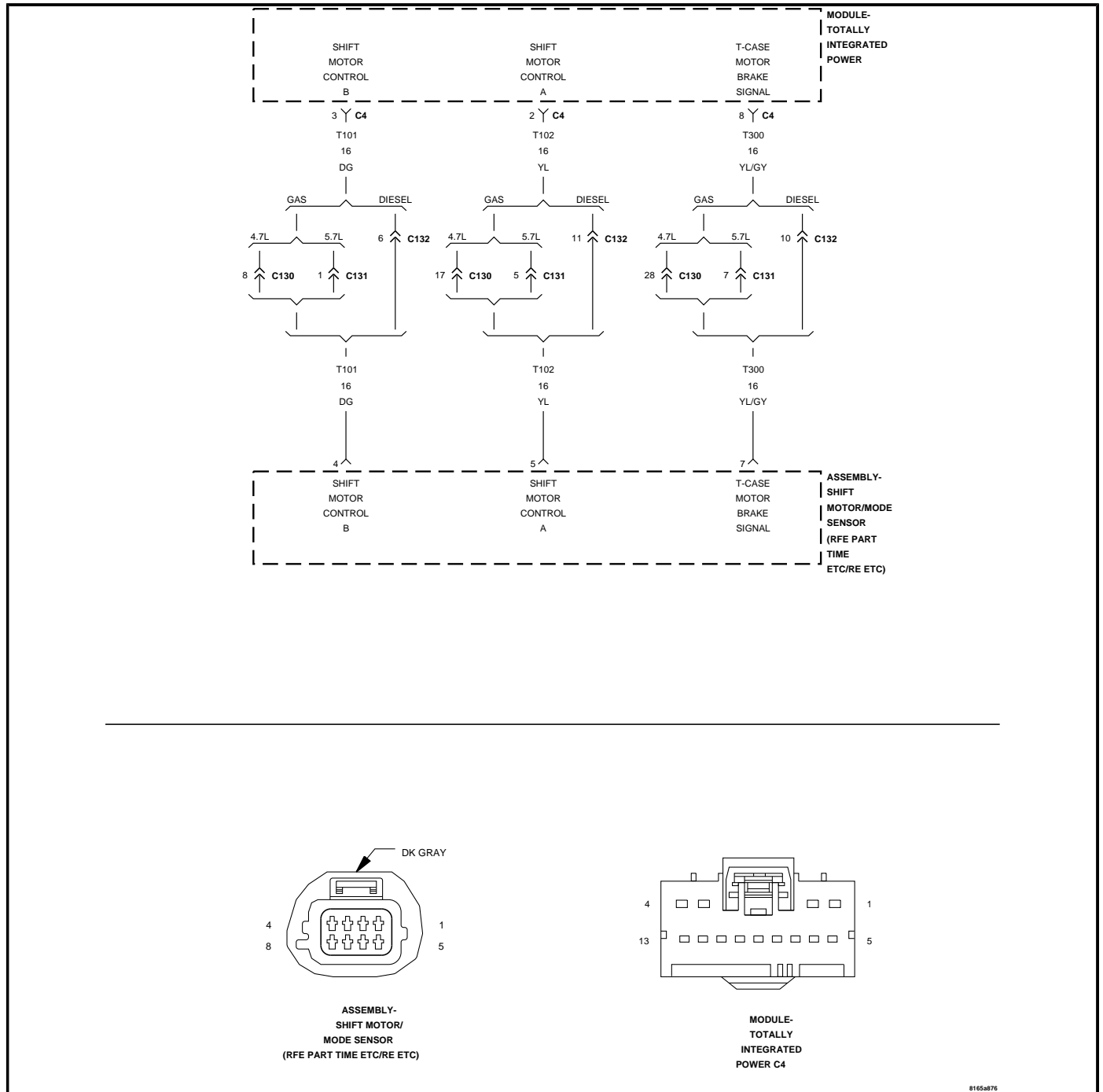


C1407-TRANSFER CASE BRAKE CONTROL CIRCUIT LOW



For a complete wiring diagram, refer to the Wiring Information.

