

Item	Description of Defect	Anticipated Repair	Hours	Material	Cost \$	Description of Repair	Initials
1	Front coupler has excessive lateral free swing. Measures 10.25" (8" max).	Apply shimming to stop area.	0.5	Shim plate X" x X" x X"			
2	Rear coupler has excessive lateral free swing. Measures 8.5" (8" max)	Apply shimming to stop area.	0.5	Shim plate X" x X" x X"			
3	Rear coupler carrier installed backward.	Remove and reapply properly.	1.0	Bolt, 3/4" x 4" - 12 (2)	\$20		
4	Wheel diameter of wheelset #1 differs from left to right by 3/16" (229.73(a))	True larger left wheel to match smaller right wheel		Wheel true			
5	Wheel diameter of wheelset #2 differs from left to right by 2/16".(229.73(a))	Turn larger left wheel to match smaller right wheel.		Wheel true			
6	L#1 outer brake strap bent from derailment	Replace one brake strap.	0.5	63" two hole brake strap			
7	L#1 brake guide damaged beyond repair.	Replace brake guide	0.2				
8	L#1 missing sand pipe and nozzle.	Replace sand pipe and rubber sand nozzle.	0.4				
9	L#1 sand hose dry and cracked.	Replace sand hose	0.1	Sand hose, 5 ft.			
10	#1 forward gear case clamp missing, Gear case loose.	Apply gear case clamp and tighten	0.4				
11	L#1 support bearing critically low on oil.	Remove wick and inspect. Reassemble correctly and fill with oil	0.5				
12	R#1 support bearing oil low.	Add oil.	0.1				
13	R#1 support bearing oil drain plug leaking.	Remove plug, tape, and reinstall plug	0.1				
14	#1 traction motor ground wire broken.	Apply new lug to wire and attach.	0.2	Wire lug	\$1		
15	#1 traction motor bottom brush cover does not seal, case bent.	Bend cover to match case and apply new gasket.	0.5	TM Cover seal	\$20		
16	#1 traction nose support has a 5/16" gap.	Add 1/4" shim.	0.2	Shim plate 1/4" x X" x X"			
17	#1 traction motor cooling duct is split in several places.	Replace duct	0.5	TM Cooling duct			
18	R#1 sand hose split and repaired with duct tape.	Replace sand hose.	0.1	5' sand hose			
19	R#1 aft pedestal binder bolt loose.	Tighten existing bolt or replace bolt if required	0.1		\$0		
20	R#1 brake guide damaged beyond repair.	Replace brake guide.	0.2	Brake guide			
21	Right front car body to truck hose in dry condition. (3Q07)	Replace with new hose.	0.1	Hose, carbody to truck			
22	Left front car body to truck hose in dry condition. (3Q07)	Replace with new hose.	0.1	Hose, carbody to truck			
23	#2 traction motor missing bolt in bottom brush cover.	Replace 1/2" x 1" bolt with new	0.1	Bolt, 1/2" x 1" (1ea)	\$3	Bolt replaced	RMD 4/18/16
24	#2 traction motor cables have a broken car body clamp.	Weld on new stud and replace missing clamp	0.2				
25	#2 traction motor support has a 7/16" gap.	Add a 3/8" shim.	0.2	Shim plate 3/8"xX'xX'			
26	L#2 support bearing critically low on oil.	Remove wick and inspect. Reassemble correctly and fill with oil.	0.5				
27	R#2 support bearing critically low on oil.	Remove wick and inspect. Reassemble correctly and fill with oil.	0.5				
28	#3 traction motor upper cover missing gasket.	Replace gasket.	0.1				
29	#3 traction motor gear case lube low. Gear near dry.	Add 3 bags of TMGL lube	0.1	Gear lube TMGL (3ea)			
30	#3 traction motor bottom brush cover missing three bolts.	Replace three 1/2" x 1" bolts. Two holes stripped out.	0.5	Bolts, 1/2"x1" (3ea)	\$10		
