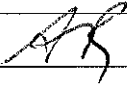
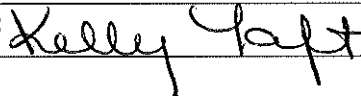




PM PACKET SIGN-OFF SHEET

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

Work Order #: 4164		Equipment ID: 233	
PM Service (ex. 45-Day, 92-Day, 1YR etc.):	180 day		
Date Work Order Opened: 11/13/20	Date Work Order Closed: 11/24/2020		
Confirm all work carried out in accordance with the PM requirements:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Work Deferred
If work Deferred, confirm that a Deferred work order has been raised:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Enter Deferred Work Order number below <div style="border: 1px solid black; padding: 2px; width: 100%;">Enter Deferred Work Order Number</div>
All required forms are attached and completed:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Today's Date: 11/23/20			
Manager/Supervisor Reviewing Work Order: (Please print clearly and sign)			
Name: A. Revert	Signature: 		
Supt reviewing Work Order: (Please print clearly and sign)			
Name: Kelly Taft	Signature: 		
Comments:			

**Work Order Detail
for Asset 233**

KEOLIS

Work Order: **MBETCH-2020-4164 180 DAY PM**
Status: **WORK FINISHED**

Dept: **MECH - MECHANICAL** Warranty: **NO**
Asset No: **233 - 1978 PULLMAN/MK BTC-1C COACH** Serial No: **233**
License:
Asset No: **1978-PULLMAN/MK-BTC** Opened By: **ANDREA.FORD** Date In: **11/13/2020 06:43**
Eq Type: **-1C** Current Equip Status: Date Due: **12/28/2020 06:43**
Job Type: **PM** Account: **254-530001** Opened: **11/13/2020 06:43**
Meter 1: **0.00** Reference WO: Finished: **11/23/2020 13:29**
Meter 2: **0.00** Estimated Hours: **0.00** Closed:
Shop Hrs: **25.13** 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: 12 - REPLACED	Reason:				
Work Class:	Comments:				
Labor			Labor Hrs		Cost
11/14/2020 13:31	Emp: PARKS - Steve Park		0.02		0.55
Parts		Qty Issued	Iss Price	Tax & Markup	Total Cost
2470300797-0 - MOUNT; MOUNT; AUX CONTACT SIDE		1.00	14.95	0.00	14.95
2470302012-0 - KIT; KIT; CONTACTOR; F/24 703 00753-N CONTACTOR ON TCU COACHES		1.00	88.98	0.00	88.98
2551404369-0 - BATTERY; BATTERY 1.5V "AA" ALKALINE		8.00	0.23	0.00	1.84
4727001053-0 - REFRIGERANT; REFRIGERANT GAS R-22 30 LB CYLINDER		2.00	709.55	0.00	1,419.10

Task: **BTC180-PM - Btc 180 Day Class Pm** Warranty: **NO**

WAC: Reason:
Work Class: Comments:

Task Notes

STEVE.PAF 11-15-2020 1:26PM CHECK VALVE IS STILL LEAKING BACK AFTER REPAIR, NEEDS TO BE REPAIRED OR REPLACED AGAIN. LEAK AT SITE GLASS AND PACKING NUT REPAIRED. UNDER SLIGHT NITROGEN PRESSURE.
STEVE.PAF 11-13-2020 8:29PM UNLOADERS REPLACED WITH P.R. DETERMINED THAT THE CHECK VALVE IS LEAKING BACK, UNDER NITROGEN PRESSURE.
STEVE.PAF 11-14-2020 1:30PM LEAKS FOUND RECEIVER TANK PACKING NUT, UPPER SITE GLASS. PIPERS REBUILT CHECK VALVE INTERNALS, REPLACED SITE GLASSES AND ADJUSTED PACKING NUT. NOT LEAK CHECKED WAITING FOR LEAK LOCK TO CURE.
DENNIS.AS 11-18-2020 4:15PM ELECTRICAL RECONNECT TRUCKS TO CAR BODY FOLLOWING ALL WHEEL C/O. MAINTENANCE TO FOLLOW.

Work Order Detail

Work Order: **MBETCH-2020-4164**

Labor		Labor Hrs	Cost
11/13/2020 14:05	Emp: BOWMANB - Brittany Bowman	7.18	197.45
11/13/2020 20:29	PARKS - Steve Park	5.43	149.33
11/14/2020 06:56	PARKS - Steve Park	0.02	0.55
11/14/2020 13:23	BOMENGE - Eric Bomengen	6.73	185.08
11/14/2020 13:32	PARKS - Steve Park	0.02	0.55
11/14/2020 13:58	RODRIGN - Neftali Rodriguez	7.08	194.70
11/15/2020 13:57	BOMENGE - Eric Bomengen	7.10	195.25
11/18/2020 14:19	RODRIGN - Neftali Rodriguez	79.47	2,185.43
11/18/2020 20:33	ASHED - Dennis Ashe	0.17	4.68
11/19/2020 13:29	BOMENGE - Eric Bomengen	30.43	836.83
11/19/2020 15:02	RODRIGN - Neftali Rodriguez	0.02	0.55
11/22/2020 07:36	PARKS - Steve Park	0.00	0.00

Parts	Qty Issued	Iss Price	Tax & Markup	Total Cost
2470300992-0 - GASKET; GASKET; U/O HVAC CHECK VALVE # 24 703 00892	1.00	1.56	0.01	1.56
2484800010-0 - GASKET; GASKET DISCHARGE VALVE	1.00	0.34	0.00	0.34

Task: **C17-000 - General Coach Tasks Group** Warranty: **NO**

WAC: **09 - SERVICED** Reason: **E - NOTED IN PM**
 Work Class: Comments:

Task Notes

ANDREY.R 11-22-2020 12:27PM OPEN BY MISTAKE

Labor		Labor Hrs	Cost
11/16/2020 06:58	Emp: TARRISL - Leo Tarris	16.77	461.18

Parts	Qty Issued	Iss Price	Tax & Markup	Total Cost
2470301045-0 - DECAL; DECAL; ``OUT OF SERVICE`` F/INOPERATIVE DOORS ON ALL COACHES	6.00	1.12	0.00	6.71
2470301251-0 - COVER; COVER; WEATHER RESISTANT RECPT F/ PULLMAN CARS ..SINGLE RECEPT	2.00	3.32	0.00	6.64
2470301354-0 - SEAL; SEAL; L/H; F/TOOL LOCKER ON ALL COACHES EXCEPT PULLMANS	10.00	3.13	0.00	31.30
2470301355-0 - SEAL; SEAL; R/H; F/TOOL LOCKER ON ALL COACHES EXCEPT PULLMANS	10.00	3.13	0.00	31.30
2488474814-0 - SIGN; SIGN "DANGER 480 VOLTS" EXTERIOR	10.00	3.95	0.00	39.50
3616501311-0 - FIRST AID; FIRST AID KIT 10PW-FRA SEALED KEOLIS	2.00	14.99	0.00	29.98
3771402428-0 - OIL; OIL; ULTRA GRADE 19; VACUUM PUMP; EDWARDS #H11025012	2.00	27.66	0.00	55.31

