

Equipment tested on 132

Device	Test on car	Test at lab (off car)	Test Process Used	Test Results	Notes
Megger motors	x		Megger traction motors @ 1KV	Low	Readings are suspected to be low due to excessive water intrusion from the fire department response. #1 - 20 Megohm #2 - 16 Megohm #3 - 2.5 Megohm #4 - 0.4 Megohm Will perform additional inspection once over a pit.
ground switch	X		Manually activate the ground switch magnet valve and witness the ground switch contacting the Pantograph	Pass	Pantograph, ground switch, and magnet valve are physically located on mate car 131
THR	X		See attached procedure	Pass	THR and PLR are tested together. THR tripped at 1 min 45 seconds (extended time due to 21deg F)
PLR	X		See attached procedure	Pass	THR and PLR are tested together. PLR tripped at 4,2 Amps
Main Transformer fuse F1 F2 F3 F4 Continuity	x		Continuity test with DMM	Pass	
Ground Resistor GRA 3-6 (500 ohms)	x		Resistance test with DMM	Pass	
Ground Resistor GRD 1-4 (1000 ohms)	x		Resistance test with DMM	Pass	
	x		Diode test with DMM	Pass	
reverser test, air and jumper	x		Visual inspection Mechanical operation	Pass (no air)	Control air was not available due to piping damage. Reverser was operated manually with no exceptions taken.
TRF	x		Visual inspection Electrical operation with power supply	Pass	
tf1 tf2 fuses	x		Continuity test with DMM	Pass	
prp 4	x		Diode test with DMM	Pass	
EFC	x		Visual inspection Electrical operation with power supply	Pass	
M and B contactors	x		Visual inspection Electrical operation with power supply	Pass	
AGR Test	x (Mechanical)	X (Electrical) Frazer Lab	Bench Test for functionality	Pass Mechanical Fail Electrical	2/28/25 JR/BW AGL indicator lights only reset switch is open Mechanism does not trip (was recieved in normal position) Work halted on this device

inspect cam controller, position 17 only R1 closed		X Frazer Lab	Remove from car and inspect on rebuild stand.  2/27/25 JR/BW - The Cam was placed on a stand at Frazer Lab for visual evaluation. See notes for findings.	Fail  (Excessive heat damage)	Cam Controller moves freely but R contacts do not open properly when the cam is rotated. Due to heavy fire damage, the cam must be removed and placed on overhaul stand for further evaluation.  2/27/25 JR/BW - The Cam was placed on a stand and we removed two of the R-contacts moveable side. Comparing them with good ones we found no difference in the geometry.  With them out of the way, we found one obvious problem. All three of the main bearing assemblies that keep the frame straight must have gotten soft from the heat and allowed the frame rails to spread apart, moving the contacts away from the cam lobes. This caused the R contacts to close up under spring tension even though the cam lobe should have held them open. Pilot motor was tested and found in working condition.
pan up/down mag valves	x		Operate Up/Down magnet valves	TBD	Up/Down magnet valves are physically located on mate car 131. Will be tested on car once safe to do so.
GRRP electronic ground relay		X Frazer Lab	Bench Test for functionality	Pass	2/28/2025 JR/BW Device was tested for function and performed as designed
ACPG and GNDR circuit	x (Mechanical)	X (Electrical) Frazer Lab	Bench Test for functionality	Pass Mechanical Pass Electrical	2/28/25 JR/BW Both devices were tested for function and performed as designed
OLR 1 2 3	x (Mechanical)	x (Electrical) Woodland Lab	Bench Test for functionality	Pass Mechanical Pass Electrical with stipulations	2/28/25 JR/TR Altho the units are AC current magnetic overloads we were able to test functionality with DC current. The units tripped but by using DC current, this caused the trip points to be extremely excessive. To test with real life conditions, the test set requires a power supply of 25Hz AC current above 1500 amps which SEPTA does not have access to. Work halted on this device.
OLM 1 and 2	x (Mechanical)	x (Electrical) Woodland Lab	Bench Test for functionality	Pass Mechanical TBD Electrical	2/27/25 JR/TR - Trip points: OLM1 - 800 Amps, OLM2 - 900 Amps
PC Relay		x Woodland Lab	Bench Test for functionality	TBD	2/27/25 JR/TR Trip point - 400 Amps
CT	X		Test CT for proper outputs	TBD	The CT is physically located on the roof of the car. This test will be performed once the car can be moved indoors for testing.
DEB Inverter		x Woodland Lab	Bench Test for functionality	Low voltage - Partial pass High voltage - Fail	3/7/25 - JR/TR The Inverter box was opened observing internal heat damage with no indication of fire (melted control board components). Low voltage control power was applied and limited control functions were observed. Software communication with the test computer did not function. High voltage power was then slowly applied and electrical arcing was witnessed at approx 420VDC. Testing was halted for safety reasons.
DEB Blower Motor		X TBD	Test for proper operation	TBD	3/7/25 - JR/TR Removed from the Vehicle and sent to Woodland with the inverter for testing coordination.