



PM PACKET SIGN-OFF SHEET

Instructions: Please complete this form ensuring all attached paperwork is completed. Once completed, attach this form with the required PM packet documents.

Work Order #: <u>4252</u>		Equipment ID: <u>209</u>	
PM Service (ex. 45-Day, 92-Day, 1YR etc.):	<u>180 DAY</u>		
Date Work Order Opened: <u>12-4-2020</u>	Date Work Order Closed:		
Confirm all work carried out in accordance with the PM requirements:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Work Deferred
If work Deferred, confirm that a Deferred work order has been raised:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Enter Deferred Work Order number below <div style="border: 1px solid black; padding: 2px; width: fit-content;">Enter Deferred Work Order Number</div>
All required forms are attached and completed:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<u>Locomotive Tests</u> Oil Sample <input type="checkbox"/> Air Filters <input type="checkbox"/> 45 Day PM <input type="checkbox"/>		<u>Coach Tests</u> Disc Report <input type="checkbox"/> A/C Filters <input checked="" type="checkbox"/> Toilet <input type="checkbox"/> 45 Day PM <input type="checkbox"/>	
Equipment Release Date: <u>12-7-2020</u>			
Manager/Supervisor Reviewing Work Order: (Please print clearly and sign)			
Name: <u>Paul Rowles</u>	Signature: <u>Paul Rowles</u>		
Supt reviewing Work Order: (Please print clearly and sign)			
Name: <u>David Fadd</u>	Signature: <u>D Fadd</u>		
Comments:			

Work Order Detail for Asset 209

KEOLIS

Work Order: MBETCH-2020-4252 180 DAY PM			
Status: OPEN			
Dept: MECH - MECHANICAL			Warranty: NO
Asset No: 209 - 1978 PULLMAN/MK BTC-1C COACH		Serial No: 209	
		License:	
Asset No:	Opened By: ANDREA.FORD	Date In:	12/04/2020 19:18
Eq Type: 1978-PULLMAN/MK-BTC-1C	Current Equip Status: CUT	Date Due:	01/19/2021 19:18
Job Type: PM	Account: 254-530001	Opened:	12/04/2020 19:18
Meter 1: 0.00	Reference WO:	Finished:	
Meter 2: 0.00	Estimated Hours: 0.00	Closed:	
Shop Hrs: 73.42	User Hours: 0.00	Warranty Expire:	
Priority: M4 - EVALUATE NEXT OPPORTUNITY	Accident:		
Incident:	Project:		

Non Service Request Tasks			
Task: AC FILTER-30 - Replace Return Air And Fresh Filters -30 Day			Warranty: NO
WAC: 09 - SERVICED	Reason:		
Work Class:	Comments:		
Labor		Labor Hrs	Cost
12/06/2020 12:49	Emp: ANTONID - David Antonino Sr	0.00	0.00
Task: BTC180-PM - Btc 180 Day Class Pm			Warranty: NO
WAC: 06 - INSPECTED	Reason:		
Work Class:	Comments:		
Labor		Labor Hrs	Cost
12/05/2020 08:54	Emp: RODRIGN - Neftali Rodriguez	2.02	55.55
12/05/2020 12:01	PARKS - Steve Park	5.08	139.70
12/05/2020 13:16	GAGLIOJ - Joseph Gaglione	6.27	172.43
12/06/2020 11:48	BOWMANB - Brittany Bowman	4.95	136.13
12/07/2020 06:58	BOMENGE - Eric Bomengen	23.07	634.43
12/07/2020 11:52	ASHEG - Gary Ashe	0.05	1.38
12/07/2020 12:24	LITTLEP - Paul Littlefield	28.40	781.00
12/07/2020 13:59	CAPONEM - Michael Capone	4.85	133.38
12/07/2020 17:17	BOMENGE - Eric Bomengen	2.55	70.13

Overhead

Small Parts - Labor: 0.00	Tools: 0.00	Total Overhead Costs: 0.00
Small Parts - Parts: 0.00	Overhead Costs: 0.00	

Messages					
Other Open Work Orders					
Work Order Number	Type	Status	Scheduled	Reason	Service
Mbetch-2020-4306	Repair	Open		C	
Mrdvyd-2020-4961	Repair	Pending		Mup	
Unit Is 124 Days Late For Inspection Service Coach-Cln-A - Due Date 08/05/2020					
Unit Is 124 Days Late For Inspection Service Coach-Cln-Ex - Due Date 08/05/2020					
Unit Is 124 Days Late For Inspection Service Coach-Cln-C - Due Date 08/05/2020					

PM Checklist

Task / Comment	Employee	Completed	N/A	Failed	SR	Comments
AC FILTER-30	Exception PM: No					
PM5840 - REPLACE RETURN AIR AND FRESH FILTERS	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BTC180-PM	Exception PM: No					
PM448 - ----- BLIND TRAILER COACH 180-DAY INSPECTION -----	CLEMENDA - DARRIN CLEMENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM110 - ----- SHEET METAL WORKER -----	GUTTADS - STEPHEN GUTTADAURO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM323 - CHECK UNDERCAR PIPING FOR SIGNS OF LOOSENING AND DAMAGE	GUTTADS - STEPHEN GUTTADAURO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM330 - INSPECT ALL PIPING, VALVES, HOSES & FITTINGS THAT SHOW SIGNS	GUTTADS - STEPHEN GUTTADAURO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: OF LEAKS, ABRASIONS, CRACKS, HOLES, HAVE MISSING OR BROKEN COMPONENTS OR ARE BELIEVED TO HAVE RESTRICTIONS.						
PM338 - FLUSH AND CLEAN DRAINPAN UNDER EVAPORATOR COILS	GUTTADS - STEPHEN GUTTADAURO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM339 - REPAIR ANY TORN OR MISSING PIPE INSULATION	GUTTADS - STEPHEN GUTTADAURO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM720 - RECONNECT HOSES FROM CAR BODY TO TRUCKS	GUTTADS - STEPHEN GUTTADAURO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM721 - AVAILABLE FOR LEAK REPAIR DURING SINGLE CAR AIR TEST	GUTTADS - STEPHEN GUTTADAURO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM117 - ----- CARMAN -----	CLEMENDA - DARRIN CLEMENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM324 - INSPECT ALL BRAKE EQUIP INCL. VALVES TREAD BRAKES FOR PROPER	CLEMENDA - DARRIN CLEMENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: OPERATION, SECUREMENT OF ALL BOLTS AND BUSHINGS AND COTTER KEYS						
PM325 - INSPECT TRUCK FRAME AND TRUCK-MOUNTED COMPONENTS FOR PROPER	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: SECUREMENT AND EXCESSIVE WEAR. I.E. VERTICAL BUMPERS, RUBBER BUSHINGS, AIR SPRING SYSTEM, SHOCK ABSORBERS, JOURNAL BOX AND BEARINGS, ALL SPRINGS AND SEATS, TRUCK CENTER CASTING, BRAKE RIGGING, SIDE BEARINGS, BOLSTER ANCHOR RODS, SAFETY HANGERS, EQUALIZERS AND TIE BAR.						
PM817 - CHECK ALL EQUALIZER BEAM BUSHINGS FOR DAMAGE, REPLACE AS REQ	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: UIRED - 8 LOCATIONS PER COACH RMM 12.2.3 FRA 238.303(C)(5)(IV)						
PM326 - INSPECT WHEELS AXLES AND COMPLETE WHEEL REPORT	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM327 - CHANGE BRAKE SHOES AS NEEDED	FORTESE - EMMANUEL FORTES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Work Order Detail