Task: **REFRIG-RR - Single Level Refrigerant Recovery And Repair** Warranty: **NO**

WAC: **12 - REPLACED** Reason:
 Work Class: Comments:

Task Notes

DAVID.AN 11-21-2020 8:54AM REPLACED #2 END NV TXV FILL & TEST
 DAVID.AN 11-21-2020 8:55AM CORRECTION MV TXV
 ANDREY.R 11-22-2020 12:27PM RICH PATCH WILL ADD THE FREON NUMBERS TOMORROW
 DAVID.AN 11-16-2020 8:45PM PIPER REPLACED INTERNALS OF CHECK VALVE * REPLACED DISCHARGE GASKET* REPAIRED LEAK AT DISCHARGE VALVE PACKING NUT
 LEAK CHECKED & ON VACUUM PUMP!!

Work Order Detail

Work Order: **MBETCH-2020-4164**

Labor		Labor Hrs	Cost
11/14/2020 13:30	Emp: PARKS - Steve Park	6.57	180.68
11/15/2020 06:51	RODRIGN - Neftali Rodriguez	0.00	0.00
11/18/2020 07:04	PARKS - Steve Park	72.18	1,984.95
11/22/2020 07:36	PARKS - Steve Park	0.02	0.55
11/22/2020 07:40	PARKS - Steve Park	0.07	1.93

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
Mrdvyd-2020-4978	Repair	Pending		Mup	
Unit Is 3 Days Late For Pm Service Btc180-Pm - Due Date 11/19/2020					
Unit Is 109 Days Late For Inspection Service Coach-Cln-A - Due Date 08/05/2020					
Unit Is 109 Days Late For Inspection Service Coach-Cln-Ex - Due Date 08/05/2020					
Unit Is 109 Days Late For Inspection Service Coach-Cln-C - Due Date 08/05/2020					

Work Order Detail

Work Order: **MBETCH-2020-4164**

PM Checklist

Task / Comment	Employee	Completed	N/A	Failed	SR	Comments
AC FILTER-30	Exception PM: No					
PM5840 - REPLACE RETURN AIR AND FRESH FILTERS	PARKS - STEVE PARK	<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	ROUNDSP - PAUL ROUNDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM110 - SHEET METAL WORKER	DIBARTN - NICOLAS DIBARTOLOMEO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM323 - CHECK UNDERCAR PIPING FOR SIGNS OF LOOSENING AND DAMAGE	DIBARTN - NICOLAS DIBARTOLOMEO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM330 - INSPECT ALL PIPING, VALVES, HOSES & FITTINGS THAT SHOW SIGNS Procedure: OF LEAKS ABRASIONS CRACKS HOLES HAVE MISSING OR BROKEN COMPONENTS OR ARE BELIEVED TO HAVE RESTRICTIONS.	DIBARTN - NICOLAS DIBARTOLOMEO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	REPLACED BOTH
PM338 - FLUSH AND CLEAN DRAINPAN UNDER EVAPORATOR COILS	DIBARTN - NICOLAS DIBARTOLOMEO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM339 - REPAIR ANY TORN OR MISSING PIPE INSULATION	DIBARTN - NICOLAS DIBARTOLOMEO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM720 - RECONNECT HOSES FROM CAR BODY TO TRUCKS	DIBARTN - NICOLAS DIBARTOLOMEO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
PM721 - AVAILABLE FOR LEAK REPAIR DURING SINGLE CAR AIR TEST	MENDONV - VIRGINIO MENDONCA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM117 - CARMAN	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM324 - INSPECT ALL BRAKE EQUIP INCL. VALVES TREAD BRAKES FOR PROPER Procedure: OPERATION SECUREMENT OF ALL BOLTS AND BUSHINGS AND COTTER KEYS	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM325 - INSPECT TRUCK FRAME AND TRUCK-MOUNTED COMPONENTS FOR PROPER 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.	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM817 - CHECK ALL EQUALIZER BEAM BUSHINGS FOR DAMAGE, REPLACE AS REQ Procedure: UIRED - 8 LOCATIONS PER COACH RMM 12.2.3 FRA 238.303(C)(5)(IV)	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM326 - INSPECT WHEELS AXLES AND COMPLETE WHEEL REPORT	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM327 - CHANGE BRAKE SHOES AS NEEDED	TARRISL - LEO TARRIS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Work Order Detail

Work Order: **MBETCH-2020-4164**

<p>PM328 - INSPECT COUPLERS AND COUPLER PARTS FOR HEIGHT AND CONDITION</p> <p>Procedure: RECORD ON CRM-3A RMM-3.2 FRA FRA-238.303(E)(3)</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM329 - INSPECT DRAFT GEAR - TIGHTNESS IN POCKET, CRACKING,</p> <p>Procedure: OTHER DAMAGES</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM637 - INSPECT WELDED BRACKETS USED TO ATTACH HANDRAILS ON BOMBARDI</p> <p>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).</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM331 - INSPECT ENTIRE CAR BODY FOR LOOSE , DEFECTIVE AND</p> <p>Procedure: MISSING PARTSÝ TO INCLUDE LUGGAGE RACKSÝ SEATSÝ SEAT ATTACHMENTS AND TRAPS RMM-1.4.1.A FRA FRA-238.307(C)(1)</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM332 - CLEAN FRESH AIR INTAKE SCREEN AT BOTH ENDS</p>	BOWMANB - BRITTANY BOWMAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM333 - TEST AND LUBRICATE THE HANDBRAKE</p>	BOWMANB - BRITTANY BOWMAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM334 - INSPECT FIRE EXTINGUISHER FOR PROPER GAUGE AND DATE AND VERI</p> <p>Procedure: FY PIN AND SEAL ARE INTACT FRA-238.307(C)(4)</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM335 - INSPECT FOR EMERGENCY PRY BAR IN PLACE</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM336 - LUBRICATE ALL MOVEABLE PARTS INCLUDING DOOR TRACKS AND</p> <p>Procedure: ROLLERS WITH DRY GRAPHITE</p>	ROSARIP - PATRICIA ROSARIO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM337 - REPLACE BAD-ODOR SPONGE AT BOTH ENDS OF CAR</p>	ROSARIP - PATRICIA ROSARIO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM651 - INSPECT ALL SEATS, SEAT CUSHIONS AND SEAT ATTACHMENTS FOR BR</p> <p>Procedure: OKENÝ LOOSEÝ OR SHARP EDGES RMM-1.4.1.A FRA FRA-238.307(C)(1)</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM340 - VERIFY PROPER OPERATION OF EMERGENCY EXIT WINDOW</p> <p>Procedure: LOCATION AND RECORD</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM341 - CHECK FOR PROPER EMERGENCY SIGNAGE INTERIOR AND EXTERIOR AND</p> <p>Procedure: HIGH VOLTAGE SIGNS.</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>PM341.2 - INSPECT LOW LEVEL EXIT PATH MARKING (LLEPM) SIGNAGE</p>	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work Order Detail