Theory of Operation

The T-case motor brake solenoid is powered by the A940 Fused B+ circuit pin 6 of the Shift Motor Assembly. Inside the motor assembly is a brake solenoid that has approximately 21 Ohms of resistance when measured between pin 6 and pin 3. The solenoid is applied by the TIPM grounding the T300 T-Case Motor Brake Signal circuit pin 8 energizing the solenoid.

- **When Monitored:**

With the ignition on and no system undervoltage or overvoltage condition present.

- **Set Condition:**

The Totally Integrated Power Module (TIPM) detects that the Transfer Case Brake circuit input is low when output is off.

Possible Causes
(T300) T-CASE MOTOR BRAKE CIRCUIT OPEN
(T300) T-CASE MOTOR BRAKE CIRCUIT SHORTED TO GROUND
TRANSFER CASE MOTOR ASSEMBLY
TOTALLY INTEGRATED POWER MODULE (TIPM)

1. DTC IS ACTIVE

1. Start the engine and allow it to idle.
2. Move the Transfer Case Selector Switch to each position several times.
3. With the scan tool, read the TIPM DTCs.

Is the status Active for this DTC?

Yes • Go To [2](#)

No • Go To [5](#)

2. (T300) TRANSFER CASE MOTOR BRAKE SIGNAL CIRCUIT

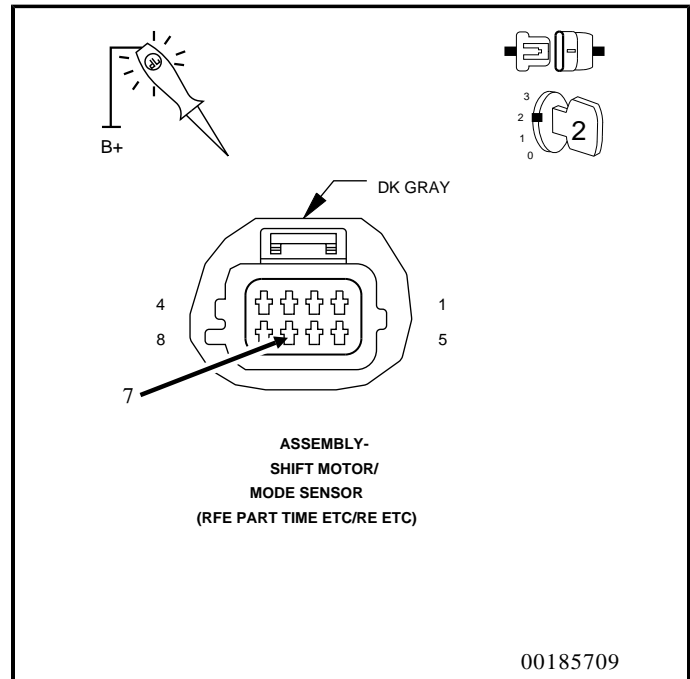
1. Turn the ignition off to the lock position.
2. Disconnect the Shift Motor/Mode Sensor Assembly harness connector.
3. Ignition on, engine not running.
4. While moving the Transfer Case Selector Switch to each position, use a 12-volt test light connected to 12-volts, check the (T300) Transfer Case Motor Brake Signal circuit at the Shift Motor/Mode Sensor Assembly harness connector.

NOTE: The test light should illuminate in each position. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes • Go To 3

No • Go To 4



3. (A940) FUSED (B+) CIRCUIT OPEN OR HIGH RESISTANCE

1. Using a 12-volt test light connected to ground, check the (T300) Transfer Case Motor Brake Signal circuit at the Shift Motor/Mode Sensor Assembly harness connector.

NOTE: Compare the brightness to that of a direct connection to the battery.