31	Rear truck cut out cock improper. Does not allow for FRA BC leakage test.	Replace with proper valve with threaded vent.	0.3	Valve, truck cut out (1ea)			
32	R#3 traction motor missing one car body lead clamp.	One missing clamp.	0.1	Clamp, TM lead (1ea)			
33	R#3 support bearing low on oil.	Add oil to R#3 support bearing	0.1				
34	L#3 support bearing low on oil.	Add oil to L#3 support bearing	0.1				
35	R#3 brake guide damaged.	Heat and bend brake guide into compliance	0.2	None	\$0		
36	#3 traction motor nose support has excessive clearance. (11/16")	Apply 5/8" shim.	0.1				
37	Right rear truck to car body hose dry (3Q07)	Replace hose	0.1	Truck brake hose (1ea)			

38	Left rear truck to car body hose dry (3Q07)	Replace hose	0.1	Truck brake hose (1ea)			
39	R#4 outer brake strap bent from derailment.	Replace one brake strap. (63" two hole brake strap)	0.5	Brake strap (1ea)			
40	R#4 brake guide damaged beyond repair.	Replace brake guide.	0.2	Brake guide. (1ea)			
41	R#4 sand hose dry and cracked.	Replace sand hose	0.1	Sand hose, 5 ft.			
42	L#4 sand hose dry, cracked and broken. Repaired with duct tape.	Replace sand hose	0.1	Sand hose, 5 ft.			
43	L4 missing sand rubber nozzle.	Replace sand nozzle.	0.1	Sander nozzle (1ea)			
44	R4 sand rubber nozzle worn out.	Replace sand nozzle.	0.1	Sander nozzle (1ea)			
45	#4 traction motor nose support has excessive clearance. (4/16")	Apply 1/8" shim	0.1				
46	#4 gear case needs lube. Gear near dry.	Add 3 bags of TMGL to #4 TM gear case	0.1				
47	R#4 support bearing low on oil.	Add oil to R#4 support bearing	0.1				
48	L#4 support bearing low on oil.	Add oil to L#4 support bearing.	0.1				
49	Front left walkway station base weld is cracked/loose.	Remove, clean up weld area, Weld back in place.	0.5	None	\$0		
50	Left front, left side, vertical handrail, bottom bolt loose.	Heat and straighten hand rail, then tighten bolt. Replace if needed	0.2				
51	MU walkway hinge seized in up position.	Apply penetrant oil and heat. Replace hinge if needed.	0.1	None	\$0	Applied penetrant and worked free. No further action needed	RMD 4/19/16
52	Front MU dummy receptacle cover is broken.	Replace front MU cover.	0.2	MU cover. (1ea)			
53	Left front cut lever has a broken bolt in a support.	Remove broken bolt and apply new bolt.	0.1	Bolt, 1/2"x1.5" (1ea)	\$3		
54	Front Act, BC EQ, MR hoses dry/cracked. Dated 3Q07)	Replace MU hoses (BP is OK 3Q2014)	0.3	MR hose (2ea) ACT/BCEQ hoses (4ea)			
55	Front bail clearance requires adjustment.	Heat and bend into compliance.	0.2	None	\$0		
56	Right front vertical hand hold, left side, has a loose bolt at the bottom.	Heat and bend hand hold up to level and tighten bolt	0.3	None	\$0		
57	Right front step sheet damaged from previous cornering.	Cut out damaged piece and weld in repair	2.0	Metal			
58	Right front MU valve handles seized and require replacement.	Replace all RF MU handles.	0.2	MR handle (1ea) ACT/BCEQ handles (2ea)			
59	Left front step sheet damaged beyond repair in past cornering incident.	Remove entire step sheet and replace with new material. Weld step mounting angles onto new sheet. Mount step light bracket and light assembly onto back of step sheet.	12.0	12ea Step bolts , 1ea Metal sheet (Drwg1) 3ea Angle iron, 1.5" x 1.5" x 7.25" \$	xxxxxxx3 50 xxxxxxx xxxxxxx		
60	Left front, middle step, back right bolt loose.	Replace bolt after repair	0.1	None	\$0		