Work Order: **MBETCH-2020-4164**

PM342 - FUNCTIONALLY TEST OPERATION OF POWER DOOR RELEASE MECHANISMS Procedure: BOTH INTERIOR AND EXTERIOR - POWER DOOR EQUIPPED COACHES ONLY.	AYERR - RICHARD AYER	<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	AYERR - RICHARD AYER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM610 - CHECK FOR FIRST AID KIT AND REPLENISH AS NECESSARY	ROSARIP - PATRICIA ROSARIO	<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 -----	BRUNOR - RONALD BRUNO	<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	BRUNOR - RONALD BRUNO	<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	BRUNOR - RONALD BRUNO	<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	RODRIGN - NEFTALI RODRIGUEZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM348 - INSPECT AND CLEAN ALL JUMPERS AND JUMPER RECEPTACLES	RODRIGN - NEFTALI RODRIGUEZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM349 - REPAIR OR REPLACE AS NEEDED ALL GROUND STRAPS AND CABLES	RODRIGN - NEFTALI RODRIGUEZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM712 - REPAIR AND REPLACE TRAP HEATERS (AS NEEDED)	BOMENGE - ERIC BOMENGEN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ALL GOOD
PM350 - TEST ALL M.U. AND SIGNAL CIRCUITS	BRUNOR - RONALD BRUNO	<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.	BRUNOR - RONALD BRUNO	<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.	RODRIGN - NEFTALI RODRIGUEZ	<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	IBRAHIH - HAISM IBRAHIM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Work Order Detail

Work Order: **MBETCH-2020-4164**

PM354 - CLEAN AND VACUUM ALL ELECTRICAL LOCKERS	PARKS - STEVE PARK	<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	PARKS - STEVE PARK	<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	BRUNOR - RONALD BRUNO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM363 - INSPECT AND REPAIR TRAP HEATERS AS NEEDED	BOMENGE - ERIC BOMENGEN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ALL GOOD
PM638 - TEST POWER DOOR OPERATION-POWER DOOR EQUIPPED COACHES ONLY	BRUNOR - RONALD BRUNO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
PM361 - CLEAN SURFACE OF CONDENSER COILS	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5032 - ----- COACH CLEANER -----	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5974 - REMOVE ALL TRASH	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5982 - REMOVE ALL TRASH FROM ELECTRICAL LOCKER AND FUSEE BOX	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5983 - WIPE DOWN ALL HANDLES GRAB HANDLES AND HANDHOLDS	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5984 - CLEAN SEAT BACKS BOTTOMS AND TABLES	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5985 - SWEEP AND WET MOP FLOORS AND STAIRS	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5986 - HAND WASH ALL TOILET ROOM SURFACES AND BUTTONS	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5987 - CLEAN AC VENTS	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5988 - WIPE DOWN ALL CAB SURFACES CONTROLS AND DISPLAY SCREENS	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5989 - CLEAN WINDSHIELD INSIDE AND OUTSIDE	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5990 - CLEAN ALL WINDOWS	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5975 - REMOVE ALL GRAFFITI AND UNAUTHORIZED MATERIALS	PEAKJ - JARRETT PEAK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
REFRIG-RR	Exception PM: No					

Work Order Detail

Work Order: **MBETCH-2020-4164**

PM6018 - RECORD TEST RESULT FOR REFRIGERANT RECOVERED	REVERTA - ANDREY REVERT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RICH PATCH WILU
PM5926 - INITIAL TEST USING HOLDING CHARGE OF NITROGEN FOR 2 HOURS	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5927 - INITIAL TEST USING MICRON METER DOWN TO 500 MICONs	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM6019 - RECORD TEST RESULT FOR REFRIGERANT INSTALLED	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM5928 - FINAL VERIFICATION TEST USING ELECTRONIC REFRIGERANT DETECTOR	ANTONID - DAVID ANTONINO SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Procedure: OR SOAP						

Test Results

Test ID: 636846	Test Date: 11/13/2020	Result: PASS	Comment:		
Component	Result	Numeric Value Found	Numeric Value Adjust	Qualitative Finding	Line Comment
EMERG WINDOW FAIL - EMERGENCY WINDOW FAILURE REASON				R1	
EMERGENCY WINDOW - EMERGENCY WINDOW					
Test ID: 636979	Test Date: 11/13/2020	Result: PENDING	Comment:		
Component	Result	Numeric Value Found	Numeric Value Adjust	Qualitative Finding	Line Comment
REFRIGRR-1 - RECOVERED REFRIGERANT FROM SYSTEM: TANK 1					
REFRIGRR-2 - RECOVERED REFRIGERANT FROM SYSTEM: TANK 2					
REFRIGRR-3 - INSTALLED REFRIGERANT INTO SYSTEM: TANK 1		30.00		NEW TANK OR NO TANK	
REFRIGRR-4 - INSTALLED REFRIGERANT INTO SYSTEM: TANK 2		30.00		NEW TANK OR NO TANK	

WO Notes

Comments:

180 DAY PM

Internal Parts Cost:	\$1,727.51
Internal Labor Cost:	\$6,580.24
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:	\$8,307.75
Commercial Total:	0.00
Work Order Total:	\$8,307.75

