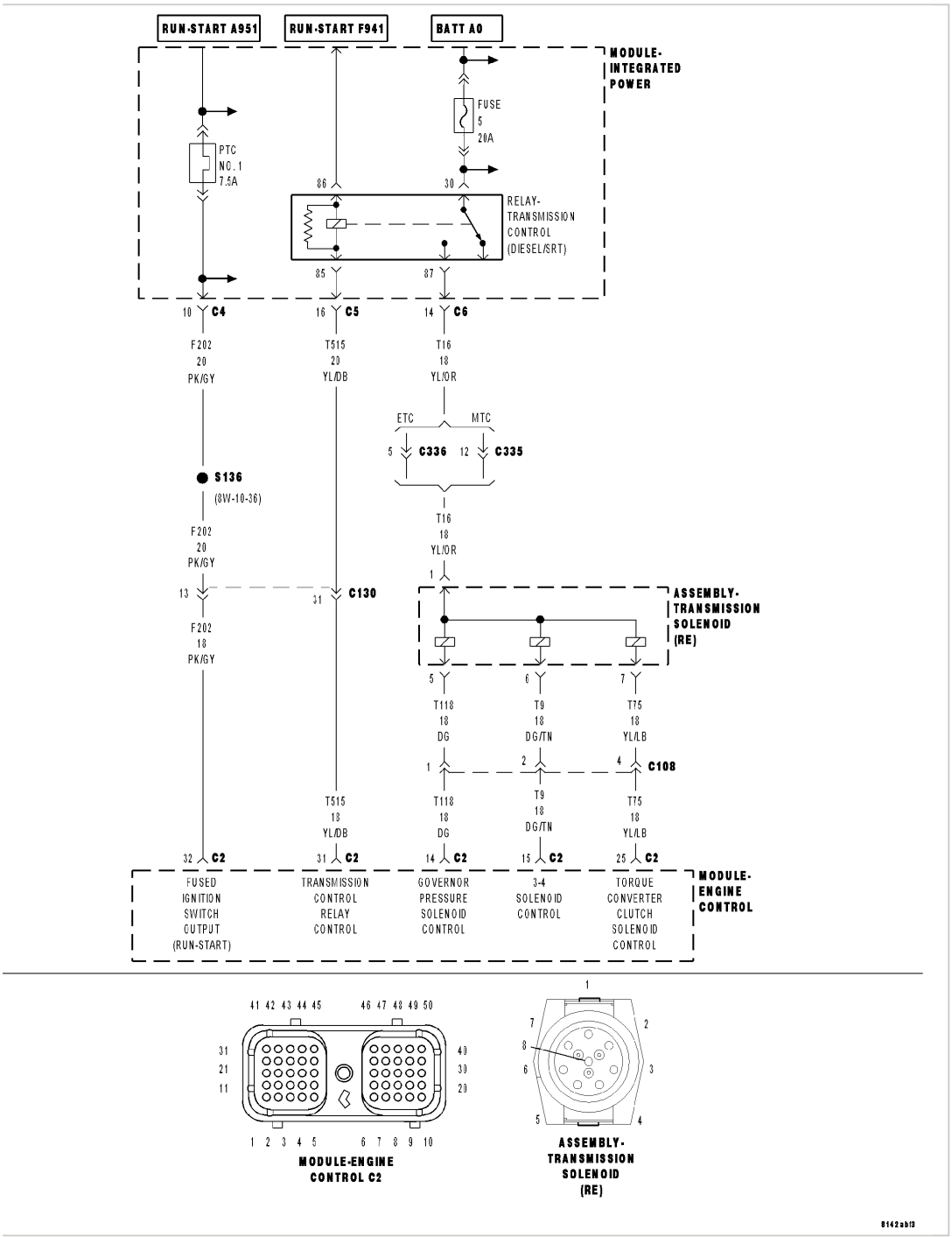
2005 Dodge or Ram Truck RAM 3500 Truck 4WD L6-5.9L DSL Turbo VIN C
Vehicle > ALL Diagnostic Trouble Codes (DTC) > Testing and Inspection > P Code Charts > P0882

TRANSMISSION CODE

P0882-TRANS 12 VOLT SUPPLY RELAY CONTROL CIRCUIT LOW



For the Transmission circuit diagram Refer to Transmission Control Systems/Diagram.
For a complete wiring diagram refer to diagrams.

Theory of Operation

The Transmission Control Relay supplies power to the TCC, Overdrive, and Governor Pressure Solenoids when in normal operating mode. The Transmission Control Relay Control circuit is constantly monitored by the ECM. If the expected state of the Transmission Control Relay Control circuit is different then the expected state, a corresponding DTC will set and the ECM will de-energize the Transmission Control Relay and place the transmission in Limp-in.

