

2009 Dodge Journey R/T
2009 ACCESSORIES AND EQUIPMENT Speed Control - Non-DTC-Based Diagnostics - Journey

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Speed Control - Non-DTC-Based Diagnostics - Journey

DIAGNOSIS AND TESTING

CHECKING THE SPEED CONTROL OPERATION

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Speed Control - Non-DTC-Based Diagnostics - Journey

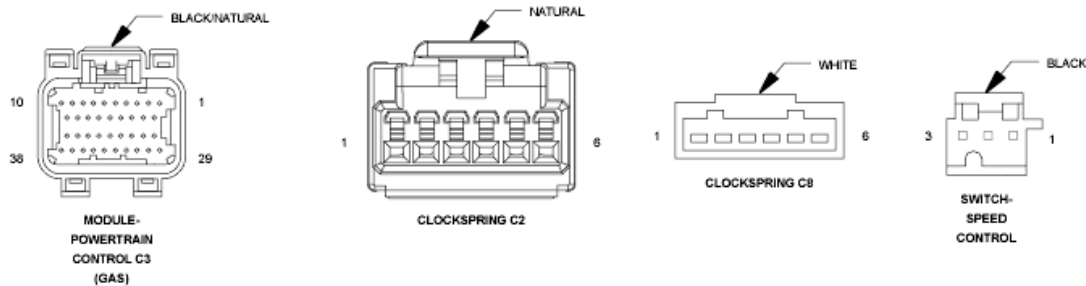
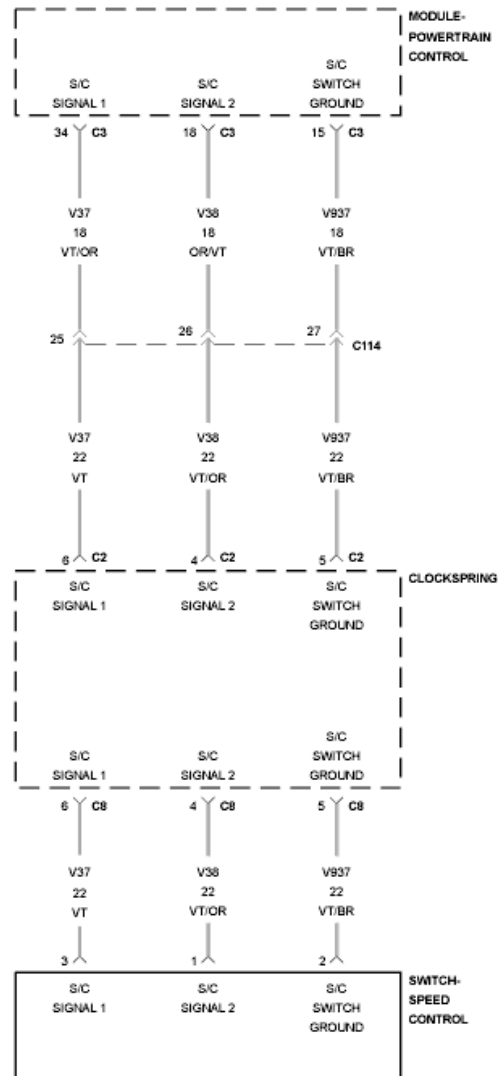


Fig. 1: Speed Control Circuit Schematic
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

Diagnostic Test**1. PERFORM SPEED CONTROL VERIFICATION TEST**

NOTE: Diagnose and repair any Stop Lamp Switch or Speed Control DTCs before proceeding with this test.

NOTE: Check for any Technical Service Bulletins (TSBs) that pertain to the Speed Control System before proceeding with this test.

1. Road test the vehicle at a speed above 60 km/h (35 MPH).
2. Turn the speed control ON/OFF switch on.
3. Depress and release the SET switch. The speed control should engage.
4. Quickly depress and release the RESUME/ACCEL switch. The vehicle speed should increase by 3 km/h (2 MPH).
5. Using caution, depress and release the brake pedal. The speed control should disengage.
6. With the vehicle speed at least 60 km/h (35 MPH), depress the RESUME/ACCEL switch. The speed control should resume at the previously set speed.
7. Hold down the COAST switch. The vehicle should decelerate.
8. While still holding down the COAST switch, ensure the vehicle speed is at least 60 km/h (35 MPH) and release the COAST switch. The vehicle should adjust and set a new vehicle speed.
9. With the speed control engaged, depress the ON/OFF switch. The speed control should disengage.

Does the speed control system operate properly?

Yes

- Go to step 2

No

- Go to step 3

2. STOP LAMP SWITCH ADJUSTMENT TEST

1. Road test the vehicle at a speed above 60 km/h (35 MPH).
2. Turn the speed control ON/OFF switch on.
3. Depress and release the SET switch. The speed control should engage.
4. Using caution, lightly depress and release the brake pedal. The speed control should disengage.

Does the Speed Control disengage when the brake pedal is applied?