**Work Order Detail
for Asset 233**

KEOLIS

Work Order: MBETCH-2020-4163 MR-1			
Status: WORK FINISHED			
Dept: MECH - MECHANICAL			Warranty: NO
Asset No: 233 - 1978 PULLMAN/MK BTC-1C COACH		Serial No: 233	
		License:	
Asset No:	Opened By:	ELAINE.DEROSA	Date In: 11/13/2020 06:18
Eq Type: 1978-PULLMAN/MK-BTC-1C	Current Equip Status:	CUT	Date Due: 12/28/2020 06:18
Job Type: REPAIR	Account:	254-530001	Opened: 11/13/2020 06:18
Meter 1: 0.00	Reference WO:		Finished: 11/22/2020 12:23
Meter 2: 0.00	Estimated Hours:	0.00	Closed:
Shop Hrs: 222.05	User Hours:	0.00	Warranty Expire:
Priority: M4 - EVALUATE NEXT OPPORTUNITY	Accident:		
Incident:	Project:		

Service Request Tasks	
Service Request: 233-3296778	
Symptom:	HVAC20 - HVAC PRE/SEASONAL INSPECTION
Comments:	HVAC- B END MOD. TX VALVE
Correction:	REPAIRED REPLACED #2 END MV TX VALVE
Service Request: 233-3525516	
Comments:	UPDATE LLEPM & EMERGENCY SIGNAGE ON 200 SERIES PULLMAN COACHES PER LINKED WORK INSTRUCTIONS.
Correction:	SERVICED
Task: C17-000 - General Coach Tasks Group Warranty: NO	
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR
Work Class: 2 - NON-SCHEDULED	Comments:
Task Notes	
RICHARD./11-15-2020 8:46AM REPLACE OOS DECALS, FIRST AID KIT, STENCIL/REPLACE WATCH YOUR STEP WARNINGS, GLOW STICKS, SEAL EMERGENCY TOOLS, CLEAN COMM/MU COVERS, CLEAN 480V STICKERS	
Labor	Labor Hrs Cost
11/15/2020 12:03 Emp: BOWMANB - Brittany Bowman	5.20 143.00
11/18/2020 12:49 BOWMANB - Brittany Bowman	5.75 158.13

Non Service Request Tasks

Work Order Detail

Work Order: **MBETCH-2020-4163**

Task: **C17-000 - General Coach Tasks Group** Warranty:

WAC: **12 - REPLACED** Reason:
 Work Class: Comments:

Task Notes

RICHARD.J 11-15-2020 8:46AM REPLACE OOS DECALS, FIRST AID KIT, STENCIL/REPLACE WATCH YOUR STEP WARNINGS, GLOW STICKS, SEAL EMERGENCY TOOLS, CLEAN COMM/MU COVERS, CLEAN 480V STICKERS

Parts	Qty Issued	Iss Price	Tax & Markup	Total Cost
2087802442-0 - BLOCK; BLOCK EQUALIZER TIMKEN	8.00	47.12	0.00	376.96
2400RRSA36-1 - SEAT; SEAT; FOLDING W/O CUSHION; COMPLETE F/900 KAWI	1.00	212.00	0.00	212.00
2451533614-0 - PLUG; PLUG ADJUSTING VESTIBULE TRAP DOOR	1.00	69.82	0.00	69.82
2457226711-0 - KEEPER; KEEPER LATCH MAGNETIC REAR BODY	2.00	141.51	0.00	283.01
2457703207-0 - CENTERPIEC; CENTERPIECE F/ DELAWARE CAR DIAPHRAGMS	1.00	117.50	0.00	117.50
2470300747-0 - SENSOR; SENSOR; SPEED 1000 OHM F/USE ON COACH AFTER CRASP UPGRADE	5.00	170.02	0.00	850.10
2470300892-0 - VALVE; VALVE; CHECK F/ 700 & 900 HVAC ON KAWI-S	1.00	203.21	0.01	203.21
2471400039-1 - AXLE; AXLE; ASSY; FOR 32" SINGLE LEVEL COACH CONTAINING AXLE; BEARINGS	4.00	5,187.00	0.00	20,748.00
2471400750-0 - TAPE; TAPE; LLEPM; 1 IN X 11.5 IN USED ON ROTEM 800 & 1800 SERIES COACHES	2.00	4.90	0.00	9.80
2471401700-1 - CRASH PAD; CRASH PAD ASSY., LH, #UYZ31-03-00-00L, USED AS PART OF 3P ARMREST--LH	1.00	154.84	0.00	154.84
2471404837-0 - DECAL; DECAL; COLLISION POST-EXIT; VERTICAL; ARROW POINTING RIGHT; HPPL; TKM-0052	4.00	8.82	0.00	35.28
2471404838-0 - DECAL; DECAL; COLLISION POST-EXIT; VERTICAL; ARROW POINTING LEFT; HPPL; TKM-0053	4.00	8.82	0.00	35.28
2471404844-0 - DECAL; DECAL; HPPL/LLEPM STRIP 1 IN. X 18 IN. F/MARKING DOORS; TKM-0054	12.00	7.56	0.00	90.72
2471404845-0 - DECAL; DECAL; "L" SHAPED; HPPL; 4.26 IN. X 4.72 IN. F/DOOR HANDLE SURROUND; TKM-0055	4.00	8.46	0.00	33.84
2471404872-0 - DECAL; DECAL; REVERVSE "L" SHAPED; HPPL; 4.26 IN. X 4.72 IN. F/DOOR HANDLE SURROUND; PULLMAN COACHES ONLY; TKM-0057	2.00	12.88	0.00	25.76
2484800010-0 - GASKET; GASKET DISCHARGE VALVE	1.00	0.34	0.00	0.34
249990324X-0 - KEEPER; KEEPER DOOR LATCH	2.00	46.73	0.00	93.47
2499926119-0 - CATCH; CATCH SIDE ENTRANCE DOOR MBTA KAWASAKI	2.00	63.35	0.00	126.69
2499960666-0 - PIN; PIN ADJUSTING F/TRAP DOOR ASSY ON	1.00	6.97	0.00	6.97
2499962100-0 - PAD; PAD WEAR FABREEKA	8.00	15.57	0.00	124.56
2499986004-0 - SIGN; SIGN EMERGENCY ACCESS # 4 MBTA COACH	4.00	6.30	0.00	25.21
24RRSA2253-1 - SEAT; SEAT BOTTOM; KAWASAKI 700 & PULLMAN; TRIPLE -- 53`` SHORT	2.00	205.36	0.00	410.71
2599903722-0 - PLATE; PLATE WEAR CENTER PLATE PULLMAN/MBB	2.00	126.79	0.00	253.58
2999938743-0 - WHEEL; WHEEL 32" S-PLATE DESIGN AAR-1B	8.00	1,165.94	0.00	9,327.48
3699901200-1 - EXTINGUISH; EXTINGUISHER; FIRE; DRY CHEM. 10 LB A:B:C	1.00	54.03	0.00	54.03
4779004977-0 - SEALANT; SEALANT GASKET CLEAR	1.00	3.87	0.00	3.87