Work Order: **MBETCH-2020-4252**

PM328 - INSPECT COUPLERS AND COUPLER PARTS FOR HEIGHT AND CONDITION Procedure: RECORD ON CRM-3A RMM-3.2 FRA FRA-238.303(E)(3)	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM329 - INSPECT DRAFT GEAR - TIGHTNESS IN POCKET, CRACKING, Procedure: OTHER DAMAGES	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM637 - INSPECT WELDED BRACKETS USED TO ATTACH HANDRAILS ON BOMBARDI Procedure: ER COACHES (300` SÝ 600` S AND 1600` S) AND ON KAWASAKI COACHES (700-766Ý AND 1700` S). ALSO INSPECT WELDED BRACKETS AT UNCOUPLING LEVERS ON ALL KAWASAKI COACHES (700 SÝ 900 SÝ AND 1700 S).	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM331 - INSPECT ENTIRE CAR BODY FOR LOOSE , DEFECTIVE AND Procedure: MISSING PARTSÝ TO INCLUDE LUGGAGE RACKSÝ SEATSÝ SEAT ATTACHMENTS AND TRAPS RMM-1.4.1.A FRA FRA-238.307(C)(1)	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM332 - CLEAN FRESH AIR INTAKE SCREEN AT BOTH ENDS	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BB RA EF
PM333 - TEST AND LUBRICATE THE HANDBRAKE	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM334 - INSPECT FIRE EXTINGUISHER FOR PROPER GAUGE AND DATE AND VERI Procedure: FY PIN AND SEAL ARE INTACT FRA-238.307(C)(4)	CAPONEM - MICHAEL CAPONE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM335 - INSPECT FOR EMERGENCY PRY BAR IN PLACE	CAPONEM - MICHAEL CAPONE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM336 - LUBRICATE ALL MOVEABLE PARTS INCLUDING DOOR TRACKS AND Procedure: ROLLERS WITH DRY GRAPHITE	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RA BB EF
PM337 - REPLACE BAD-ODOR SPONGE AT BOTH ENDS OF CAR	FORTESE - EMMANUEL FORTES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM651 - INSPECT ALL SEATS, SEAT CUSHIONS AND SEAT ATTACHMENTS FOR BR Procedure: OKENÝ LOOSEÝ OR SHARP EDGES RMM-1.4.1.A FRA FRA-238.307(C)(1)	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM340 - VERIFY PROPER OPERATION OF EMERGENCY EXIT WINDOW Procedure: LOCATION AND RECORD	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R1ÝL2 TESTED PA
PM341 - CHECK FOR PROPER EMERGENCY SIGNAGE INTERIOR AND EXTERIOR AND Procedure: HIGH VOLTAGE SIGNS.	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM341.2 - INSPECT LOW LEVEL EXIT PATH MARKING (LLEPM) SIGNAGE	LITTLEP - PAUL LITTLEFIELD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Work Order: MBETCH-2020-4252

PM342 - FUNCTIONALLY TEST OPERATION OF POWER DOOR RELEASE MECHANISMS Procedure: BOTH INTERIOR AND EXTERIOR - POWER DOOR EQUIPPED COACHES ONLY.	CLEMENDA - DARRIN CLEMENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM575 - TEST ALL EMERGENCY VALVES (CONDUCTORS VALVES)	CLEMENDA - DARRIN CLEMENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM343 - PERFORM SINGLE CAR AIR TEST (RECORD ON CRM-3A) Procedure: NOT ON 180 DAY IN LINE INSPECTION EXCEPT IF CONDITIONS WARRANT	CLEMENDA - DARRIN CLEMENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM574 - REPLACE E-TYPE FILTER CARTRIDGE	CLEMENDA - DARRIN CLEMENT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM610 - CHECK FOR FIRST AID KIT AND REPLENISH AS NECESSARY	BOWMANB - BRITTANY BOWMAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM360 - CLEAN RETURN AIR FILTER GRILLS	BOWMANB - BRITTANY BOWMAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM454 - ----- ELECTRICAL -----	BOMENGE - ERIC BOMENGEN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM345 - INSPECT ALL UNDERSIDE CONDUIT AND ENCLOSURES FOR SIGNS OF Procedure: DAMAGE AND SEAL INTEGRITY	TINIM - MARCO TINI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM346 - CHECK UNDER CAR HIGH AND LOW VOLTAGE WIRING AND CABLING AND Procedure: ELECTRICAL EQUIPMENT FOR SIGNS OF DAMAGE OR OVERHEATING	TINIM - MARCO TINI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM347 - CHECK ALL WHEEL SENSORS AND CABLING FOR SIGNS OF DAMAGE AND Procedure: PROPER GAP	TINIM - MARCO TINI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM348 - INSPECT AND CLEAN ALL JUMPERS AND JUMPER RECEPTACLES	KRUSPES - STEPHEN KRUSPER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM349 - REPAIR OR REPLACE AS NEEDED ALL GROUND STRAPS AND CABLES	KRUSPES - STEPHEN KRUSPER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	REPLACE WITH P
PM712 - REPAIR AND REPLACE TRAP HEATERS (AS NEEDED)	KRUSPES - STEPHEN KRUSPER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	REPLACED WITH
PM350 - TEST ALL M.U. AND SIGNAL CIRCUITS	TINIM - MARCO TINI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM351 - CHECK ALL SWITCHES, RELAYS, CONTACTORS, SHUNT TRIPS, WIRING Procedure: CONNECTIONS AND CIRCUIT BREAKERS FOR PROPER OPERATIONSÝ SIGNS OF LOOSENING AND OVERHEATING.	TINIM - MARCO TINI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM352 - REPLACE AS NEEDED HEAD LIGHTS, BRAKE INDICATOR LIGHTS, CLASS Procedure: LIGHTSÝ NUMBER LIGHTSÝ STEP LIGHTSÝ EMERGENCY LIGHTS AND GENERAL LIGHTING.	BOMENGE - ERIC BOMENGEN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM353 - TEST WHEEL SLIDE SYSTEM FOR PROPER OPERATION AND SECURE CONT Procedure: ROL BOX	BOMENGE - ERIC BOMENGEN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Work Order Detail

