

# SLPS PCC 1743 Progress Report

## STL PS 1743 Progress Report 3/10 to 3/17/16

Friday, 3/11

1. Moved documents and photos on computer to logical folders to make them easier to access when information is needed. Revise Electrical Sequence Test based on yesterday's results. Copied Steve Siegerist' PCC Cars of North America and corrections sheet. This will be used to identify out of service 1700 series PCC cars for parts we need.

Saturday, 3/12

1. Tweaked Sequence Test and draft Braking test after reviewing all documents relative to propulsion and braking and review of connection diagram. Revise Connection Diagram to E with minor format changes. Continuing to work on Braking Sequence.

Monday, 3/13

1. Went to MOT and found spare B1 contactor to substitute for C1 in the Electrical Sequence Test. Replaced missing contact point.

Tuesday, 3/16

1. Installed the C1 substitute contactor. Contact wiring was installed on top of the existing wiring and the coil was wired to the G- 3F and B6 connection on LB1. It worked as planned.
2. Put together a Dynamic Braking Sequence Test from the manual text and GE Plate A115585 (Sequence Connection Diagram – Simplified Braking) over the weekend.
3. The Dynamic Brake Test worked partially on a preliminary test.
4. It was decided to test the track brake commutator by measuring the voltage at the resistors. The reading was 0 for several bars then increased until reaching around 33 volts. The commutator was very dirty and the brushes sparked as they went around. I removed the brushes so Steve could clean the commutator and found that both springs had rusted through and were broken. I managed to fabricate substitute springs from stock springs found in the tool room. When retested we measured current and got a better result.
5. Ran the Electrical Sequence Test (revised over the weekend based on the manual text and GE Plate A115584 (Sequence Connection Diagram – Simplified Motoring). The test ran better and the sequence was completed. I don't think the coil wiring for the C1 substitute is correct.
6. While power was on we tested 4 loose wires under the contactors and identified them. Two of the wires were 3J and G for the C2 coil. The C1 and C2 contactors were missing when we received the car. Both coils were rewired. We never found wire 5 for the C1 coil.

Thursday, 3/17

1. Removed 8 ohm holding resistor for B3 and corrected wiring. Tested by moving KM arm to B and back to A. It works correctly now.
2. Checked brake pedal emergency brake lock at full depression and found it worked correctly. Reinstalled c clamp on heel plate.
3. Isolated track brake contact so battery will not be drained during testing when deadman is up.
4. Started to run Dynamic Brake Sequence test and found the control power was lost when BC5 opened. The problem was traced to a missing wire on the back of the fixed contact on BC2. A jumper from the back contact to the front contact fixed the problem.
5. Started test again and found that it would not progress from the starting condition with B1, B2, C2 and FS1 closed. This is the minimum dynamic braking with a 4.5 ohms load on the motors. By opening a contact on LB2 the test continued to completion. Steve and I worked on this for some time and could not understand why the sequence stopped. I called Ed Lindstrom and he said that the sequence will not continue unless you are motoring forward over a certain speed and then press the brake pedal.

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6. Received 2 CD from Laddie Vitek who was back at the MOT to transport the remainder of the diesel parts salvaged a few weeks ago to IRM. Laddie said one of the CD was files from Karl Johnson and the other CD was a collection of files from Septa and other places.

Plans for next week and the near future.

1. Run and hopefully complete the Electrical Sequence Test.
2. Make temporary wiring permanent.
3. Retest the brakes and attempt to move car slowly forward and reverse in the shop.
4. If the ABR relay doesn't work properly try adjusting it, if that doesn't work see if we can find a replacement coil the coil rewind.
5. Go to Fort Worth and try to find an ABR coil with the correct resistance, a track brake buzzer and chime.
6. Continue work on the auxiliary circuits' drawings. As-Build the connection diagram when the car is running.