61	Left front, switching step, front right bolt loose.	Replace bolt after step sheet is repaired.	0.1	None	\$0		
62	Left front MU valve handles seized and require replacement.	Replace all LF MU handles.	0.2	MR handle (1ea) ACT/BCEQ handles (2ea)			
63	Right rear MU valve handles seized and require replacement.	Replace all RR MU handles.	0.2	MR handle (1ea) ACT/BCEQ handles (2ea)			
64	Left rear MU valve handles seized and require replacement.	Replace all LR MU handles.	0.2	MR handle (1ea) ACT/BCEQ handles (2ea)			
65	Left rear switching step has loose / broken bolts.	Replace two bolts with new.	0.5	Step bolts (2ea)			
66	Adjust left rear vertical handholds to preferred clearances.	Heat and adjust.	0.1				
67	Rear MU walkway locks seized.	Apply penetrant and work free.	0.1	None	\$0	Applied penetrant and worked free. No further action needed	RMD 4/19/16
68	Rear MU dummy receptacle cover seized.	Apply penetrant and work free.	0.1	None	\$0	Applied penetrant and worked free. No further action needed	RMD 4/19/16
69	Rear Act, BC EQ, MR hoses dry/cracked. Dated 3Q 2007)	Replace MU hoses (BP is OK 3Q12014)	0.3	MR hose (2ea) ACT/BCEQ hoses (4ea)			
70	Right side fuel tank sight glass tube stained and difficult to see.	Replace glass (Approximately 23") (See Item #72)	0.5		\$0		
71	Right side fuel tank glass protective metal is missing.	Replace protective metal	0.1				

72	Right side fuel sight glass valve leaks when opened.	Replace with kit that includes valve, seals and glass	0.3	Kit, sight glass			
73	Conductor's door bottom hinge tearing away from door.	Weld tear	0.2				
74	Car body door latch L7 top, L9 top, and R4 bottom do not latch securely,	Adjust latches as needed to repair.	0.2	None	\$0	Adjusted latches as needed.	RMD 4/19/16
75	Auxiliary generator commutator is rough from being run with short brushes.	Remove brushes and inspect brush holders to ensure none have dropped	1.0	None	\$0	Removed upper left brushes. Brushes are nearly new in length and well seated to the grooved commutator. All brush holders have adequate clearance. No further action needed.	RMD 4/19/16
76	Left hand blower inlet to air filter duct missing 3ea 5/8" bolts. Allows unfiltered air into engine blower.	Apply missing bolts in blower inlet duct	1.0	Bolts, 5/8" x 1 1/2" (3ea)		Applied new bolts in open holes.	RMD 4/19/16
77	Right hand blower inlet to air filter duct missing 3ea 5/8" bolts. Allows unfiltered air into engine blower.	Apply missing bolts in blower inlet duct	1.0	Bolts, 5/8" x 1 1/2" (3ea)		Applied new bolts in open holes.	RMD 4/19/16
78	Two panels, engine room side of HV cabinet have missing or unreadable High Voltage Warning decals.	Apply warning labels (After paint if engine room is to be painted.)	0.1	Decal, HV Warning (2ea)			
79	Ballast plate under cab floor shifted against hand brake chain.	Reposition ballast plate and block to prevent recurrence.	0.1				
80	Cooling fan has very noisy operation.	Remove fan, shutters, grill, belts. Replace fan bearing assembly. Reapply other material.	16.0	Bearing assembly			
81	Auxiliary generator shaft, lower guard mounts broken.	Remove guard, Weld on new mounting ears. Reattach to blower duct to blower base bolts.	4.0				
82	Main generator brushes near new. 4ea brushes shorter than the rest.	Replace 4 shorter brushes	0.5	Brush, Main gen (4ea)	\$48		