Work Order: **MBETCH-2020-4252**

PM354 - CLEAN AND VACUUM ALL ELECTRICAL LOCKERS	ASHEG - GARY ASHE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM355 - CHECK FOR PROPER OPERATION OF H.V.A.C. CONTROLS AND THERMOST	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: ATS						
PM356 - CHECK THE EVAPORATOR BLOWER AND CONDENSER FANS FOR PROPER	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: WORKING CONDITION						
PM357 - REPLACE RETURN AIR AND FRESH AIR INTAKE FILTERS	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM358 - INSPECT ENTIRE H.V.A.C. SYSTEM FOR LOOSE OR MISSING COMPONEN	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: TS, LEAKS AND SIGNS OF EXCESSIVE VIBRATION						
PM359 - INSPECT COMPRESSOR FOR PROPER OIL LEVEL AND RECEIVER TANK FO	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: R PROPER REFRIGERANT LEVEL						
PM362 - TEST HIGH AND LOW VOLTAGE SYSTEMS FOR GROUNDS	TINIM - MARCO TINI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM363 - INSPECT AND REPAIR TRAP HEATERS AS NEEDED	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	INSPECTED ALL C
PM638 - TEST POWER DOOR OPERATION-POWER DOOR EQUIPPED COACHES ONLY	TINIM - MARCO TINI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
PM361 - CLEAN SURFACE OF CONDENSER COILS	ASHEG - GARY ASHE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5032 - ----- COACH CLEANER -----	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COACH CLEANING
PM5974 - REMOVE ALL TRASH	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5982 - REMOVE ALL TRASH FROM ELECTRICAL LOCKER AND FUSEE BOX	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5983 - WIPE DOWN ALL HANDLES GRAB HANDLES AND HANDHOLDS	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5984 - CLEAN SEAT BACKS BOTTOMS AND TABLES	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
PM5985 - SWEEP AND WET MOP FLOORS AND STAIRS	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
PM5986 - HAND WASH ALL TOILET ROOM SURFACES AND BUTTONS	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
PM5987 - CLEAN AC VENTS	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5988 - WIPE DOWN ALL CAB SURFACES CONTROLS AND DISPLAY SCREENS	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
PM5989 - CLEAN WINDSHIELD INSIDE AND OUTSIDE	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
PM5990 - CLEAN ALL WINDOWS	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5975 - REMOVE ALL GRAFFITI AND UNAUTHORIZED MATERIALS	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Test Results

Test ID: 638402	Test Date: 12/04/2020	Result: PASS	Comment:		
Component	Result	Numeric Value Found	Numeric Value Adjust	Qualitative Finding	Line Comment
EMERG WINDOW FAIL - EMERGENCY WINDOW FAILURE REASON EMERGENCY WINDOW - EMERGENCY WINDOW				R1	

Comments:

180 DAY PM

Internal Parts Cost:	
Internal Labor Cost:	\$2,124.13
Commercial Parts Cost:	\$0.00
Commercial Labor Cost:	\$0.00
Commercial Misc Cost:	\$0.00
Commercial Tax & Markup:	\$0.00
Equipment Usage Costs:	\$0.00
Overhead Costs:	\$0.00
Internal Total:	\$2,124.13
Commercial Total:	0.00
Work Order Total:	\$2,124.13

Work Order Detail for Asset 209

KEOLIS

Work Order: MBETCH-2020-4306 MR1				Warranty: NO	
Status: WORK FINISHED					
Dept: MECH - MECHANICAL					
Asset No: 209 - 1978 PULLMAN/MK BTC-1C COACH		Serial No: 209			
		License:			
Asset No:	Opened By:	ELAINE.DEROSA	Date In:	12/04/2020 19:18	
Eq Type: 1978-PULLMAN/MK-BTC-1C	Current Equip Status:	RELEASED	Date Due:	01/19/2021 19:18	
Job Type: REPAIR	Account:	254-530001	Opened:	12/04/2020 19:18	
Meter 1: 0.00	Reference WO:		Finished:	12/07/2020 21:02	
Meter 2: 0.00	Estimated Hours:	0.00	Closed:		
Shop Hrs: 0.30	User Hours:	0.00	Warranty Expire:		
Priority: M4 - EVALUATE NEXT OPPORTUNITY	Accident:				
Incident:	Project:				

Non Service Request Tasks				Warranty: NO	
Task: C17-000 - General Coach Tasks Group					
WAC: 02 - CLEANED		Reason: C - WEAR AND TEAR			
Work Class: 2 - NON-SCHEDULED		Comments:			
Task Notes					
PAUL.LITT 12-6-2020 8:01AM CLEAN COMM/MU COVERS, ALL 480V DECALS, ALL EMERGENCY RED BEADING					
BRITTNEY. 12-6-2020 11:50AM CLEANED -- BB / RA / EF					
Labor					
12/06/2020 11:50	Emp: BOWMANB - Brittany Bowman		Labor Hrs		Cost
			0.02		0.55
Parts					
		Qty Issued	Iss Price	Tax & Markup	Total Cost
2424007870-0 - PLATE; PLATE BOTTOM (PHENOLIC) OF DELAWARE CAR DIAPHRAGM		1.00	601.46	0.00	601.46
2457704998-0 - BLOCK; SHEAR BLOCK F/ DELAWARE CAR DIAPHRAGMS		2.00	170.50	0.00	341.00
2470301597-0 - SCREW; SCREW; THUMB; 18-8 STAINLESS; KNURLED HEAD F/200 BOMB VEST CEILING		2.00	4.00	0.00	8.00
2499900212-0 - SEAL; SEAL DOOR 84" LONG F/ BI-PARTING DOORS		3.00	160.67	0.00	482.00
249996339X-0 - BUMPER; BUMPER LATERAL BEEHIVE NAT. RUBBER		4.00	38.96	0.00	155.82
3604503411-0 - CLEANER; CLEANER GERMICIDAL AEROSOL CLEAR LIQUID		2.00	2.95	0.00	5.90
3604503411-0 - CLEANER; CLEANER GERMICIDAL AEROSOL CLEAR LIQUID		2.00	2.95	0.00	5.90
3616501311-0 - FIRST AID; FIRST AID KIT 10PW-FRA SEALED KEOLIS		1.00	14.99	0.00	14.99
3722510508-0 - OIL; OIL PENETRATING SPRAY CAN TRIZOL ORDER 12/CASE		2.00	6.84	0.00	13.68
Task: C17-210 - First Aid Kit					
Warranty: NO					
WAC: 12 - REPLACED		Reason: C - WEAR AND TEAR			
Work Class: 2 - NON-SCHEDULED		Comments:			
Task Notes					
PAUL.LITT 12-6-2020 9:58AM REPLENISH					
RICHARD./ 12-6-2020 11:43AM REPLACED RA BB EF					