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

RONALD.B 11-14-2020 9:54AM MU + COMM PINS NEED CLEANING --- COVERS NEED OIL = ALL --- SOME COVERS FROZEN

Work Order Detail

Work Order: **MBETCH-2020-4163**

Task: P02-111-0090 - Locomotive Control Train Line Housing Cover		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
RONALD.B 11-14-2020 9:56AM 480V RED HOUSING RECEPT NEED HEAT SHRINK = 1R		
Task: P02-112-0060 - Jumper Cable-Black Screw Base		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
RONALD.B 11-14-2020 9:57AM 480V SCREW BASE RECEPT, NEEDS HEAT SHRINK = 1L + 1R		
Task: P03-132-0210 - Main Reservoir Hose		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
RICHARD./11-15-2020 9:07AM (P) #1 END MR HOSE IS LOOSE IN BRACKET, REPLACE ALL END HOSES (CHAFFED)		
Task: P03-142-0060 - Sheave; Handbrake		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
RICHARD./11-15-2020 9:08AM REPLACE ALL MISSING HANDBRAKE WASHERS UNDERNEATH CAR ANTHONY. 11-15-2020 1:29PM REPLACED MISSING HARDWARE		
Task: P05-114-0090 - Fire Extinguisher - Dry Powder		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
RICHARD./11-15-2020 9:03AM MISSING MANUFACTURER SERVICE TAG BRITTNEY. 11-15-2020 2:06PM REPLACED EXTINGUISHER		
Labor	Labor Hrs	Cost
11/15/2020 14:06 Emp: BOWMANB - Brittany Bowman	0.00	0.00
Task: P05-115 - Manually Operated Doors - End Door		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
RICHARD./11-15-2020 9:00AM #1 BODY END DOOR GASKET IS TORN L/S. #2 BODY END DOOR IS BINDING, HOLD OPEN CATCH IS NOT HOLDING EMANUEL. 11-15-2020 12:30PM BODY END DOOR CATCH WAS BROKEN ALONG WITH A BENT TRACK. REPLACED CATCH AND STRAIGHTENED TRACK ON BODY END 2 E.F FELIPE.FLC 11-18-2020 5:13PM FF, MJ, RA		

Work Order Detail

Work Order: **MBETCH-2020-4163**

Task: **P05-116 - Trap Door Arrangement** Warranty: **NO**

WAC: **CR - REPAIRED** Reason: **C - WEAR AND TEAR**
 Work Class: **2 - NON-SCHEDULED** Comments:

Task Notes

RICHARD./11-15-2020 8:53AM ALL TRAPS ARE SLAMMING DOWN, NEED ADJUSTMENT, R-1 TRAP STEP LATCH IS LOOSE/MISSING
 HARDWARE
 EMANUEL. 11-15-2020 12:31PM AJUSTED TRAPS ON THE #2 END
 FELIPE.FLC 11-18-2020 5:13PM FF, MJ, RA

Task: **P05-117-0180 - Coupler; Tightlock; New; Complete Cast Stl; Gr-C** Warranty: **NO**

WAC: **CR - REPAIRED** Reason: **C - WEAR AND TEAR**
 Work Class: **2 - NON-SCHEDULED** Comments:

Task Notes

RICHARD./11-15-2020 8:51AM #2 COUPLER R/S SHANK PLATE WELDS ARE BROKEN AND PLATE IS SEPARATING
 FELIPE.FLC 11-16-2020 7:52PM FF, DC

Parts	Qty Issued	Iss Price	Tax & Markup	Total Cost
2499925713-0 - ROD; ROD LEVER RIGHT UNCOUPLER INTERIOR	1.00	165.48	0.00	165.48

Task: **P05-117-0540 - Coupler Carrier Spring Assy.** Warranty: **NO**

WAC: **12 - REPLACED** Reason: **C - WEAR AND TEAR**
 Work Class: **2 - NON-SCHEDULED** Comments:

Task Notes

RICHARD./11-15-2020 9:05AM #1 END SPRINGS EXTREMELY WEAK
 DELRICO.C 11-20-2020 9:30PM REPLACED- DG MC

Task: **P05-118-0240 - Coupler Operating Rod Bracket** Warranty: **NO**

WAC: **CR - REPAIRED** Reason: **C - WEAR AND TEAR**
 Work Class: **2 - NON-SCHEDULED** Comments:

Task Notes

RICHARD./11-15-2020 8:48AM #1 AND #2 END EXCESSIVE ROD EYE CLEARANCES, #2 END TELLTALE NOT CLEARING WHEN
 KNUCKLE CLOSED
 FELIPE.FLC 11-18-2020 5:14PM FF, MJ, RA

Task: **P05-200 - Signage** Warranty: **NO**

WAC: **12 - REPLACED** Reason: **C - WEAR AND TEAR**
 Work Class: **2 - NON-SCHEDULED** Comments:

Task Notes

RICHARD./11-15-2020 9:04AM R1 DOOR EMERGENCY ACCESS STICKER MISSING
 BRITTNEY. 11-15-2020 2:05PM REPLACED

Labor	Labor Hrs	Cost
11/15/2020 14:05 Emp: BOWMANB - Brittany Bowman	2.03	55.83

Task: **P05-213-0390 - Seat; Spring Bottom F/All Mbta Coaches** Warranty: **NO**

WAC: **12 - REPLACED** Reason: **C - WEAR AND TEAR**
 Work Class: **2 - NON-SCHEDULED** Comments:

Task Notes

RICHARD./11-15-2020 9:02AM R4 FLIP SEAT BOTTOM TORN
 R11,R19 TRIPLE SEAT BOTTOM TORN
 R12 CRASH PAD TORN



Work Order Detail

Work Order: **MBETCH-2020-4163**

Task: P07-111-1650 - Side Door - 1R + 2L		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 2 - NON-SCHEDULED	Comments:	
Task Notes		
RICHARD./ 11-15-2020 8:58AM R1 DOOR HANDLE IS A PINCH HAZARD WHEN CLOSED, NOT 2" OF CLEARANCE, L-1 DOOR STOP INSIDE WALL IS LOOSE, L2 DOOR IS DRAGGING, R2 DOOR HANDLE IS LOOSE, HOLD OPEN CATCH IS NOT WORKING		
EMANUEL. 11-15-2020 12:36PM TIGHTENED THE ROLLER SCREWS ON #2 END REPLACED THE CATHES AND DOOR KEEPERS ON THE #2 END		
Task: P09-119 - Trap Door Heaters		Warranty: NO
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
NEFTALI.R 11-19-2020 3:00PM DONE		
RONALD.B 11-14-2020 9:58AM TRAP HEATER WIRE NEEDS TIE WRAP AND BOX COVER IS BROKEN = 2L		
Task: P12-111-0120 - 2 Lamp Emergency Light Fixture		Warranty: NO
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
NEFTALI.R 11-19-2020 3:00PM DONE		
RONALD.B 11-14-2020 10:02AM EMERGENCY LIGHT FIXTURE IS PUSHED UP THRU = 2R ---- LIGHT NOT WORKING = FRONT VESTIBULE RT --- ALL LIGHTS NEED TO BE AIMED TOWARDS DOOR AND ISLE		
Task: P12-111-0210 - Vestibule Lighting		Warranty: NO
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
NEFTALI.R 11-19-2020 3:01PM DONE		
RONALD.B 11-14-2020 10:03AM VESTIBULE + STEP LIGHT LENS NEED CLEANING = BOTH ENDS		
Task: P12-111-0630 - Lens Clear F/ 48 Passenger Lighting		Warranty: NO
WAC: 02 - CLEANED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
RONALD.B 11-14-2020 10:04AM ALL INTERIOR LIGHT LENS NEEDS CLEANING AND BULB CHANGE AS NEEDED		
ERIC.BOMI 11-14-2020 1:21PM CLEANED AND RELAMPED WITH N. RODRIQUEZ		
Task: P12-122-0120 - Cb Prot.Htr.;Platf.Ltg;Lckr.Lt.;Conven.Outlets;Door Op.		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
RONALD.B 11-14-2020 10:05AM 2- 120V OUTLET COVERS BROKEN		
Task: P12-123 - Switches		Warranty: NO
WAC: 09 - SERVICED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
RONALD.B 11-14-2020 10:08AM PRESSURE SWITCH -A- COVER IS BROKEN		

Work Order Detail

Work Order: **MBETCH-2020-4163**

Task: P12-125 - Exterior Lighting		Warranty: NO
WAC: 12 - REPLACED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
RONALD.B 11-14-2020 10:06AM BRAKE INDICATOR LIGHTS NEED CHANGING = BOTH SIDES ALL		
Task: P12-126 - Platform Lighting		Warranty: NO
WAC: 02 - CLEANED	Reason: C - WEAR AND TEAR	
Work Class: 9 - MR-1 DEFECTS	Comments:	
Task Notes		
RONALD.B 11-14-2020 10:07AM PLATFORM LIGHT LENS NEED CLEANING = ALL --- BULB 2L OUT		

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-2020-4164	Pm	Open		Btc180-Pm	
Mrdvyd-2020-4978	Repair	Pending		Mup	
Unit Is 3 Days Late For Pm Service Btc180-Pm - Due Date 11/19/2020					
Unit Is 109 Days Late For Inspection Service Coach-Cln-A - Due Date 08/05/2020					
Unit Is 109 Days Late For Inspection Service Coach-Cln-Ex - Due Date 08/05/2020					
Unit Is 109 Days Late For Inspection Service Coach-Cln-C - Due Date 08/05/2020					

Test Results					
Test ID: 637448	Test Date: 11/18/2020	Result: IN PROGRESS	Comment:		
Component	Result	Numeric Value Found	Numeric Value Adjust	Qualitative Finding	Line Comment
REFRIGRR-1 - RECOVERED REFRIGERANT FROM SYSTEM: TANK 1					
REFRIGRR-2 - RECOVERED REFRIGERANT FROM SYSTEM: TANK 2					
REFRIGRR-3 - INSTALLED REFRIGERANT INTO SYSTEM: TANK 1		30.00		NEW TANK OR NO TANK	
REFRIGRR-4 - INSTALLED REFRIGERANT INTO SYSTEM: TANK 2		30.00		NEW TANK OR NO TANK	

WO Notes

Comments:

MR-1

Internal Parts Cost:	\$33,838.51
Internal Labor Cost:	\$356.96
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:	\$34,195.47
Commercial Total:	0.00
Work Order Total:	\$34,195.47

Keolis

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

Coach No. 233

Electrician RP/SP/D4

EMP. ID# 13875

Date: 11/17/20

Carman [Signature]

EMP. ID# [Signature]

HVAC Electrician

- o Replace all Return and Fresh air filters A and B ends Completed ✓
- 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 ✓
FH2 Disabled
 - Protective Heaters
 - Threshold heaters Verified ✓
 - 900 series Door pocket heaters Verified N/A
 - Thermal overload protection
 - Klixons Verified ✓
 - Fault log
 - Review fault logs Completed ✓
- o Conduct Acid test (Kit #QT200) Verified Negative ✓

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 ✓

EMERGENCY LIGHTING DURATION TEST RECORD

All Single-Level Coaches

90-DAY PM

180-DAY PM

Date Tested: 11/14 Time Test Began: (h) 10 (m) 00 Time Test Ended: (h) 11 (m) 00

Coach #: 233 Employee #: 3902 Employee Signature: [Signature]

