

# SLPS PCC 1743 Progress Report

## STL PS 1743 Progress Report 1/30 to 2/4/16

1/30/16

1. Steve B removed the track brake bonding jumpers added Conducto Lube to the mating surfaces, primed and painted black on top.

2/2/16

1. All work is being performed using battery power only. When the Sequence Test can be performed successfully then we will test the entire electrical system with 600 volts
2. I stated today by verifying the jumpers on the BC and PC switches. They are installed as shown on the attached drawing.
3. Steve and I started to plan the sequence test and how to actuate C1 manually at the correct time. Previously it was observed that when C1 is manually closed C2, FS1 and B1-B2 alternated. The relays that alternate now are B1-B2, LB2 and FS1. We have no idea why C2 is not alternating and LB2 is.
4. When the MG toggle is switched on B1-B2, LB2 and FS1 energize. LB2 should not energize at this time. When the PC pedal is pressed down 1 ½ to 2" the alternation starts. Manually closing C1 before or after pressing the PC pedal makes no difference.
5. We tested wire 3 from BC-2 and ground for continuity to the alternating relays. Both the wires had continuity (less than .4 ohms). We tried to measure the voltage and current in wire 3 during the alternating cycle with digital meters and failed to get a reading.
6. We next isolated relay B2 by disconnecting the coil wire, powered the system up and only relay B1 energized. Manually closing LB2 did nothing.
7. We next isolated relay B1 by disconnecting the coil wire and powered the system up. Relays B2 and FS1 energized. Manually closing LB2 caused B2 and FS1 to release. When the PC pedal was pressed B2, LB2 and FS1 began alternating.
8. It is now clear that something is not wired correctly. Steve will not be available on Thursday.
9. The ABR outer shunt coil wire measured between .063" and .065" diameter. #14 AWG is 0.06410" diameter and is available in enameled magnet wire.

2/4/16

1. All of the following items were suggested by Ed Lindstrom and Jeff Hackner.
2. A jumper was installed on deadman contact 3 to make sure that there was no resistance in the deadman contacts. The oscillation began (B1-B2, LB2 and FS1) as soon as the PC pedal was pressed 1 to 2 inches.
3. A thin piece of plastic was inserted in all of the normally closed contacts on the contactors. When powered up the PC pedal was pressed, there was no oscillation and no contactors energized.
4. At this point all powered testing was stopped until the cause of the oscillation is found and corrected.
5. All normally closed contacts on PC, BC and KM were isolated in the same way and the clamp on the dead man was released.
6. With all normally closed contacts isolated wire tracing and labeling was started. Wires were traced using a Fluke DVM, readings of less than .4 ohms were considered satisfactory. Wire labels ordered by Steve B were delivered this morning.
7. The following wires were traced and labeled today. Wires to the backup controller were not traced and labeled but the destination was confirmed on the backup controller drawing.  
Wire 8 was traced from LB2 to KM contact 6 on the movable arm.  
Wire B6 was traced from LB2 to the correct contact on LB1, B3 and BC1 on the movable arm.  
Wire 4 was traced from LB2 to the correct contact on LB1.  
Wire 4A was traced from LB2 to the B2 coil.  
Wire 3 was traced from LB3 to the BC2 fixed contact, to the PC1 movable arm, to the PC7 fixed contact and to the PC9 fixed contact.

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8. I gave Teresa the Visio CD and ask her to load it on her Windows 95 machine. When she tells me it installed correctly I will send her the draft of my connection diagram so she can print it. I expect overlapping 11 X 17 pages.

### Plans for Saturday 2/6/16

1. Steve B continues tracing and labeling wires.