Work Order Detail

Work Order: MBETCH-2020-4306

Task: P02-100 - Control Trainline (Mu)		Warranty: NO
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
STEVE.KRL 12-7-2020 1:42PM REPAIRED WITH PHILLIPS		
MARCO.TII 12-6-2020 9:54AM FROZEN MU AND COMM COVERS		
Task: P02-112 - 480 Train Line		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
STEVE.KRL 12-7-2020 1:44PM REPLACED ORINGS		
MARCO.TII 12-6-2020 9:55AM ADD O RINGS TO 480 CABLES		
Task: P02-113 - Communication Train Line		Warranty: NO
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
STEVE.KRL 12-7-2020 1:43PM REPAIRED WITH PHILLIPS		
STEVE.KRL 12-7-2020 2:01PM CLEANED AND LUBED		
MARCO.TII 12-6-2020 9:55AM CLEAN ALL MU AND COMM PINS		
Task: P03-111-0150 - Decelostat Wheel Slide F/Mbb; Pull; + Kawi		Warranty: NO
WAC: 01 - ADJUSTED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
STEVE.KRL 12-7-2020 1:53PM ADJUSTED ALL SENSORS WITH PHILLIPS		
STEVE.KRL 12-7-2020 2:04PM ADJUSTED ALL WHEEL SENSORS		
MARCO.TII 12-6-2020 9:56AM ADJUST ALL WHEEL SLIDE SENORS TO PROPER SETTING		
Task: P03-141-0030 - Hand Brake Application/Release Unit		Warranty: NO
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
PAUL.LITT 12-6-2020 9:58AM LUBE AND REPLACE MSSING WASHERS		
RICHARD./ 12-6-2020 11:44AM DONE RA BB EF		
Task: P05-111-0060 - Buffer Assembly Diaphragm		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:01AM #1 SHEAR MOUNTS WORN ,#2 END PHENOLIC PAD		
LEO.TARRI 12-7-2020 1:17PM REPLACED BOTH SHEAR MOUNTS #1 END #2PHENOLIC PAD		
Task: P05-114-0030 - Safety Equipment		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:09AM RESTOCK TOOL KIT WITH PRY BAR AND GLOW STICKS AND RESEAL		
BRITTNEY. 12-6-2020 12:50PM RESTOCKED -- BB / RA / EF		

Work Order Detail

Work Order: **MBETCH-2020-4306**

Labor	Labor Hrs	Cost
12/06/2020 12:50 Emp: BOWMANB - Brittany Bowman	0.00	0.00
Task: P05-114-0090 - Fire Extinguisher - Dry Powder		Warranty: NO
WAC: 12 - REPLACED Work Class: 2 - NON-SCHEDULED	Reason: C - WEAR AND TEAR Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:02AM REPLACE		
Task: P05-115-0450 - Seal; Door; Neoprene		Warranty: NO
WAC: 12 - REPLACED Work Class: 2 - NON-SCHEDULED	Reason: C - WEAR AND TEAR Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:03AM #1 R SIDE BODY END DOOR GASKET RIPPED, #2 END BOTH BODY END DOOR GASKETS RIPPED MICHAEL.C 12-7-2020 9:59AM REPLACED ALL		
Task: P05-115-0750 - Biparting Door Mechanism Assy		Warranty: NO
WAC: 09 - SERVICED Work Class: 2 - NON-SCHEDULED	Reason: C - WEAR AND TEAR Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:03AM LUDE AND ADJUST RICHARD./ 12-6-2020 11:44AM ADJUSTED AND LUBED RA BB EF		
Task: P05-115-1350 - Door Latch/Catch Assembly		Warranty: NO
WAC: 09 - SERVICED Work Class: 2 - NON-SCHEDULED	Reason: C - WEAR AND TEAR Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:04AM ADJUST AND TIGHTEN ALL DOORS, L2 FINGER LATCH LOOSE RICHARD./ 12-6-2020 11:45AM ADJUSTED/LUBED/MADE TIGHT RA BB EF		
Task: P05-116 - Trap Door Arrangement		Warranty: NO
WAC: 01 - ADJUSTED Work Class: 2 - NON-SCHEDULED	Reason: C - WEAR AND TEAR Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:04AM LUBE AND ADJUST ALL TRAPS RICHARD./ 12-6-2020 11:45AM DONE RA EF BB		
Task: P05-116-0690 - Trap Door Heater Assembly		Warranty: NO
WAC: 12 - REPLACED Work Class: 9 - MR-1 DEFECTS	Reason: C - WEAR AND TEAR Comments:	
Task Notes		
STEVE.KRL 12-7-2020 1:45PM REPAIRED WITH PHILLIPS MARCO.TII 12-6-2020 9:56AM TIE WRAP TRAP HEATER WIRE HANGING		
Task: P05-117-0180 - Coupler; Tightlock; New; Complete Cast Stl; Gr-C		Warranty: NO
WAC: 09 - SERVICED Work Class: 2 - NON-SCHEDULED	Reason: C - WEAR AND TEAR Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:05AM #1 COUPLER LOCK DOESN`T OPERATE CORRECTLY AND TELLTALE ISN`T CLEAR RICHARD./ 12-6-2020 11:46AM CLEANED/ADJUSTED RA BB EF		