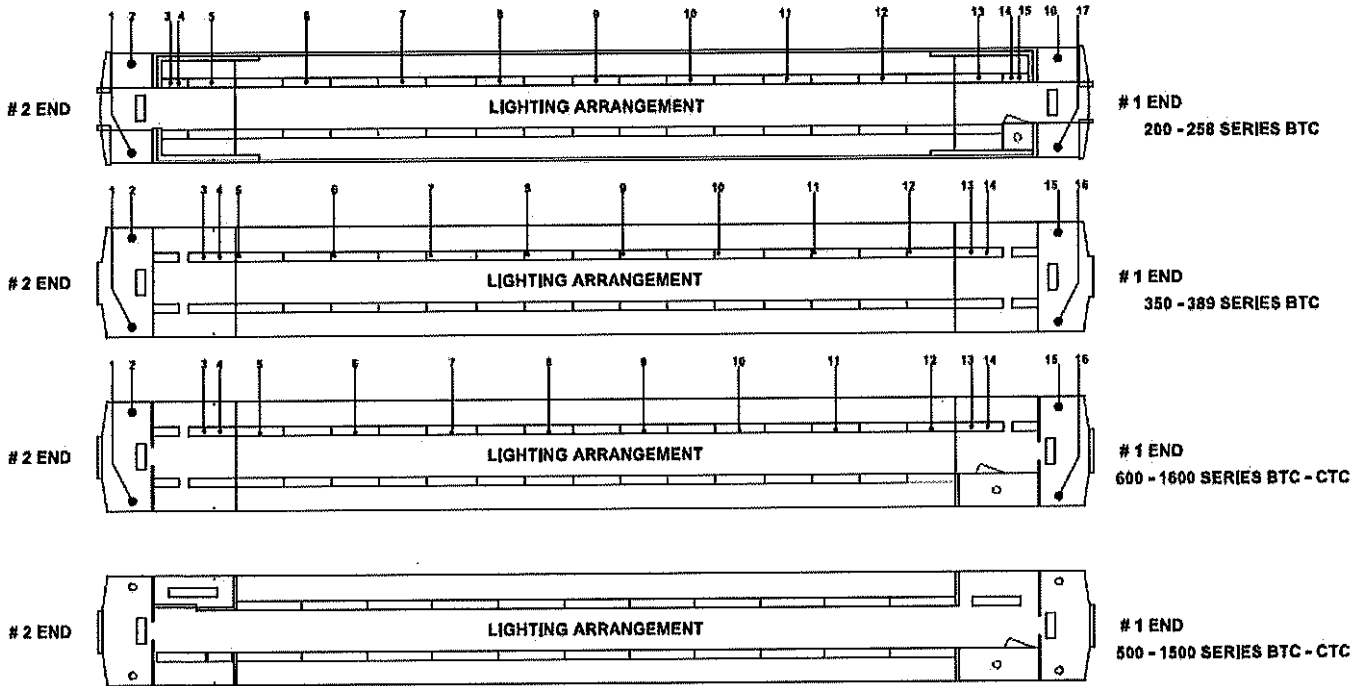
Ensure emergency ballasts have been charged for 30 minutes.

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

All emergency lighting is functioning properly.

Duration: 100 minutes
(How long lighting functioned)

Record any failures and ballast replacements on MR1 form.

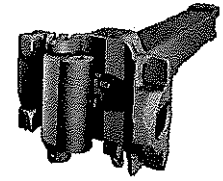


COMMENTS: TCSA PASS

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

KEOLIS

COACH COUPLER INSPECTION REPORT

Coach #: 233

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: 11/15/2020Employee: R. AyerEmployee ID: 3441Employee Signature: [Signature]Foreman: Paul RowlettForeman Signature: [Signature]

Keolis

MBTA COMMUTER RAIL
COACH WHEEL SLIDE REPORT

VEHICLE NO: 233

DATE: 11/18/20

LOCATION: CH

WHEEL SLIDE CONTROL UNIT:

Wheel Slide Control Unit System performance test

COMMENTS: _____

Electronic panels, cards, wires, test lights and fuses

Speed sensor resistance check

- #1 961
- #2 960
- #3 956
- #4 969

Signature: _____

COMMENTS: _____

PNEUMATICS:

A & B valve operation

- A _____
- B _____

Signature: _____

COMMENTS: _____

SPEED SENSORS AND CABLES:

Speed sensor cables

Proper sensor

Speed sensor gap

gear

Signature: _____

COMMENTS: _____

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: _____

Done
* All wheel c/o *

<u>Keolis</u>	COACH WHEEL REPORT	
Coach #: <u>233</u>		

WHEEL MEASURE

Test Date: 10/22/2020

POS.	FLANGE HEIGHT <small>[LIMIT: 1 7/16"]</small>	FLANGE THICK <small>[LIMIT: 1"]</small>	RIM THICK <small>[LIMIT: 1 1/16"]</small>	POS.	FLANGE HEIGHT <small>[LIMIT: 1 7/16"]</small>	FLANGE THICK <small>[LIMIT: 1"]</small>	RIM THICK <small>[LIMIT: 1 1/16"]</small>
L1	1 1/16	1 17/64	2 5/8	R1	1 1/16	1 17/64	2 5/8
L2	1 1/16	1 17/64	2 5/8	R2	1 1/16	1 17/64	2 5/8
L3	1 1/16	1 17/64	2 5/8	R3	1 1/16	1 17/64	2 5/8
L4	1 1/16	1 17/64	2 5/8	R4	1 1/16	1 17/64	2 5/8

THERMAL CRACKS NOTED (LOCATION) _____

COMMENTS: All wheel change out New

TOP OF RAIL CLEARANCE HEIGHT

COUPLER HEIGHT <small>(MAX. 34 1/2" MIN. 32 1/2")</small>		PILOT HEIGHT <small>(MAX. 6" MIN. 4")</small>		FLOOR HEIGHT <small>(51 In±1.0")</small>	
FRONT	33.5	FRONT	N/A	1R	51 3/4
REAR	34.5			2R	51 1/2
				1L	50 3/4
				2L	51 1/2

AIR SPRING VERIFICATION INSPECTION

AIR SPRING HEIGHT				AIR SPRING PRESSURE	NO. 1 END <u>55</u> LBS.
L1	9	L2	9		
				R2	9 1/16

SINGLE CAR TEST PRESSURES

ASP		BCP	FULL SERVICE	EMERGENCY
DEFLATED	Ø	DEFLATED	57	64
AWO	57	AWO	58	68
AWS	73	AWB	68	81

Wheels / heights
after change

Employee: me 3945

Foreman: Archey Lewis 1977

Officer: Kelly Yaff

Keolis	COACH WHEEL REPORT	
Coach #: <u>233</u>		

WHEEL MEASURE

Test Date: 11/15/2020

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	1 1/8	1 17/64	1 1/8	R1	1 3/16	1 7/32	1 3/16
L2	1 1/8	1 17/64	1 3/16	R2	1 3/16	1 17/64	1 3/16
L3	1 3/16	1 17/64	1 1/8	R3	1 3/16	1 17/64	1 1/8
L4	1 1/8	1 17/64	1 3/16	R4	1 1/8	1 17/64	1 1/4

