DTC P0748: GOVERNOR PRESSURE SOL CONTROL/TRANS RELAY CIRCUITS

Circuit Description

Circuit is monitored continuously while key is on. Code sets if voltage detected on governor pressure solenoid control circuit at the Powertrain Control Module (PCM) does not match desired voltage for 4.8 seconds.

Possible Causes

- Fused B+ circuit open.
- Solenoid and harness assembly defective.
- Governor pressure solenoid out of tolerance.
- Transmission control relay defective.
- Governor pressure solenoid control circuit shorted to ground.
- Governor pressure solenoid harness defective.
- Governor pressure solenoid control circuit open.
- Transmission control relay output circuit open.
- Transmission control relay output circuit shorted to ground.
- PCM defective.

Diagnostic Procedure (AN & DN Bodies)

1. Using scan tool, read DTCs. If DTC P1765 is set, go to DTC **DTC P1765: TRANS 12-VOLT SUPPLY RELAY CNTRL CIRCUIT**. If DTC P1765 is not set, go to next step.
2. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, go to step 5. If voltage is less than one volt, go to next step.
3. Using scan tool, erase DTCs. Start engine. Using scan tool, read DTCs while wiggling wiring harness between governor pressure solenoid and PCM. If DTC P0748 resets, repair wiring harness as necessary. If DTC P0748 does not reset, go to next step.
4. Inspect all related wiring and connectors. Repair as necessary. If wiring and connectors are okay, see **INACTIVE DTC CONDITION** under SELF-DIAGNOSTIC SYSTEM. Testing is complete.
5. Turn ignition off. Disconnect transmission solenoid harness connector. Inspect connector and terminals for damage. Repair as necessary. If connector and terminals are okay, turn ignition on. Using scan tool, actuate transmission control relay. Measure voltage between ground and transmission relay output circuit at transmission solenoid harness connector. If voltage does not switch from zero to greater than 10 volts, go to step 18. If voltage switches from zero to greater than 10 volts, go to next step.
6. Turn ignition off. Disconnect PCM harness connectors. Inspect connectors and terminals for damage. Repair as necessary. If connectors and terminals are okay, turn ignition on. Measure voltage between ground and governor pressure solenoid control circuit at transmission solenoid harness connector. If voltage is greater than 10 volts, go to step 8. If voltage is 10 volts or less, go to next step.
7. Repair governor pressure solenoid control circuit for short to ground. Reconnect all disconnected harness connectors. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select

1st gear and read governor pressure voltage. If voltage is one volt or greater, replace PCM. If voltage is less than one volt, test is complete.