Work Order Detail

Work Order: **MBETCH-2020-4306**

Task: P05-118-0060 - Uncoupling Rod		Warranty: NO
WAC: 01 - ADJUSTED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:06AM #2 ROD EYE CLEARANCE TOO CLOSE		
RICHARD./ 12-6-2020 11:46AM ADJUSTED RA BB EF		
Task: P08-114-0300 - Lateral Bumpers Assy		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
PAUL.LITT 12-6-2020 10:06AM L3,R4 LATERAL BUMBERS PEELING		
EMANUEL. 12-6-2020 12:53PM REPLACED LATERAL BUMBERS L3 L4 R3 R4		
Labor	Labor Hrs	Cost
12/06/2020 12:52 Emp: FORTESE - Emmanuel Fortes	1.32	36.30
12/06/2020 12:54 FORTESE - Emmanuel Fortes	0.03	0.83
Task: P09-115 - Hvac Controls		Warranty: NO
WAC: CR - REPAIRED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
GARY.ASHI 12-7-2020 2:14PM A-END TX WRAPPED		
DAVID.AN 12-6-2020 12:53PM A-END TX VALVE BULB SUCTION SIDE NEEDS TO BE WRAPPED		
Labor	Labor Hrs	Cost
12/07/2020 14:12 Emp: ASHEG - Gary Ashe	0.03	0.83
Task: P10-111 - Communication System Assembly		Warranty: NO
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
STEVE.KRI 12-7-2020 1:51PM SERVICED		
MARCO.TII 12-6-2020 9:57AM CONDUCTOR BUZZERS ARE LOW CANT HEAR GOOD		
Task: P12-111-0060 - 48 In. Dual Fluorescent Fixture		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
MARCO.TII 12-6-2020 9:57AM REPLACE ALL INTERIOR BULBS THAT ARE OUT		
Task: P12-111-0240 - Lens		Warranty: NO
WAC: 02 - CLEANED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
MARCO.TII 12-6-2020 9:58AM CLEAN INTERIOR AND VESTIBULE LENS		
Task: P12-121 - Interior Lighting Controls		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
MARCO.TII 12-6-2020 9:59AM VESTIBULE BULB OUT		



Work Order Detail

Work Order: **MBETCH-2020-4306**

Task: **P12-123-0090 - Main Lighting Switches 1 2 3 3P;120Vac; 30A** Warranty: **NO**

WAC: **12 - REPLACED** Reason: **C - WEAR AND TEAR**
 Work Class: **9 - MR-1 DEFECTS** Comments:

Task Notes

STEVE.KRI 12-7-2020 1:50PM REPLACED ALL 4 WITH PHILLIPS
 MARCO.TII 12-6-2020 9:59AM REPLACE 120V COVERS

Task: **P12-124 - Electrical Locker Lighting** Warranty: **NO**

WAC: **12 - REPLACED** Reason: **C - WEAR AND TEAR**
 Work Class: **9 - MR-1 DEFECTS** Comments:

Task Notes

STEVE.KRI 12-7-2020 1:46PM REPLACE BULB
 MARCO.TII 12-6-2020 10:00AM REPLACE ELECTRICAL LOCKER BULB OUT

Task: **P12-126 - Platform Lighting** Warranty: **NO**

WAC: **02 - CLEANED** Reason: **C - WEAR AND TEAR**
 Work Class: **9 - MR-1 DEFECTS** Comments:

Task Notes

STEVE.KRI 12-7-2020 1:47PM CLEANED ALL WITH PHILLIPS
 MARCO.TII 12-6-2020 10:00AM REPLACE PLATFORM BULBS OUT AND CLEAN LENS

Overhead
 Small Parts - Labor: **0.00** Tools: **0.00** Total Overhead Costs: **0.00**
 Small Parts - Parts: **0.00** Overhead Costs: **0.00**

Messages

Other Open Work Orders

Work Order Number	Type	Status	Scheduled	Reason	Service
Mbetch-2020-4252	Pm	Open		Btc180-Pm	
Mrdvyd-2020-4961	Repair	Pending		Mup	

Unit Is 124 Days Late For Inspection Service Coach-Cln-A - Due Date 08/05/2020
 Unit Is 124 Days Late For Inspection Service Coach-Cln-Ex - Due Date 08/05/2020
 Unit Is 124 Days Late For Inspection Service Coach-Cln-C - Due Date 08/05/2020

WO Notes

Comments:
 MR1

Internal Parts Cost:	\$1,628.75
Internal Labor Cost:	\$38.51
Commercial Parts Cost:	\$0.00
Commercial Labor Cost:	\$0.00
Commercial Misc Cost:	\$0.00
Commercial Tax & Markup:	\$0.00
Equipment Usage Costs:	\$0.00
Overhead Costs:	\$0.00
Internal Total:	\$1,667.26
Commercial Total:	0.00
Work Order Total:	\$1,667.26



EMERGENCY LIGHTING DURATION TEST RECORD

All Single-Level Coaches

90-DAY PM

180-DAY PM

Date Tested: 12/7/20 Time Test Began: (h) 3 (m) 30P Time Test Ended: (h) 4 (m) 30P

Coach #: 209 Employee #: 3325 Employee Signature: [Signature]

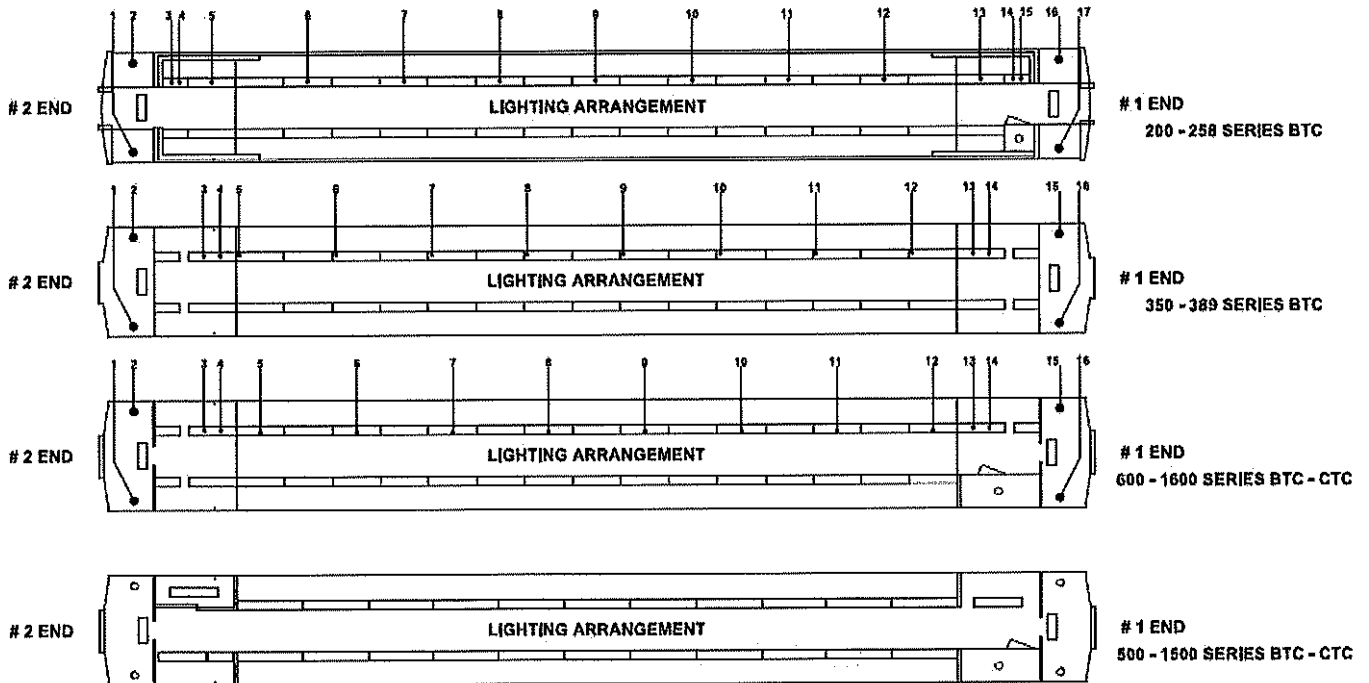
Ensure emergency ballasts have been charged for 30 minutes.

