

# SLPS PCC 1743 Progress Report

## STL PS 1743 Progress Report 3/18 to 3/24/16

Tuesday 3/22/16

1. This morning I rewired the C1 coil to wire 5A before Steve arrived,
2. I traced from the heater and lighting toggle switches back to the 50 amp fuse in the stairwell. The toggle switch wire numbers matched the 1600 drawing. I traced the wires back to the fuses and marked all of the wiring.
3. When Steve arrived we ran the propulsion sequence per Jeff's message. Everything worked except B3 did not open because LB2 did not open. When the pedal was released the sequence finished.
4. I removed the C1 substitute relay and we ran the test again with me manually closing C1 with the same result until Steve manually opened BC2 (control power) and the sequence finished correctly. When the pedal was released everything opened and ended up with B1, B2, C2 and FS1 closed.
5. We are sure that everything is wired correctly and matches Ed's and my drawing. B3 seals in through the 8 ohm resistor and cannot open until LB2 opens. With this in mind we plan to test the car with 600 volts on Thursday.
6. When we tried to install the arc chutes we had some difficulty with B3. We were able to install the left chute but the right would not fit. Steve retrieved a spare B3 from the shed and tried to fit the chute on it. While I was reconnecting the power and brake springs Steve noticed that the chute was assembled wrong. When Steve asked for the chutes to be disassembled and cleaned the person who did the chute said that he may have reversed the center part. That was long forgotten until today. Steve took it apart and reversed the center and it fit.
7. I didn't know that the seat had been replaced with one from St. Charles until Steve told me. The floor flange did not fit the existing mounting holes. We assembled the seat and secured it with one bolt in an existing hole. We moved it slightly until it appeared to be the correct position. I marked the other 3 holes and we removed the seat. It was necessary to move it back around  $\frac{1}{4}$ " to miss the old holes. I started drilling and tapping the new holes until we ran out of time. I can complete the job on Thursday morning.

Wednesday 3/23/16

1. A checklist was written to prepare the car and testing.

Thursday 3/24/16

2. The seat installation was completed.
3. In preparation for the power test the new wiring on LB1 had to be made permanent to mount the arc chute. On close examination I saw that the cable support could be removed and the wires installed into the existing cable. When this was completed the arc chute was installed.
4. Remaining temporary wiring was secured unidentified wiring heat shrunk.
5. Preparation was completed and the car was powered up.
6. The sequence started but stopped with the KM arm at A and the car drawing around 300 amps on the power supply cabinet ammeter.
7. Power was shut down and Al Weber attached jumper wires to the shunt. When powered up again he found that 90% of the power was heating the KM resistors and the remaining power was going to the motors.
8. Steve and I examined the contacts on B1, B3, C1 and LB3 that control the direction of the PM motor. All of the contacts were cleaned and contacts on B3 and LB3 were adjusted.
9. The test was repeated with the same results.
10. Steve and I will go back to the 32 volt sequence test on Tuesday until we find the cause of the problem and correct it. Hopefully we will be able to successfully test the car with power next Thursday.

Plans for next week and the near future.

1. Repeat the 32 volt sequence test until the fault is found and the sequence runs automatically to the end.
2. Run the car in forward and reverse in the shop.

## SLPS PCC 1743 Progress Report

3. Make temporary wiring permanent.
4. Test the car on the MOT loop.
5. If the ABR relay doesn't work properly see if we can find a replacement coil or get the coil rewound.
6. Go to Fort Worth and try to find an ABR coil with the correct resistance, a track brake buzzer and chime.
7. Continue work on the auxiliary circuits' drawings. As-Build the connection diagram when the car is running.