – V 5.6  
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CL40-3  
04/26/2019

**M** TASK 40 Periodic Inspection 2000/3000 Series  
Washington Metropolitan Area Transit Authority

CHECKLIST TABLES

ATC Ground Rack Measurement (0.5Ω <)	ATC Wheel Diameter	VMS Wheel Diameter A-Car	VMS Wheel Diameter B-Car
0.2	27.8	26.85	27.34

Validate Wheel Wear	
Set	Verify
_____	_____

Discrepancy Found?  No (N)  Yes (Y) If Yes! Provide details on the Discrepancy Notice Form

LEADMAN / CLERK DUTIES		
No.	Item:	Initials:
1	Prepare Sign-Off Sheet Packages	
2	Review ALL Car History: Deferrals / ETP / EMI / etc.	
3	Review the Fleet Logger	
4	Review for Missing Parts	
5	Distribute Recalls / Deferrals / Missing Parts / Request	
6	Enter Labor and Task Information	
7	Verify Package Completeness and Prepare for File	
8	PI Turnover	
Notes / Comments:		

**M** Periodic Inspection – 2000/3000 Series – V 5.6  
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CL40-3  
04/26/2019



# Inspection Form

Form WMSC-IR-1

Washington Metrorail Safety Commission

Photo 3 – PI A-2, Daily Periodic Inspections Checklist for railcar 3248

**DAILY PERIODIC INSPECTION REPORT**

DATE: 06/16/2020 CLEANER(S): [Redacted] (1)

CAR NUMBER: 3248 (2)

START TIME: 09:00 pm END TIME: 05:30 am

MAJOR AREAS	Cleaned Initials (1)	Cleaned Initials (2)	COMMENTS
<b>CAB AREA</b>	<i>ML</i>		
(A) FLOOR	<i>ML</i>		
(B) VENTS	<i>ML</i>		
(C) OP. SIDE WINDOW & WINDSHIELD	<i>ML</i>		
(D) CONSOLE	<i>ML</i>		
(E) SEAT(S)	<i>ML</i>		
(F) DOORS	<i>ML</i>		
(G) CEILING	<i>ML</i>		
<b>PASSENGER AREA</b>			
FLOOR: (A) Gum Removal	<i>[Handwritten squiggle]</i>		
(B) Vacuum			
(C) Shampoo			
SEATS: (A) Cushions			
(B) Backs			
<b>PARTITIONS</b>			
<b>WINDSCREENS</b>			
DOORS: (A) Panels			
(B) Glass			
(C) Threshold Plates			
<b>HEADLINERS</b>			
<b>SIDELINERS</b>			
<b>CEILING</b>			
WINDOWS: (A) Side			
(B) End			
<b>DEST. SIGN GLASS</b>			
<b>WINDOWS-EXTERIOR</b>			
VENTS: (A) Overhead			
(B) Floor			
SEAT WELLS			
DOOR OPERATOR PANELS			
LIGHT DIFFUSERS			
VERT. + Q/H STANCHIONS			



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Photo 4 – PI A-2, Tasks # 10 through 110 Checklist and Post PI Checklist for railcar 3249

**M metro** Periodic Inspection 2000 / 3000 Series Railcar  
**Washington Metropolitan Area Transit Authority**

Shop: WFG Insp: A Car # 2 Car # 3 249 W/O # 16722096 Date: Jan 15, 2020

Supervisor Signature: [Redacted] Employee # [Redacted]

Supervisor Signature: [Redacted] Employee # [Redacted]

Supervisor Signature: [Redacted] Employee # [Redacted]

Supervisor Signature: [Redacted] Employee # [Redacted]

Notes & Comments

Int:  LS TASK 10 - UNDERCAR CLEANING

Int:  LS TASK 20 - TRUCKS/COUPLERS

Int:  LS TASK 25 - ULTRASONIC LEAK DETECTION

Int:  LS TASK 30 - UNDERCAR ELECTRICAL

Int:  LS TASK 35 - PROPULSION

Int:  LS TASK 40 - INTERIOR

Int:  LS TASK 50 - HVAC

Int:  LS TASK 60 - LUBRICATION

Int:  LS TASK 70 - BRAKE RATES/UTILITY

Int:  LS TASK 80 - AIR SPRINGS AND CARBODY HEIGHT CHECKS

Int:  LS TASK 90 - DOORS

Int:  LS TASK 100 - LEVEL III MAJOR CLEANING

Int:  LS TASK 110 - PRE-REVENUE CHECKS

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**CMNT POST PI CHECKLIST**

**POST PI SAFETY INSPECTION**

It is extremely important that a generalized final inspection be performed before moving the car pair after Periodic Inspection. The final inspector should check to ensure that all latches, hinges, access panels, and doors are secure. The inspection area must also be checked to ensure there is no test equipment, tools, drop lights, or other items left on rails, stanchions, catwalks or shop floor. Ensure that all subsystem circuit breakers, switches, and cut-outs are normalized. The following checklist is a guide and does not nor cannot cover each and every possible hazard which may be encountered by this inspection. It is also important to note that this checklist is not a substitute or replacement for the standard O&T and Outside Functional procedure.

**CAR PAIR #'S 3248 / 3249 (A2)**

- Detailed inspection of undercar:**
- Check the fault display unit (FDU) for any fault indications.
  - Ensure that all latches, hinges, access panels, and doors are secure.
  - Ensure that all trucks and air springs are cut-in.
  - Check for foreign objects such as tools, test equipment, drop lights, chocks, or other items left which may have been left on top of rails or stanchions. Ensure there are no cords draped over the running rails.
  - Check that all undercar circuit breakers are turned on.
  - Ensure shop tracks are forward clear of any foreign objects, such as tools or extension cords, which may interfere with the dynamic envelop of the train.
  - Ensure there are no shop ladders, scaffolding, or other shop equipment underneath or next to the train, which could possibly interfere with train movement.
  - Ensure lift plates are stowed (if applicable). Remove wheel chocks if present.
  - Verify that the pneumatic horn is cut-in. Remove the pneumatic horn mufflers before the train is moved from the facility.
  - Ensure a brief inspection of the trucks is given to include motor and sensor covers, quick disconnects, security and safety wire of discs and fill/drain gearboxes, collector hardware and cabling. Check to ensure there is nothing left atop or between truck components.
  - Check front and rear couplers to ensure shear bolts are safety wired and that there are no gauges or coupler test stands left on or around the couplers.

<sup>1</sup> 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.

<b>Inspector in Charge - Signature</b>		<b>Date</b>
		06/24/2020
<b>Inspector in Charge - Name</b>	<b>Inspection Team</b>	
Manuel Lopez	Manuel Lopez	