At the end of 60 minutes in operation, the emergency lights were (check one):

All emergency lighting is functioning properly.

Duration: 60 minutes
(How long lighting functioned)

Record any failures and ballast replacements on MR1 form.



COMMENTS: *LED

NOTE: Refer to instructions for performing tests on Page 2 if needed.

Keolis

MBTA COMMUTER RAIL
COACH WHEEL SLIDE REPORT

VEHICLE NO: 209

DATE: 12-7-20

LOCATION: CHA BET

WHEEL SLIDE CONTROL UNIT:

- Wheel Slide Control Unit System performance test
- Electronic panels, cards, wires, test lights and fuses
- Speed sensor resistance check
 - #1 941
 - #2 950
 - #3 950
 - #4 953

COMMENTS: _____

Signature: _____

[Handwritten Signature]

COMMENTS: _____

PNEUMATICS:

- A & B valve operation
 - A
 - B

Signature: _____

[Handwritten Signature]

SPEED SENSORS AND CABLES:

- Speed sensor cables
- Proper sensor
- Speed sensor gap
- gear

COMMENTS: _____

Signature: _____

[Handwritten Signature]

DEFERRED WORK

SEVERITY CODES

- A - HOLD CAR
- B - SCHEDULE FOR REPAIR
- C - MONITOR

RECOMMENDED SEVERITY CODE

ITEM	SEVERITY CODES	RECOMMENDED SEVERITY CODE

SYSTEM STATUS:

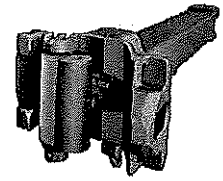
- FUNCTIONING
- NOT FUNCTIONING

Foreman Signature: _____

[Handwritten Signature: Paul Ravel]

KEOLIS

COACH COUPLER INSPECTION REPORT

Coach #: 209

For any maintenance and/or replacement

Task	Description	Other reference	Front	Rear
	Inspect Coupler to Include:			
1.	Visually Inspect Coupler for Proper Coupling, damage and Body Integrity	FRA-238.303(e)(3) APTA PR-M-RP-002-98	✓	✓
2.	Gauge Coupler for 31000 34100-1 34100-2A (if required) 32600 34101-4 44250-5	APTA PR-M-RP-002-98	✓	✓
3.	Inspect Coupler lock + lock drop/ and inspect for proper coupling CHECK "TELLTALE" IS CLEAR, NO OBSTRUCTION.	APTA PR-M-RP-002-98	✓	✓
4.	Inspect Coupler Anti-Creep+ Draft Gear for Excessive Wear, Loose or Cracked Welds in Pocket	FRA-238.303(e)(3) APTA PR-M-RP-002-98	✓	✓
5.	Coupler Lock Lift (Special Lock) lever and Operating Rod Eye Clearance.	APTA PR-M-RP-002-98	✓	✓
6.	Inspect Coupler Free Slack	APTA PR-M-RP-002-98	✓	✓
7.	Inspect Coupler Left Level Coupler as Required, Measure Height+ Record on Document# HRU-3	HRU-3		
8.	Perform Coupler Carrier Inspection	FRA-238.303(e)(3) APTA PR-M-RP-002-98	✓	✓
	Record all Defects on Form MR1		✓	✓

Date: 12-6-20Employee: Paul LittlefieldEmployee ID: 3887Employee Signature: Paul LittlefieldForeman: Paul RowlesForeman Signature: Paul Rowles

Keolis
Coach #: 209

COACH WHEEL REPORT



WHEEL MEASURE

Test Date: 12-6-20

POS.	FLANGE HEIGHT [LIMIT: 1 7/16"]	FLANGE THICKNESS [LIMIT: 1"]	RIM THICKNESS [LIMIT: 1 1/18"]	POS.	FLANGE HEIGHT [LIMIT: 1 7/16"]	FLANGE THICKNESS [LIMIT: 1"]	RIM THICKNESS [LIMIT: 1 1/18"]
L1	<u>1 1/16</u>	<u>1 7/64</u>	<u>2 1/16</u>	R1	<u>1 1/16</u>	<u>1 7/64</u>	<u>2</u>
L2	<u>1 1/16</u>	<u>1 7/64</u>	<u>2 1/8</u>	R2	<u>1 1/16</u>	<u>1 7/64</u>	<u>2 1/16</u>
L3	<u>1 1/16</u>	<u>1 7/64</u>	<u>2 1/16</u>	R3	<u>1 1/16</u>	<u>1 7/32</u>	<u>2</u>
L4	<u>1 1/16</u>	<u>1 7/64</u>	<u>2 1/16</u>	R4	<u>1 1/16</u>	<u>1 7/32</u>	<u>2</u>

Comments:

Freshly Trued

TOP OF RAIL CLEARANCE HEIGHT

COUPLER HEIGHT (MAX. 34 1/2" MIN. 32 1/2")		PILOT HEIGHT (MAX. 6" MIN. 4")		FLOOR HEIGHT (51 in ±1.0")	
FRONT	<u>33 7/8"</u>	FRONT	<u>N/A</u>	1R	<u>50 3/4"</u>
REAR	<u>34 3/16"</u>			2R	<u>51 3/16"</u>
				1L	<u>50 3/4"</u>
				2L	<u>50 3/4"</u>