8. Turn ignition off. Reconnect transmission solenoid harness connector. Measure resistance between ground and governor pressure solenoid control circuit at White PCM harness connector C2. If resistance is 5 ohms or less, repair short to ground in governor pressure solenoid control circuit. If resistance is greater than 5 ohms, go to next step.
9. Remove transmission control relay. Inspect transmission control relay connector and terminals for damage. Repair as necessary. If connector and terminals are okay, measure resistance between transmission control relay output circuit at transmission control relay connector and governor pressure solenoid control circuit at White PCM harness connector C2. If resistance is 2.5-5.0 ohms, replace PCM. If resistance is not 2.5-5.0 ohms, go to next step.
10. Measure resistance between transmission control relay output circuit at transmission control relay connector and governor pressure solenoid control circuit at White PCM harness connector C2. If resistance is greater than 5 ohms, go to next step. If resistance is 5 ohms or less, go to step 13.
11. Disconnect transmission solenoid harness connector. Inspect connector and terminals for damage. Repair as necessary. If connector and terminals are okay, measure resistance of governor pressure solenoid control circuit between White PCM harness connector C2 and transmission solenoid harness connector. If resistance is greater than 5 ohms, repair open governor pressure solenoid control. If resistance is 5 ohms or less, go to next step.
12. Drain transmission fluid and remove oil pan. Disconnect governor pressure solenoid harness connector. Inspect connector and terminals for damage. Repair as necessary. If connector and terminals are okay, measure resistance across governor pressure solenoid terminals. If resistance is 5 ohms or less, repair or replace transmission solenoid and harness assembly. If resistance is greater than 5 ohms, replace governor pressure solenoid.
13. Disconnect transmission solenoid harness connector. Inspect connector and terminals for damage. Repair as necessary. If connector and terminals are okay, measure resistance between governor pressure solenoid control circuit and all other circuits at transmission solenoid harness connector. If resistance is less than 2.5 ohms between any 2 circuits, go to next step. If resistance is not less than 2.5 ohms between any 2 circuits, go to step 15.
14. Repair governor pressure solenoid control circuits that were shorted together. Reconnect all disconnected harness connectors. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, replace PCM. If voltage is less than one volt, test is complete.
15. Drain transmission fluid and remove oil pan. Disconnect governor pressure solenoid harness connector. Inspect connector and terminals for damage. Repair as necessary. If connector and terminals are okay, measure resistance across governor pressure solenoid terminals. If resistance is 2.5 ohms or less, go to next step. If resistance is greater than 2.5 ohms, go to step 17.
16. Replace governor pressure solenoid. Replace oil pan and fill with fluid. Reconnect all disconnected harness connectors. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, replace PCM. If voltage is less than one volt, test is complete.
17. Repair or replace transmission solenoid and harness assembly. Reconnect all disconnected harness connectors. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, replace PCM. If voltage is less than one volt, test is complete.
18. Remove transmission control relay. Inspect transmission control relay connector and terminals for damage. Repair as necessary. If connector and terminals are okay, turn ignition on. Measure voltage between ground and fused B+ circuit at transmission control relay connector. If voltage is 10 volts or

less, repair open fused B+ circuit. If voltage is greater than 10 volts, go to next step.

19. Turn ignition off. Measure resistance of transmission control relay output circuit at transmission control relay connector and TCC solenoid harness connector. If resistance is greater than 5 ohms, repair open transmission control relay output circuit. If resistance is 5 ohms or less, go to next step.
20. Measure resistance between ground and transmission control relay output circuit at transmission solenoid harness connector. If resistance is less than 5 ohms, repair open in transmission control relay output circuit. If resistance is 5 ohms or greater, replace transmission control relay.

Diagnostic Procedure (AB, BR & WJ Bodies)

NOTE: On WJ body, if all solenoid codes, P0743, P0748 and P0753 are set, go to test DTC P1765: TRANS 12-VOLT SUPPLY RELAY CNTRL CIRCUIT before proceeding.

1. Using scan tool, read DTCs. On BR and WJ bodies, go to next step. On AB body, if DTC SPECIFIC GOOD TRIPS counter is not displayed or displayed count is not "0", go to step 20. If DTC SPECIFIC GOOD TRIPS counter is displayed and displayed count is "0", indicating DTC still exists, go to next step.
2. If DTC P1765 is also set, go to DTC **DTC P1765: TRANS 12-VOLT SUPPLY RELAY CNTRL CIRCUIT**. If DTC P1765 is not set, go to next step.
3. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, go to step 20. If voltage is less than one volt, go to next step.
4. Turn ignition off. Disconnect transmission solenoid harness connector. Turn ignition on. Using scan tool, actuate transmission control relay. Measure voltage between ground and transmission relay output circuit at transmission solenoid harness connector. If voltage does not switch from zero to greater than 10 volts, go to step 17. If voltage switches from zero to greater than 10 volts, go to next step.
5. Turn ignition off. Disconnect PCM harness connectors. Inspect connectors and terminals for damage. Repair as necessary. If connectors and terminals are okay, turn ignition on. Measure voltage between ground and governor pressure solenoid control circuit at transmission solenoid harness connector. If voltage is greater than 10 volts, go to next step. If voltage is 10 volts or less, go to step 7.
6. Repair governor pressure solenoid control circuit for short to voltage. Reconnect all disconnected harness connectors. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, replace PCM. If voltage is less than one volt, test is complete.
7. Turn ignition off. Reconnect transmission solenoid harness connector. Measure resistance between ground and governor pressure solenoid control circuit at White PCM harness connector C2. If resistance is 5 ohms or less, repair short to ground in governor pressure solenoid control circuit. If resistance is greater than 5 ohms, go to next step.
8. Remove transmission control relay. Inspect transmission control relay connector and terminals for damage. Repair as necessary. If connector and terminals are okay, measure resistance between transmission control relay output circuit at transmission control relay connector and governor pressure solenoid control circuit at White PCM harness connector C2. If resistance is 2.5-5.0 ohms, replace PCM. If resistance is not 2.5-5.0 ohms, go to next step.
9. Measure resistance between transmission control relay output circuit at transmission control relay connector and governor pressure solenoid control circuit at White PCM harness connector C2. If resistance is greater than 5 ohms, go to next step. If resistance is 5 ohms or less, go to step 12.