- When Monitored:
  Continuously with the Ignition on.
- Set Condition:
  This DTC will set if the ECM monitored voltage of the Transmission Control Relay Control circuit is different than the expected voltage for the period 3.0 seconds.

Possible Causes

- FUSED B(+) CIRCUIT OPEN
- (T515) TRANSMISSION CONTROL RELAY CONTROL CIRCUIT OPEN
- FUSED B(+) CIRCUIT SHORT TO GROUND
- (T515) TRANSMISSION CONTROL RELAY CONTROL CIRCUIT SHORT TO GROUND
- (T515) TRANSMISSION CONTROL RELAY CONTROL CIRCUIT SHORT TO ANOTHER CIRCUIT
- TRANSMISSION CONTROL RELAY
- ENGINE CONTROL MODULE

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding.

1. CHECK IF THE DTC IS CURRENT
   Ignition on, engine not running.
   With the scan tool, read Engine DTCs.
   Record the Freeze Frame data for the reported DTC.
   With the scan tool, erase DTCs.
   Turn the ignition off to the lock position.
   Using the Freeze Frame data recorded earlier, try to duplicate the conditions in which the DTC originally set.

   NOTE: It may be necessary to road test the vehicle to duplicate the original set conditions.

   With the scan tool, read Engine DTCs.

   Did the DTC reset?
   Yes >>Go To 2
   No >>Go To 10

2. TRANSMISSION CONTROL RELAY NOT CLICKING
   With the scan tool, actuate the Transmission Control Relay.

   Is the Transmission Control Relay clicking?
   Yes >>Go To 10
   No >>Go To 3

3. CHECK THE TRANSMISSION CONTROL RELAY
   Turn the ignition off to the lock position.

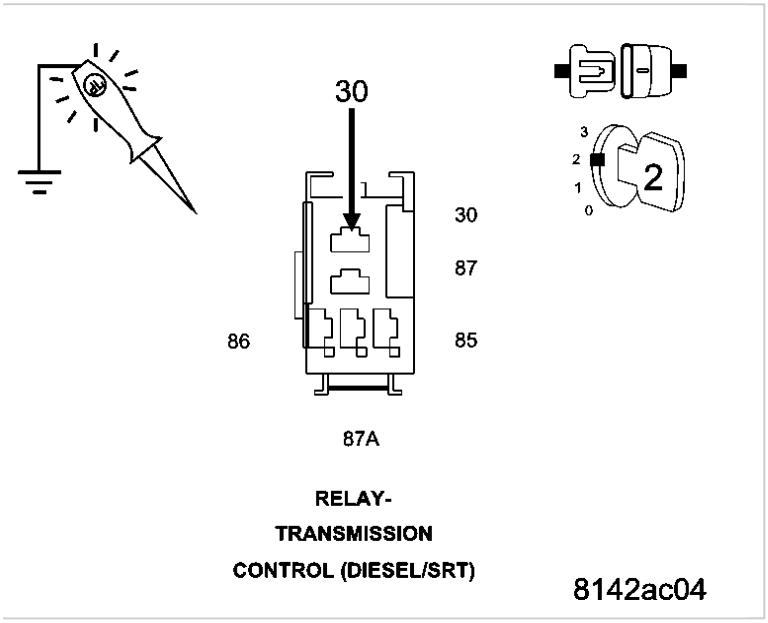
Remove the Transmission Control Relay.

NOTE: Check connectors - Clean/repair as necessary.

Install a substitute relay in place of the Transmission Control Relay.
Ignition on, engine not running.
With the scan tool, erase DTCs.
Start the engine.
With the scan tool, read Engine DTCs.

Does the scan tool display the DTC P0882?
Yes >>Go To 4
No >>Replace the Transmission Control Relay.
Perform RE TRANSMISSION VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests

4. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN

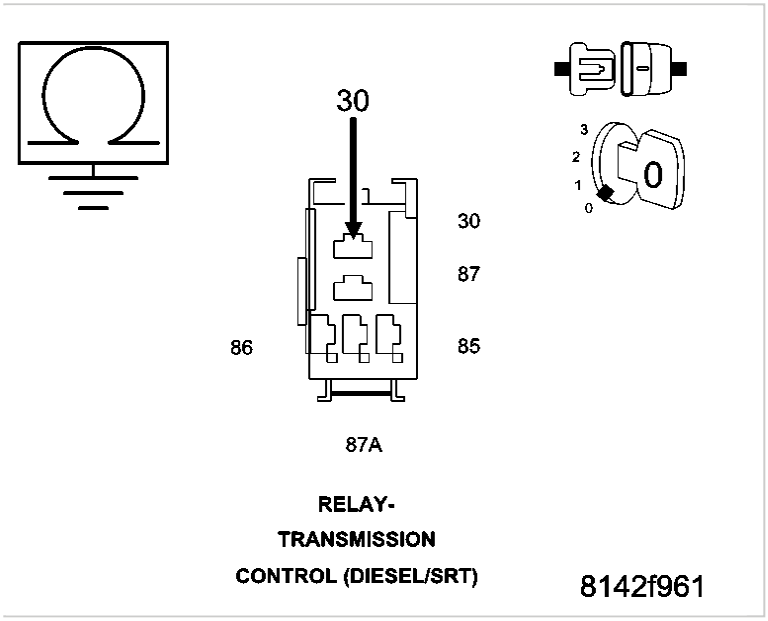


Turn the ignition off to the lock position. Remove the Transmission Control Relay. Ignition on, engine not running. Using a 12-volt test light connected to ground, check the Fused B(+) circuit in the Transmission Control Relay connector.

NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?
Yes >>Go To 4
No >>Repair the Fused B(+) circuit for an open.
Perform RE TRANSMISSION VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests

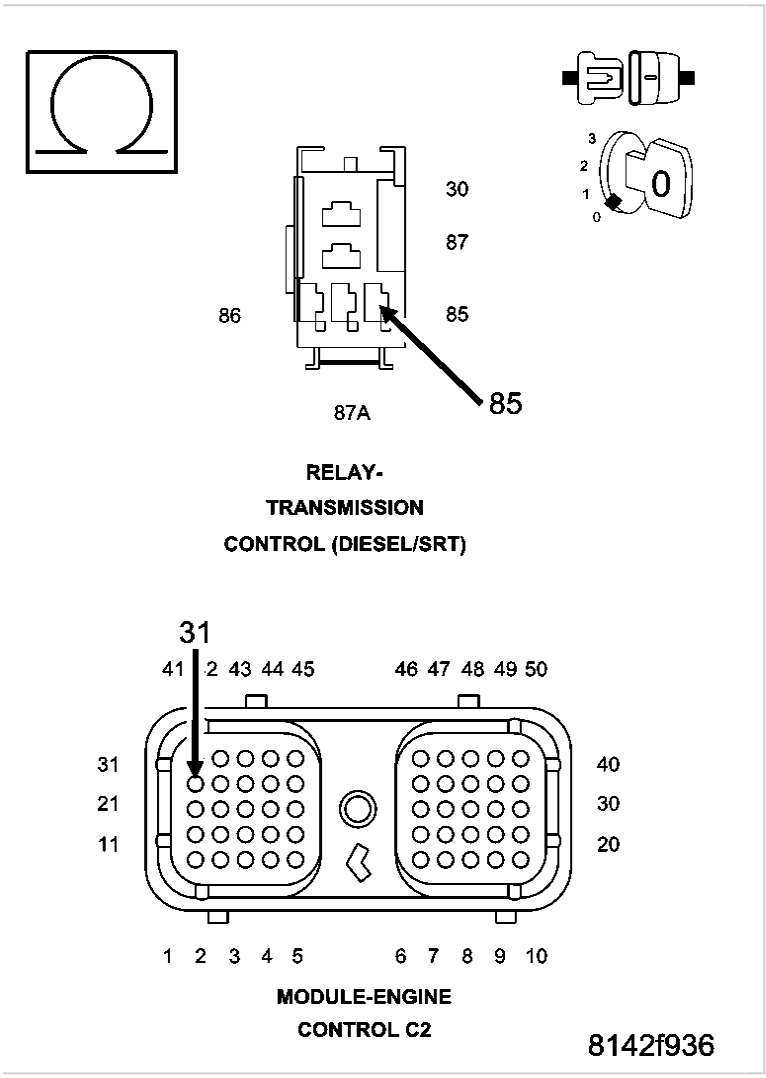
5. CHECK THE FUSED B(+) CIRCUIT FOR A SHORT TO GROUND



Turn the ignition off to the lock position.
Disconnect the ECM C2 harness connector.
Measure the resistance between ground and the Fused B(+) circuit in the Transmission Control Relay connector.