83	Load regulator cover gasket leaking.	Replace cover gasket	0.1	Gasket (1ea)	\$5		
84	Load regulator hoses not secured.	Secure hoses with wire ties.	0.1	Wire ties	\$0		
85	Front sander relay valve wiring conduit broken and hanging on wires.	Replace flexible conduit.	0.5	1/2" flexible conduit (3ft)	\$3		
86	Auxiliary generator access hatch has 50% broken bolts.	Heat and remove broken bolt fragments, tap holes, replace bolts	4.0	Bolt 3/8"x1" (20ea)	\$40		
87	Fuel preheater inoperative. One water line removed, port capped. Other water line deteriorated.	Remove or replace	4.0	Fuel preheater and hoses			
88	Engineer's cab heater has short brushes.	Replace brushes.	0.2	Brush, cab heat (2ea)			
89	Engineer's cab heat motor resistor has been hot. Evaluate on running checks.	Replace resistor if needed.	0.2	None	\$0	Resistor performed as intended. No defect.	RMD 4/18/16
90	Conductor's side cab heat fan motor missing.	Replace motor with new	0.4				
91	Exhaust false stacks have many broken bolts. (60%)	Heat and remove broken bolt fragments, tap holes, replace bolts	5.0	Bolt, 3/8"x1" (60ea)	\$120		
92	Engineer's front window is extremely clouded and obstructs visibility.	Replace engineer front window	1.0	Window, Engineer.			
93	Engineer's seat is worn.	Replace engineer seat.	1.0	Seat, Engineer (1ea)			
94	Water leak @ left bank water pump weep hole.	Replace water pump with rebuilt	6.0	Water pump, LB 40004236-R (Hatch and Kirk PN)		Replaced water pump with rebuilt	RMD 4/15/16
95	Water leak @ water drain valve handle and thru valve.	Replace 1 1/2" ball valve	1.0	1 1/2" ball valve		Replaced 1 1/2" ball valve.	RMD 4/15/16
96	Water leak @ forward cab heat drain valve leaks thru.	Replace 1/2" ball valve	0.2	1/2" ball valve		Replaced 1/2" ball valve.	RMD 4/15/16
97	Aft cab heat drain valve plugged and will not drain.	Replace 1/2" ball valve	0.5	1/2" ball valve		Replaced 1/2" ball valve and plumbing.	RMD 4/15/16
98	Water leak @ Engineer's cab heater, outside rubber hose.	Replace rubber hose and clamps to outside connections	1.5	Hose, 1 1/4"x5" (1ea)	\$2	Replaced hose to outside connection. Leak checked	RMD 4/15/16
99	Water line to air compressor blew off during testing.	Add new clamp.	0.2	Hose clamp, 1/1/4" (2ea)	\$2	Applied extra clamp to both ends of hose	CDW

100	Water leak @ hose from temperature switch manifold to air compressor head.	Replace leaking hose	0.1	Hydraulic hose 3/8"x2" (local manufacture) (1ea)			
101	All wiper blades missing or deteriorated.	Replace all wiper blades	0.4	Wiper blade, 20" (6ea)			
102	Conductor's rear window wiper arm linkage broken.	Replace all broken hardware and rods,	0.3				
103	Engineer's rear window wiper arm linkage broken.	Replace all broken hardware and rods.	0.3				
104	Front center windows (2ea) not FRA glazing.	Change out for FRA glazing if required	2.0				
105	Conductor's side of battery box is rusting out.	Apply patch over open area	2.0				
106	Car body mounted hand rail on right side is improperly repaired.	Replace with original pipe or Change hand rail to modern walkway mounted hand rail on stations.	3.0				
107	Batteries very weak. One lug nearly burned in two. Have had to jump start every time.	Replace 8ea 4cell batteries.	4.0	P8CH23PR (8ea) (Powerrail PN)			
108	Air brake valves well beyond date. Several valves last serviced 19 years ago (04/97).	Replace all air brake equipment	10.0				