10. Drain transmission fluid and remove oil pan. Disconnect governor pressure solenoid harness connector. Inspect connector and terminals for damage. Repair as necessary. If connector and terminals are okay, measure resistance across governor pressure solenoid terminals. If resistance is 5 ohms or less, repair or replace transmission solenoid and harness assembly. If resistance is greater than 5 ohms, go to next step.
11. Measure resistance of governor pressure solenoid control circuit between White PCM harness connector C2 and transmission solenoid harness connector. If resistance is greater than 5 ohms, repair open governor pressure solenoid control circuit. If resistance is 5 ohms or less, replace governor pressure solenoid.
12. Measure resistance between governor pressure solenoid control circuit and all other circuits at transmission solenoid harness connector. If resistance is less than 2.5 ohms between any 2 circuits, go to next step. If resistance is not less than 2.5 ohms between any 2 circuits, go to step 14.
13. Repair governor pressure solenoid control circuits that were shorted together. Reconnect all disconnected harness connectors. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, replace PCM. If voltage is less than one volt, test is complete.
14. Drain transmission fluid and remove oil pan. Disconnect governor pressure solenoid harness connector. Inspect connector and terminals for damage. Repair as necessary. If connector and terminals are okay, measure resistance across governor pressure solenoid terminals. If resistance is 2.5 ohms or less, go to next step. If resistance is greater than 2.5 ohms, go to step 16.
15. Replace governor pressure solenoid. Replace oil pan and fill with fluid. Reconnect all disconnected harness connectors. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, replace PCM. If voltage is less than one volt, test is complete.
16. Repair or replace transmission solenoid and harness assembly. Reconnect all disconnected harness connectors. Using scan tool, perform GOV and 3-4 SHIFT VALVE SYSTEM TEST. Select 1st gear and read governor pressure voltage. If voltage is one volt or greater, replace PCM. If voltage is less than one volt, test is complete.
17. Remove transmission control relay. Inspect transmission control relay connector and terminals for damage. Repair as necessary. If connector and terminals are okay, turn ignition on. Measure voltage between ground and fused B+ circuit at transmission control relay connector. If voltage is 10 volts or less, repair open fused B+ circuit. If voltage is greater than 10 volts, go to next step.
18. Turn ignition off. Measure resistance of transmission control relay output circuit at transmission control relay connector and TCC solenoid harness connector. If resistance is greater than 5 ohms, repair open transmission control relay output circuit. If resistance is 5 ohms or less, go to next step.
19. Measure resistance between ground and transmission control relay output circuit at transmission solenoid harness connector. If resistance is less than 5 ohms, repair short to ground in transmission control relay output circuit. If resistance is 5 ohms or greater, replace transmission control relay.
20. Using scan tool, erase DTCs. Start engine. Using scan tool, read DTCs while wiggling wiring harness between governor pressure solenoid and PCM. Note if DTC P0748 resets. If DTC P0748 resets, repair wiring harness as necessary. If DTC P0748 does not reset, go to next step.
21. Inspect all related wiring and connectors. Repair as necessary. If wiring and connectors are okay, see **INACTIVE DTC CONDITION** under SELF-DIAGNOSTIC SYSTEM. Testing is complete.