Is the resistance above 100k ohms?
Yes >>Go To 6
No >>Repair the Fused B(+) circuit for a short to ground.
Perform RE TRANSMISSION VERIFICATION TEST VER -1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests

6. CHECK THE (T515) TRANSMISSION CONTROL RELAY CONTROL CIRCUIT FOR AN OPEN



Measure the resistance of the (T515) Transmission Control Relay Control circuit between the Transmission Control Relay connector and the ECM C2 harness connector.

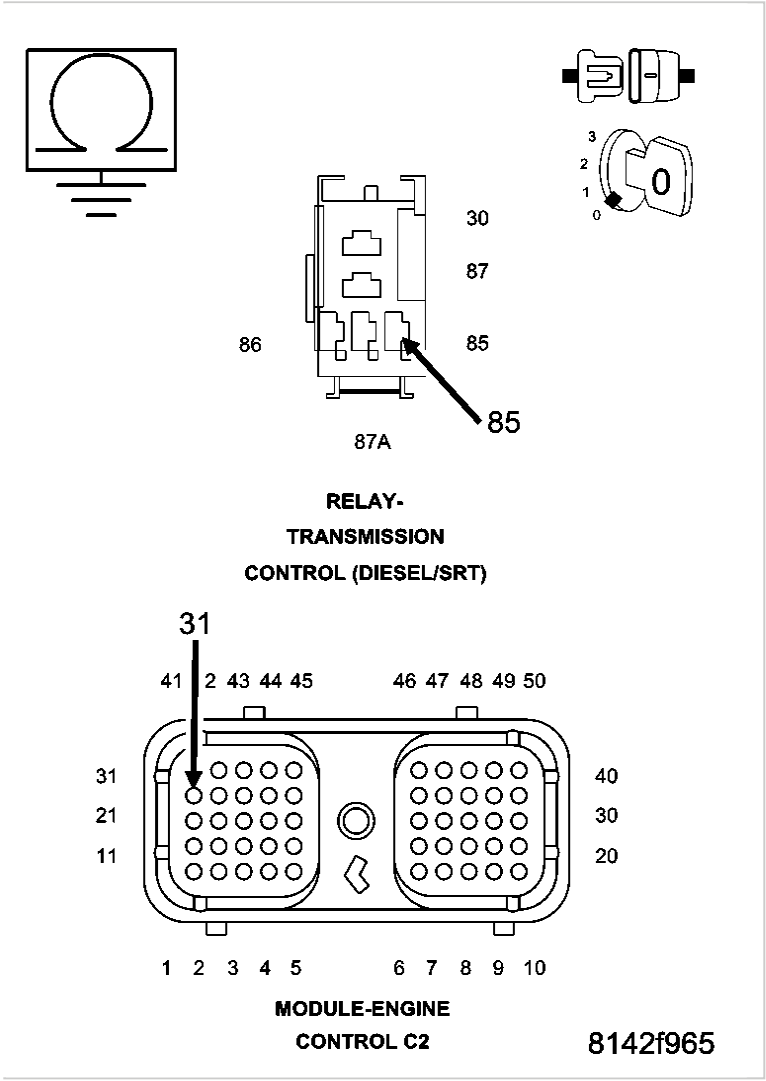
Is the resistance below 5.0 ohms?

Yes >>Go To 7

No >>Repair the (T515) Transmission Control Relay Control circuit for an open.

Perform RE TRANSMISSION VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests

7. CHECK THE (T515) TRANSMISSION CONTROL RELAY CONTROL CIRCUIT SHORT TO GROUND



Measure the resistance between ground and the (T515) Transmission Control Relay Control circuit in the Transmission Control Relay connector.

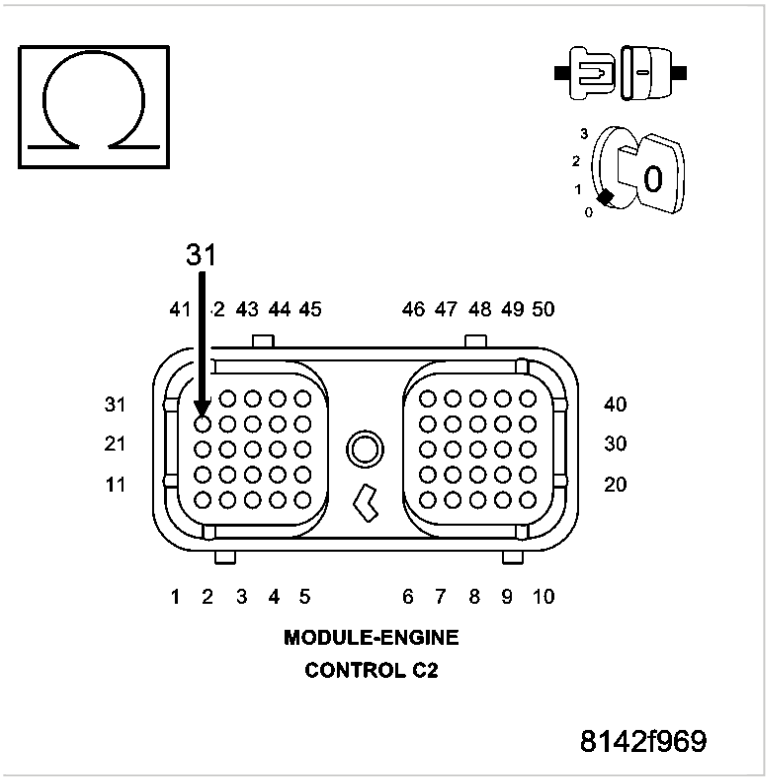
Is the resistance above 100k ohms?