Comments: L-3 wheel thermal cracks
* All wheel clo to do *

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		FRONT		1R _____	1L _____
REAR				2R _____	2L _____

AIR SPRING VERIFICATION INSPECTION

AIR SPRING HEIGHT				AIR SPRING PRESSURE	NO. 1 END <u>55</u> LBS.
L1 _____	L2 _____	R1 _____	R2 _____		

SINGLE CAR TEST PRESSURES

ASP		BCP	FULL SERVICE	EMERGENCY
DEFLATED	<u>Ø</u>	DEFLATED	<u>57</u>	<u>64</u>
AW0	<u>57</u>	AW0	<u>58</u>	<u>68</u>
AW3	<u>73</u>	AW3	<u>68</u>	<u>81</u>

(pressures only) Dan [Signature]

Employee: _____
 Foreman: Andrew [Signature] # 1027
 Officer: Kelly [Signature]

All wheel clo to do + heights.

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 233 Date 11/17/20 Location BET CH

Defect SIGHT GLASSES LEAKING. CHECK VALVE INTERNAL COMPONENTS
Replaced. Discharge gasket Replaced. Discharge valve Packing NOT
repaired

Repair all repairs made

Amount of Refrigerant recovered from system _____
Amount of recovered Refrigerant reinstalled in system 0.0
Amount of new Refrigerant charged to system 60.0 #
Amount of Refrigerant drawn from stores 60.0 #

UKN See Patch

Single-level 55# SYSTEM								BI-level VSR3 33# SYSTEM							
#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
1	1.8	12	21.8	23	41.8	34	61.8	45	81.8	1	3.0	12	36.4	23	69.7
2	3.6	13	23.6	24	43.6	35	63.6	46	83.6	2	6.1	13	39.4	24	72.7
3	5.5	14	25.5	25	45.5	36	65.5	47	85.5	3	9.1	14	42.4	25	75.8
4	7.3	15	27.3	26	47.3	37	67.3	48	87.3	4	12.1	15	45.5	26	78.8
5	9.1	16	29.1	27	49.1	38	69.1	49	89.1	5	15.2	16	48.5	27	81.8
6	10.9	17	30.9	28	50.9	39	70.9	50	90.9	6	18.2	17	51.5	28	84.8
7	12.7	18	32.7	29	52.7	40	72.7	51	92.7	7	21.2	18	54.5	29	87.9
8	14.5	19	34.5	30	54.5	41	74.5	52	94.5	8	24.2	19	57.6	30	90.9
9	16.4	20	36.4	31	56.4	42	76.4	53	96.4	9	27.3	20	60.6	31	93.9
10	18.2	21	38.2	32	58.2	43	78.2	54	98.2	10	30.3	21	63.6	32	97.0
11	20.0	22	40.0	33	60.0	44	80.0	55	100.0	11	33.3	22	66.7	33	100.0

Alstom BI-level Alte 13# Circuits	
#	%
1	8
2	15
3	23
4	31
5	38
6	46
7	54
8	62
9	69
10	77
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 _____
RP / SP / DA
Technician _____ Foreman Archie

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

MBTA COMMUTER RAIL
HVAC SYSTEM INSPECTION for Single Level Coaches

Bombardier Coaches 600-653, 1600-1652 (Faiveley A/C System R-22)
 Bombardier Coaches 350-389, (Stone Safety A/C System R-22)
 MBB Coaches 500-532, 1500-1533 (Sigma A/C System R-22)
 Pullman Coaches 200-257 (Stone Safety A/C System R-22)

ELECTRICIAN	SIGNATURE <u>RP/SP/DA</u>	EMP. ID # <u>12895</u>	CAR NUMBER: <u>233</u>
LABORER	_____	_____	DATE COMPLETED: <u>11/17/20</u>
CARMEN	_____	_____	
COACH CLEANER	_____	_____	

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.
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	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"/>
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"/>
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. <u>TIPS REPLACED BKW SIDE CAR REPLACED</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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. <u>Replace air filters and Bad Odor Sponges.</u> <u>OK SP</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	PASS	FAIL

- 11. Megger test compressor, condenser fan, and blower motors for grounds with Megohmmeter.
- 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)
- 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).
- 15. Inspect all motors and record current draw on all phases.

EVAPORATOR BLOWER

MOTOR #1	CONDENSER FAN MOTOR #1	COMPRESSOR MOTOR
Phase A <u>1.6</u>	Phase A <u>23</u>	Phase A <u>22.5</u>
Phase B <u>1.5</u>	Phase B <u>24</u>	Phase B <u>24.3</u>
Phase C <u>1.6</u>	Phase C <u>24</u>	Phase C <u>24.0</u>

EVAPORATOR BLOWER

MOTOR #2	CONDENSER FAN MOTOR #2
Phase A <u>1.5</u>	Phase A <u>2.5</u>
Phase B <u>1.4</u>	Phase B <u>2.4</u>
Phase C <u>1.6</u>	Phase C <u>2.5</u>

- 16. Check for proper rotation and air flow of condenser fan and blower motors.
- 17. Check thermal expansion valve bulbs for proper securement.

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 _____
High Side			
Ambient Temperature _____	Discharge Pressure _____		

PASS FAIL

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

20. Cover condenser coils with cardboard to cause #2 condenser fan to operate. (Nominal: 250 psig)

START PRESSURE: 265 #

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

Pumpdown
SHUTDOWN PRESSURE: 13 #

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)

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)

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: 64 #
(Nominal: 63 - 65 psig)
2nd stage unloader LOADED: 69 #
(Nominal: 68 - 70 psig)

1st stage unloader UNLOADED: 53 #
(Nominal: 51 - 55 psig)
2nd stage unloader UNLOADED: 59 #
(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. *Filter Dryer changed*

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.

MARGINAL PASS FAIL N/A

27. Wash condenser compressor unit and associated piping.

PASS FAIL

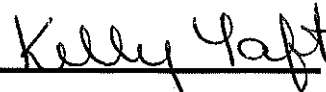
- 28 Using the DTE (Diagnostic Test Equipment) raise the temperature in the coach so that Full Cool will be called for. (>75°F)
- 29 Remove the DTE and observe that the coach responds properly moving from Full Cool to Partial Cool. Verify that the modulation valves deenergize. (Approx. 74°F)
- 30 When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

Reviewed by

FOREMAN



MANAGER



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