109	Air brake fails to dump correctly during break-in-two. #8 vent valve opens, but air brake fails to enter emergency. Then resets on its own.	Troubleshoot and repair.	1.5				
110	Cab wall by front door has loose metal plating. (From accessing car body mounting bolts)	Tack plate in place after bolt application (See 113)	0.5				
111	Both fire extinguishers are out of date.	Replace fire extinguishers	0.1	Service fire extinguishers (2ea)			
112	Flashing missing around radiators.	Fabricate and install flashing.	5.0	Flashing			
113	Numerous bolts missing between car body and frame from car body removal during engine replacement.	Replace missing hardware.	4.0	Bolt, 1/2"x2" (60ea)	\$180		
114	Battery field resistor shows signs of overheating /overcurrent.	Troubleshoot excitation circuit.	8.0				
115	Previous repair of air compressor water line continues to fail even with additional clamps.	Replumb air compressor water line with metal pipe	6.0	1" black pipe and fittings			
116	Cab fan missing hardware	Replace missing hardware.	0.1	Apply #10 screw	\$1		
117	Rubber hose from radiator cap overflow dry and leaks.	Replace rubber hose.	0.3				
118	Wire #6 loose and off SHS roller switch.	Replace wire end.	0.1	wire end fast on	\$1	Replaced wire end.	RMD 4/21/16
119	LH engine blower has a minor oil leak	Noted	0.0	Noted	\$0	Noted	RMD 4/21/16
120	Oil leak at ice cream box strainers and cover.	Reseal top of ice cream box	0.5	Seals			
121	Homemade environmental tank is not secured and is awkward.	Secure and check for alternate placement.	1.0				
122	Heavy positive low voltage ground.	Troubleshoot and locate cause of ground	2.0				
123	Air compressor intercooler relief valve popping.	Troubleshoot cause and repair	3.0				
124	Load meter reads 600A at 48mv						
125	Engineer's front wiper motor motor wrong degree.	Replace wiper motor	1.0	Wiper motor			
126	Conductor's front wiper hose smashed.	Replace wiper motor hose	0.2	Hose, wiper motor (1ea)			
127	Conductor's front wiper motor inoperative.	Replace wiper motor.	1.0	Wiper motor			
128	Wheel slip light inoperative from either MU.	Troubleshoot and repair.	1.0				
129	Engineer's cab heat fan works but is noisy.						
130	Rear number light inoperative.	Replace bulb	0.1	Light bulb, 50W (1ea)		Replaced 50W light bulb	RMD 4/21/16
131	Conductor's side radiator shutter blade linkage not connected.	Reconnect shutter blade.	0.3				

132	Both front head lights inoperative. (no power)	Troubleshoot and repair.	1.0				
133	Front head light bezel broken	Replace bezel	0.2	Head light bezel			
134	Unloader line to air compressor leaking.	Replace leaking line.	0.3				
135	Front number light inoperative. (no power)	Troubleshoot and repair.	0.3				
136	Inoperative control stand bulbs (7ea)	Replace bulbs	0.2				
137	Conductor's overhead light inoperative.	Repair wiring.	0.2	wire end fast on	\$1	Replaced wire end.	RMD 4/21/16
138	Engineer's overhead light inoperative.	Replaced bulb	0.2	30W light bulb			
139	Oil leak at lube oil cooler vent line over water expansion tank.	Replace oil vent line	0.5				
140	Step lights inoperative (LF, LR, RF)	Replace bulbs	0.2	3ea 50W bulbs		Replaced 3ea 50W bulbs	RMD 4/21/16
141	Left side ground light inoperative	Remove broken bulb and replace with new.	0.3	50W bulb (1ea)			
142	Engine room light inoperative. (new bulb)	Troubleshoot and repair.	0.5				