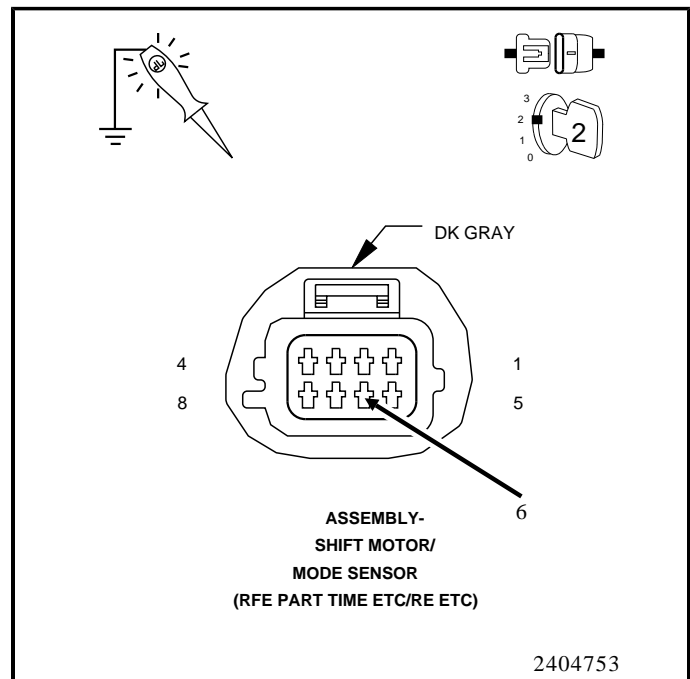
Does the test light illuminate brightly?

Yes

- Replace the Transfer Case Shift Motor Assembly in accordance with the Service Information.
- Perform the TRANSFER CASE VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure).

No

- Repair the (A940) Fused (B+) circuit for an open circuit or high resistance.
- Perform the TRANSFER CASE VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure).



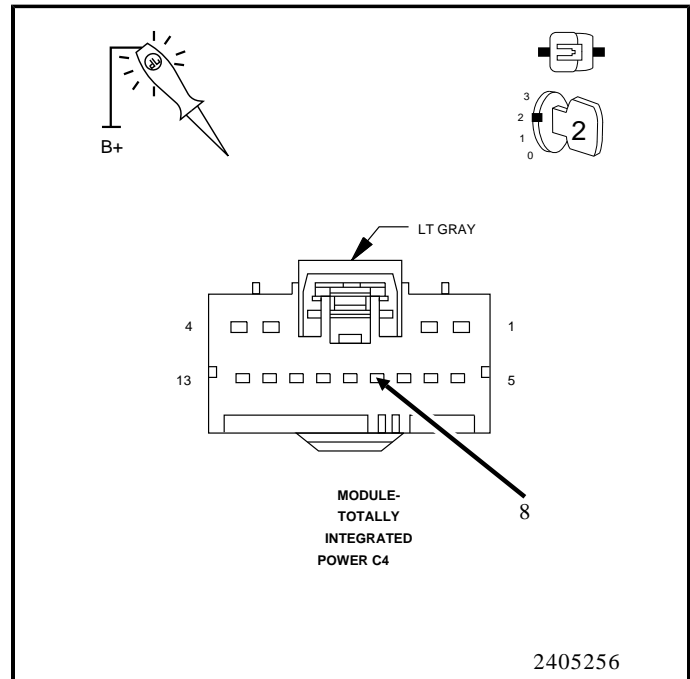
4. (T300) TRANSFER CASE MOTOR BRAKE SIGNAL CIRCUIT OPEN

1. While moving the Transfer Case Selector Switch to each position, use a 12-volt test light connected to 12-volts, backprobe the (T300) Transfer Case Motor Brake Signal circuit at the TIPM C4 harness connector.

NOTE: Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

- Yes**
- Repair the (T300) Transfer Case Motor Brake Signal circuit for an open circuit or high resistance.
 - Perform the TRANSFER CASE VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure).
- No**
- Replace the Totally Integrated Power Module (TIPM) in accordance with the Service Information.
 - Perform the BODY VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure).



5. INTERMITTENT WIRING AND CONNECTORS

1. The conditions necessary to set this DTC are not present at this time.
2. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors.
3. While monitoring the scan tool data relative to this circuit, wiggle test the wiring and connectors.
4. Look for the data to change or for the DTC to reset during the wiggle test.

Were any problems found?

- Yes**
- Repair as necessary.
 - Perform the TRANSFER CASE VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure).
- No**
- Test complete.