

Loco #

5016

Date 2-10-2011

One Time Trainline Wiring Verification	
Overview: Procedure for check trainline for grounds, open circuits and wiring errors.	
Special Tools or Equipment: 6 watt test light	
Sequence of Job Steps	Corrective Signature
1. Inspect all MU cables attached to the locomotive for signs of being smashed or cut. Replace as needed.	
2. Inspect pins on the front and rear MU receptacle for signs of burning, arcing or any damage.	JH
3. Set up with the locomotive engine running and all circuit breakers closed. The independent and automatic brakes set, the handset set, generator field switch OFF and reverser centered.	
4. Verify your test light works and test for low voltage ground by connecting a 6 watt test light to the positive switch and a frame ground. Connect from the negative side of the battery switch to a frame ground. If the test light glows on either side, find and repair the low voltage ground before proceeding.	
5. Shut down engine and open all circuit breakers except the Control circuit breaker.	JH
6. Open and lock in place the MU receptacle lid on front of the locomotive.	JH
7. Connect the 6 watt test light to #4 pin (control negative) of the MU receptacle and a frame ground.	JH
8. Connect the 1 ft. test wire to pin #13 and while observing test light. Connect the other end to all of the pins in the MU receptacle one at a time EXCEPT FOR #4 AND #13 . If any of these MU pins light the test light, find and repair the low voltage ground before proceeding.	JH
9. Connect the test light to MU #4 and to ground and then from MU pin #13 to ground. If the test light glows, find and repair low voltage ground before proceeding.	JH
10. Open battery switch and open the control circuit breaker. Confirm all circuit breakers are open.	JH
11. Set the headlight control switch to "single unit".	JH
12. Use the long (75ft.) test wire to check continuity on all trainline wires. Connect one end of the test wire to pin #1 on the rear receptacle and at the front of the locomotive connect an ohm meter to the other end of the test wire and pin #1 on the front receptacle. The ohm meter should read less than 1 ohm. If it is anything higher than 1 ohm, check for poor connections or damaged wiring.	JH
13. Repeat step 12 for the remaining 26 trainline wires. Note: please check "SPARE" trainline wires as well.	JH
14. Note: Remember that pins #8 and #9 cross in the trainline. (pin #8 on the front goes to pin #9 on the rear and pin #9 on the front goes to pin #8 on the rear)	JH
15. Check each of the 27 trainline terminal board connections for wiring errors. Check the terminal boards under the A/C cabinet and the terminal board in the Main Gen room . The correct wiring diagram for the specific locomotive should be consulted. Look for wires that have no	JH

markings or wires that are not marked with the appropriate trainline number.	
Locomotive MU Trainlines MU Locomotive function 1 Slow speed 2 Alarm bell 3 Engine Speed DV 4 Control negative 5 Emergency sanding 6 Generator field 7 Engine speed CV 8 Forward 9 Reverse 10 Wheel slip indication 11 Spare 12 Engine speed BV 13 Control positive 14 Spare 15 Engine Speed AV 16 Engine run 17 Dynamic brake-set up 18 Spare 19 Spare 20 Dynamic brake-warning 21 Dynamic brake – excitation set up 22 Compressor synch 23 Sanding control 24 Dynamic brake – excitation control 25 Headlight 26 Spare 27 Spare	
Were any miswires or trainline cable problems found? <u>Yes</u> No Please include details of the problems found <i>Front MU pin 4 Burned - Replaced pin</i>	