Yes >>Go To 8

No >>Repair the (T515) Transmission Control Relay Control circuit for a short to ground.

Perform RE TRANSMISSION VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests

8. CHECK THE (T515) TRANSMISSION CONTROL RELAY CONTROL CIRCUIT FOR A SHORT TO ANOTHER CIRCUIT



Measure the resistance between the Transmission Control Relay Control circuit and all other circuits in the ECM C2 harness connector.

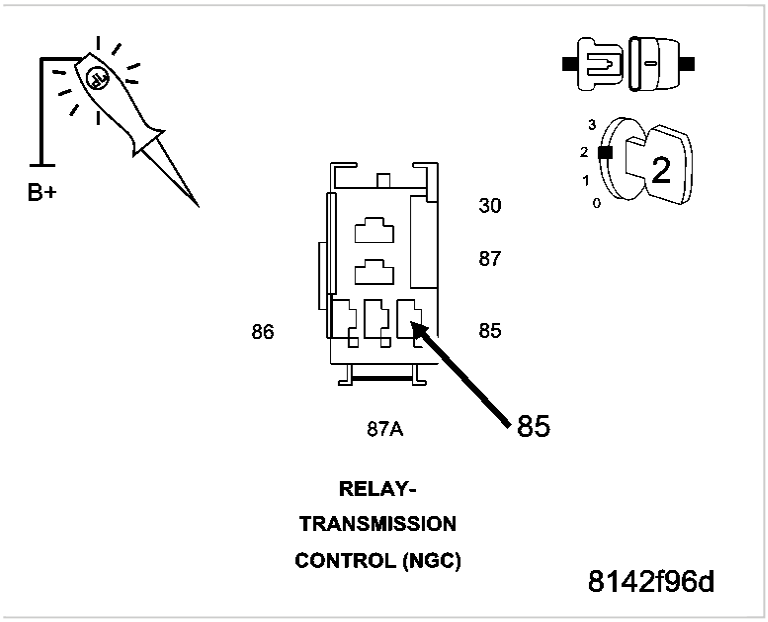
Is the resistance below 100k ohms between the (T515) Transmission Control Relay Control circuit and any other circuit(s) in the ECM C2 harness connector?

Yes >>Repair the Transmission Control Relay Control circuit for a short to another circuit(s).

Perform RE TRANSMISSION VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests

No >>Go To 9

9. CHECK THE ENGINE CONTROL MODULE



Turn the ignition off to the lock position.

Ignition on, engine not running.

With the scan tool, actuate the Transmission Relay.

Using a 12-volt test light connected to 12-volts, check the Transmission Control Relay Control circuit in the Transmission Control Relay Control connector.

NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the Test Light cycle on and off and illuminate brightly?

Yes >>Go To 10

No >>Using the schematics as a guide, check the Engine Control Module **(ECM)** pins terminals and connectors for corrosion, damage, or terminal push out. Pay particular attention to all power and ground circuits. If no problems are found, replace and program the ECM per the Service Information.

Perform RE TRANSMISSION VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests

10. INTERMITTENT WIRING AND CONNECTORS

The conditions necessary to set this DTC are not present at this time.

Use the Freeze Frame Data to help duplicate the conditions in which the DTC originally set. Pay particular attention to the DTC set conditions, such as, VSS, MAP, ECT, and Load

Using the schematics as a guide, visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires.

Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

Wiggle the wiring and connectors while checking for any possible open or shorted circuits.

Check for any Service Information Tune-ups or Technical Service Bulletins that may apply.

Were there any problems found?

Yes >>Repair as necessary.

Perform RE TRANSMISSION VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests

No >>Test Complete.