AIR SPRING VERIFICATION INSPECTION

AIR SPRING HEIGHT				AIR SPRING PRESSURE	NO. 1 END <u>57</u> LBS.
L1 <u>9"</u>	L2 <u>8 7/8"</u>	R1 <u>8"</u>	R2 <u>8 3/4"</u>		

SINGLE CAR TEST PRESSURES

ASP		BCP	FULL SERVICE	EMERGENCY
DEFLATED	<u>Ø</u>	DEFLATED	<u>58</u>	<u>70</u>
AW0	<u>56</u>	AW0	<u>60</u>	<u>71</u>
AW3	<u>73</u>	AW3	<u>68</u>	<u>71</u>

Employee: David [Signature] #3949
 Foreman: Paul [Signature] #0738
 Officer: [Signature] #1309

Keolis

HVAC PM Inspection Sheet
For Kawasaki, Bombardier, Pullman, MBB Coaches Only

Coach No. 209

Electrician [Signature]

EMP. ID# 428

Date: 12-20

Carman [Signature]

EMP. ID# 3449

HVAC Electrician

209

- o Replace all Return and Fresh air filters A and B ends Completed ✓ DA
- o Inspect system for leaks Completed ✓
- o Inspect equipment for loose or missing hardware Completed ✓
- o Inspect equipment for proper grounding Completed ✓
- o Run diagnostic check, Verify proper operation of:
 - Cooling
 - Check operation of all contactors & overloads Verified ✓
 - Compressor(s), Blowers, & Condenser motors Verified ✓
 - Condenser & Evaporator Coils + Related Equipment Verified ✓
 - Heating
 - Contactors Overhead/Floor heat Verified ✓
 - Protective Heaters
 - Threshold heaters Verified ✓ DA
 - 800 series Door pocket heaters Verified N/A
 - Thermal overload protection
 - Kluxons Verified ✓ DA
 - Fault log
 - Review fault logs Completed ✓ DA
- o Conduct Acid test (Kit #QT2000) Verified Negative ✓ DA

Carman

- o Clean return air grille A and B ends Completed ✓
- o Replace Bad air sponge A and B ends Completed ✓
- o Clean all air vents along interior lights Completed ✓

KEOLIS

REFRIGERANT USAGE AND LEAK REPAIR RECORD

The EPA, in accordance with Section 608 of the CLEAN AIR ACT, requires record keeping of refrigerant usage and leak repairs for comfort cooling systems with a charge of 50 pounds or greater. All single level coaches have approximately a 55 pound charge. Kawasaki coaches have a 33 pound charge in each end. Any leak with an annual leak rate greater than 15% of system capacity must be repaired.

Coach 209 Date 12.7.20 Location Boston

Defect _____

Repair _____

Amount of Refrigerant recovered from system 0#
 Amount of recovered Refrigerant reinstalled in system _____
 Amount of new Refrigerant charged to system _____
 Amount of Refrigerant drawn from stores _____

Single-level 55# SYSTEM								Bi-level VSRS 33# SYSTEM								Alarm Bi-level Alte 13# Circuits	
#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
1	1.8	12	21.8	23	41.8	34	61.8	45	81.8	1	3.0	12	36.4	23	69.7	1	8
2	3.6	13	23.6	24	43.6	35	63.6	46	83.6	2	6.1	13	39.4	24	72.7	2	15
3	5.5	14	25.5	25	45.5	36	65.5	47	85.5	3	9.1	14	42.4	25	75.8	3	23
4	7.3	15	27.3	26	47.3	37	67.3	48	87.3	4	12.1	15	45.5	26	78.8	4	31
5	9.1	16	29.1	27	49.1	38	69.1	49	89.1	5	15.2	16	48.5	27	81.8	5	38
6	10.9	17	30.9	28	50.9	39	70.9	50	90.9	6	18.2	17	51.5	28	84.8	6	46
7	12.7	18	32.7	29	52.7	40	72.7	51	92.7	7	21.2	18	54.5	29	87.9	7	54
8	14.5	19	34.5	30	54.5	41	74.5	52	94.5	8	24.2	19	57.6	30	90.9	8	62
9	16.4	20	36.4	31	56.4	42	76.4	53	96.4	9	27.3	20	60.6	31	93.9	9	69
10	18.2	21	38.2	32	58.2	43	78.2	54	98.2	10	30.3	21	63.6	32	97.0	10	77
11	20.0	22	40.0	33	60.0	44	80.0	55	100.0	11	33.3	22	66.7	33	100.0	11	85
																12	92
																13	100

Has the system been charged in the past 12 months? _____
 If yes, what was the percentage of system capacity charged? _____
 What is the percentage of system capacity charged for this repair? _____
 Total percentage charged past 12 months _____

Gary P. O'Neil Technician
Paul R. R... .. Foreman

Copies of this form are to go into the coach file and into the Freon control file.

Keolis

MBTA COMMUTER RAIL
HVAC SYSTEM INSPECTION for Single Level Coaches

Bombardier Coaches 800-853, 1600-1652 (Falvey A/C System R-22)
Bombardier Coaches 350-388, (Stone Safety A/C System R-22)
MBB Coaches 500-632, 1500-1633 (Sigma A/C System R-22)
Pullman Coaches 200-257 (Stone Safety A/C System R-22)

	SIGNATURE	EMP. ID #
ELECTRICIAN	<u>Greg T. Ashe</u>	<u>428</u>
LABORER	<u>[Signature]</u>	<u>3949</u>
CARMEN	<u>[Signature]</u>	<u>[Blank]</u>
COACH CLEANER	<u>[Blank]</u>	<u>[Blank]</u>

CAR NUMBER: 209

DATE COMPLETED: 12-7-20

REQUIRED TOOLS: Oil Test Kit TA-1, Fluke Multieter with clamp-on Ammeter and thermocouple attachments, Megohmmeter, Electronic Leak Detector, HVAC Manifold Gauges, Bristle Brush, Rubber Mallet, Step ladder

WARNING: ALL SAFETY PRECAUTIONS AND EQUIPMENT TAG OUT PROCEDURES MUST BE STRICTLY ADHERED TO. FOLLOW SPECIFIC PROCEDURE INSTRUCTIONS FOR DETERMINING IF EQUIPMENT IS TO BE ENERGIZED PRIOR TO STARTING ANY TEST.

