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> SS 708 Low Voltage Disconnect (LVD) Troubleshooting...

# SS 708 Low Voltage Disconnect (LVD) Troubleshooting: Western Star 5700 and New 4700



## **Applicable Vehicles:**

- 4700: August of 2019 - Present
- Applicable to All 5700

## **Symptoms:**

- When Red light is ON in the Low Voltage Disconnect (LVD) module (built into the PDM1)
- Multiple relays in the PDMs not powering up

## **Issue:**

System Operation:

- The LVD module controls 2 bus bars of the PDM1 using relays bR49 and bR51. The internal wiring of the PDM1 can be seen in the schematics within subgroup 285 and in the attached 'LVD Wiring Architecture'. If the LVD module senses low voltage on 11-B28 the LVD module built into PDM1 will shut off the PDM1 busses by energizing pin 1 on both bR49 and bR51 in order to decrease current draw on the batteries. This will conserve enough battery charge in order to crank the engine.
- WST trucks come standard with a 12.3V cutoff voltage.
- PDM1 carries this LVD system over to the other PDMs as well. See 'LVD Wiring Architecture' in the attachments.

Issues:

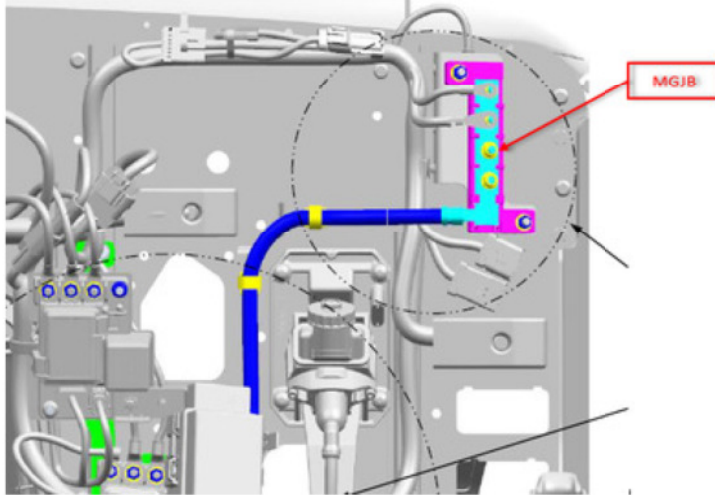
- Issues you will see involve multiple relays not powering up across all PDMs. Driver will complain of multiple functions inop.

## **Solution:**

1. Ensure the battery is on a charger at this time and battery voltage is above the cutoff voltage of the LVD. The cutoff voltage will be different depending on if there is a ground in

B33 (12.3V) or not (12.1V).

2. Verify the LVD is not energizing bR49 and bR51.
3. If there is still no response from the LVD, run a voltage drop test the BAT Sense pin B28 and GND Sense pin B23.
  - If this is an intermittent issue, inspect the MGJB (A66-04649-028) located on the LHS of the front-wall for any loose connections, excessive paint, etc.



4. If the LVD is still not energizing the LVD relays and no issues were found, then replace the PDM1.

Labels :

4700

4800

4900

5700

Add tags

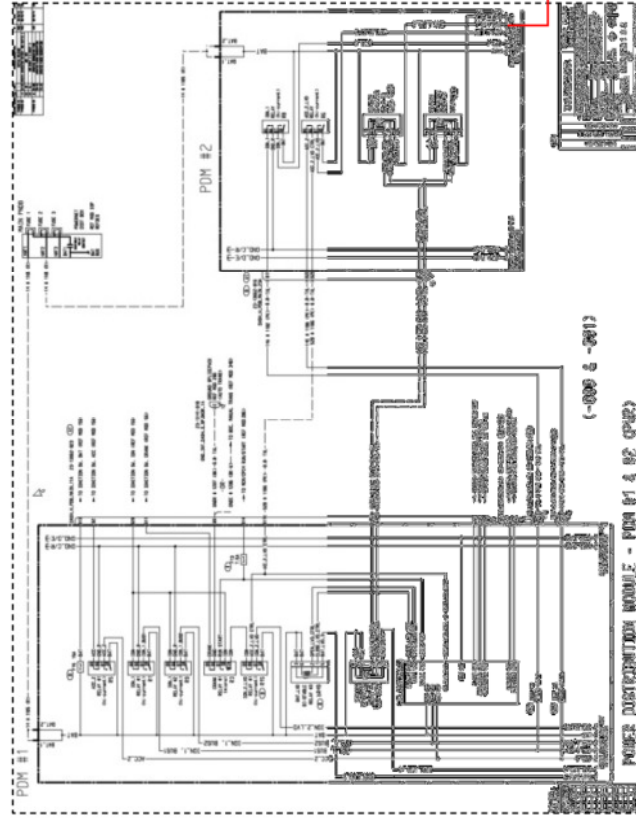
## Attachments



0 Kudos

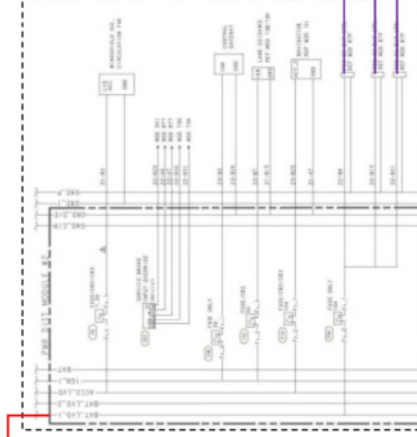
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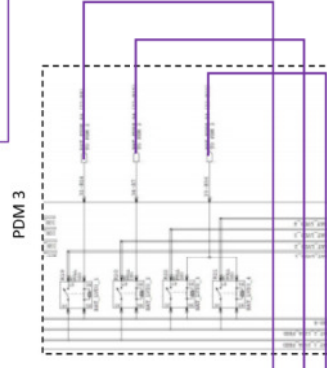
See schem D06-92777-000 in mod 285

See G06-77816-000  
and G06-89570-000  
in mod 306



See schem D06-92778-000  
in mod 285

See G06-11816-000  
in mod 87P



See schem D06-11824-000  
in mod 87P