	PASS	FAIL	
1. Verify refrigerant level in lower sight glass of receiver tank is visible. If none visible refer to leak detection/repair procedure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DA
2. Inspect using visual and electronic leak detector for Freon leaks and traces of oil at pipe connections, fittings, valves, compressor, condenser coils, etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. Vacuum air intake compartment and check evaporator pan and drains for water flow.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. Wash return air grill.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. Check all motors and mounts for securement and deterioration/damage.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DA
6. Inspect air flow boots for integrity and proper attachment.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7. Inspect all contactors, that control compressor, condenser fan, heaters, and blower motors.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DA
8. Blow all control boxes with air to clean any debris from them.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Clean dirt and dust from temperature sensors and temperature control units. Check for proper securement.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10. Replace air filters and Bad Odor Sponges.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DA

PASS FAIL

- 11. Megger test compressor, condenser fan, and blower motors for grounds with Megohmmeter. DA
- 12. Test resistance values of all overhead (30-80 Ω's), and floor heaters (30-50 Ω's). Megger test from heater circuit to ground (>2MΩ). See Chart in appendix A (May through November only) DA
- 13. Test resistance values of all protective heaters (10 to 50 Ω's). Megger test from heater circuit to ground (>2MΩ).
- 14. Inspect and test operation of air flow switch and overhead heat thermostat (Klixon). DA
- 15. Inspect all motors and record current draw on all phases. DA

EVAPORATOR BLOWER

MOTOR #1
 Phase A 1.5
 Phase B 1.7
 Phase C 1.6

CONDENSER FAN MOTOR #1
 Phase A 2.3
 Phase B 2.5
 Phase C 2.4

COMPRESSOR MOTOR
 Phase A 24.1
 Phase B 25.7
 Phase C 25.0

EVAPORATOR BLOWER

MOTOR #2
 Phase A 1.6
 Phase B 1.6
 Phase C 1.6

CONDENSER FAN MOTOR #2
 Phase A 2.5
 Phase B 2.7
 Phase C 2.4

- 16. Check for proper rotation and air flow of condenser fan and blower motors.
 - 17. Check thermal expansion valve bulbs for proper securement.
A-end needs to be wrapped
- PUT HVAC SYSTEM ON AUTOMATIC AND CHECK FOR PROPER OPERATION**
- 18. Between Nov 1st through May 1st apply manifold gauges to high and low sides of system, apply diagnostic equipment (TEST BOX). Operate the system and record Freon pressures.

No. 1 END		No. 2 END	
Line valve THX	Modulation THX	Line valve THX	Modulation THX
Low Side	Low Side	Low Side	Low Side
Suction Pressure _____	Suction Pressure _____	Suction Pressure _____	Suction Pressure _____
Saturation Temp. (from chart) _____	Saturation Temp. (from chart) _____	Saturation Temp. (from chart) _____	Saturation Temp. (from chart) _____
Suction Temp _____	Suction Temp _____	Suction Temp _____	Suction Temp _____
SUPERHEAT _____	SUPERHEAT _____	SUPERHEAT _____	SUPERHEAT _____
Ambient Temperature _____		High Side Discharge Pressure _____	

PASS FAIL

19. Charge system as necessary to maintain Freon level 1/2 full on lower sight glass. (Nominal: 270 - 275 psig) DA

20. Cover condenser coils with cardboard to cause #2 condenser fan to operate. (Nominal: 260 psig) DA

START PRESSURE: 265#

21. Restrict compressor suction valve to lower system pressure, until shutdown. (Nominal: 20 to 25 psig) DA

SHUTDOWN PRESSURE: 7#

REOPEN SUCTION VALVE

22. Block condenser completely to cause system to go into modulation, if necessary heat coach prior to attempting modulation to cause a higher pressure. (Nominal: 380 - 400 psig) DA

MODULATION PRESSURE: 400#

Observe that modulation occurs and continues to operate in modulation until a pressure of 330 +/-10 psig is reached. (When modulation occurs you will see a sudden drop in pressure around 400 psig).

23. Block condenser completely to cause system to shutdown on high pressure, if necessary heat coach prior to attempting shutdown to cause a higher pressure. (Nominal: 425 - 430 psig) DA

SHUTDOWN PRESSURE: 425#

CAUTION: DO NOT CONTINUE IF PRESSURE GOES ABOVE 435 psig.

NOTE: Do not use discharge valve to raise pressure.

24. Record the loading pressure and the unloading pressure for each head. (place a heat load on the coach and use suction valve)

1st stage unloader LOADED: 63#
(Nominal: 63 - 65 psig)

1st stage unloader UNLOADED: 51#
(Nominal: 51 - 55 psig)

2nd stage unloader LOADED: 68#
(Nominal: 68 - 70 psig)

2nd stage unloader UNLOADED: 56#
(Nominal: 56 - 60 psig)

25. Check system for moisture at the filter dryer sight glass indicator, if indicator is pink in color, or the sight glass indicates moisture, checked failed. If failed change the filter/dryer. DA

26. Between Nov 1st through May 1st take oil sample (Acid Test) use test kit. Follow the oil sample kit instructions to determine condition of the compressor oil and record result.

DA
MARGINAL PASS FAIL N/A

27. Wash condenser compressor unit and associated piping.

PASS FAIL

- | | | |
|--|-------------------------------------|--------------------------|
| 28 Using the DTE (Diagnostic Test Equipment) raise the temperature in the coach so that Full Cool will be called for. (>75°F) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 29 Remove the DTE and observe that the coach responds properly moving from Full Cool to Partial Cool. Verify that the modulation valves deenergize. (Approx. 74°F) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 30 When the Coach gets cooler Reheat is energized. Verify 1st stage OH heat contactors close. (Approx. 72°F) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 31 The Coach should continue to cool until Partial cool drops out. Verify Compressor contactor is Open. (Approx. 71°F) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Reviewed by

FOREMAN

Paul Roub

MANAGER

[Signature]

APPENDIX A

Resistance Chart

200	OH - 1st Stage	75+- 2.5 Ω
	OH - 2nd Stage	47.5+- 2.5 Ω
	FH - 1st Stage	32.5 +- 2.5 Ω
	FH - 2nd Stage	Disabled
300	OH - 1st Stage	75+- 2.5 Ω
	OH - 2nd Stage	47.5+- 2.5 Ω
	FH - 1st & 2nd Stage	52.5 +-2.5 Ω
500	OH - 1st Stage	67.5 +- 2.5 Ω
	OH - 2nd Stage	35 +- 5 Ω
	FH - 1st & 2nd Stage	35 +- 5 Ω
600	OH - 1st Stage	57.5 +- 2.5 Ω
	OH - 2nd Stage	37.5 +- 2.5 Ω
	FH - 1st & 2nd Stage	32.5 +- 2.5 Ω