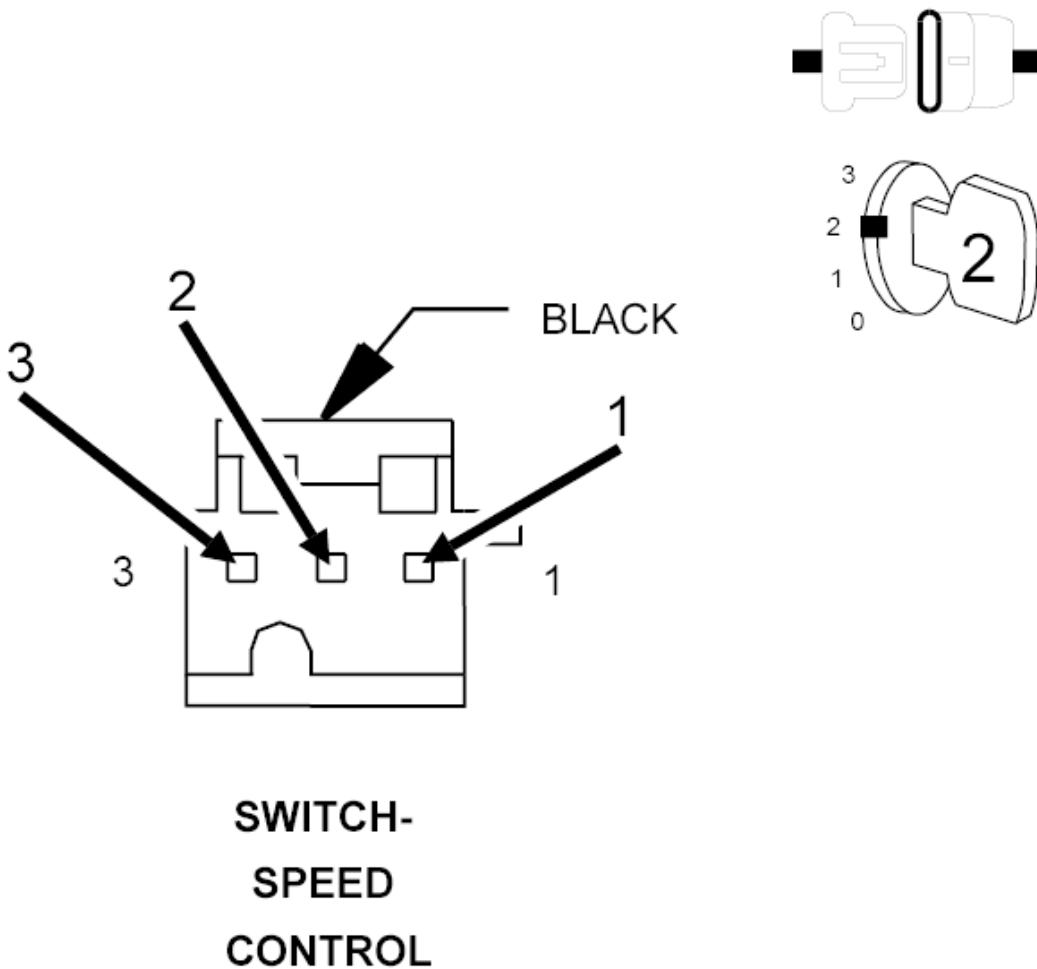
Yes

- The system is operating properly. Test Complete.

No

- The Stop Lamp Switch is adjusted incorrectly. Replace the Stop Lamp Switch in accordance with the Service Information.
- Perform the appropriate VERIFICATION TEST.

3. SPEED CONTROL SWITCH



104694

Fig. 2: Identifying Speed Control Switch

Courtesy of CHRYSLER LLC

NOTE: Refer to the following table when diagnosing the speed control switch.

-	Switch 1 voltage	Switch 2 voltage
On/Off - Min.	0.5882	3.5294
On/Off -	1.1373	3.9216

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Speed Control - Non-DTC-Based Diagnostics - Journey

Max.		
Set - Min.	3.1569	1.1765
Set - Max.	3.5686	1.5686
Cancel - Min.	1.5882	2.8431
Cancel - Max.	2.0000	3.2549
Accel - Min.	3.8824	2.0392
Accel - Max.	4.1765	2.4706

1. Turn the ignition off.
2. Remove the Speed Control Switch in accordance with the Service Information.
3. Turn the ignition on.
4. With a scan tool, read the (V37) S/C Signal 1 and (V38) S/C Signal 2 voltages.

NOTE: The voltages should be above 4.8 Volts with the Speed Control Switch harness connector disconnected.

5. Connect a jumper wire between the (V37) S/C Signal 1 circuit and the (V937) S/C Switch Ground circuit in the Speed Control Switch harness connector.
6. With a scan tool, read the (V37) S/C Signal 1 voltage.

NOTE: The (V37) S/C Signal 1 voltage should be below .2 of a Volt with the jumper wire in place.

7. Connect a jumper wire between the (V38) S/C Signal 2 circuit and the (V937) S/C Switch Ground circuit in the Speed Control Switch harness connector.
8. With a scan tool, read the (V38) S/C Signal 2 voltage.

NOTE: The (V38) S/C Signal 2 voltage should be below .2 of a Volt with the jumper wire in place.

Are the Speed Control voltages displayed as described?

Yes

- Replace the Speed Control Switch in accordance with the Service Information.
- Perform the appropriate VERIFICATION TEST.

No

- Go to step 4

4. CLOCKSPRING

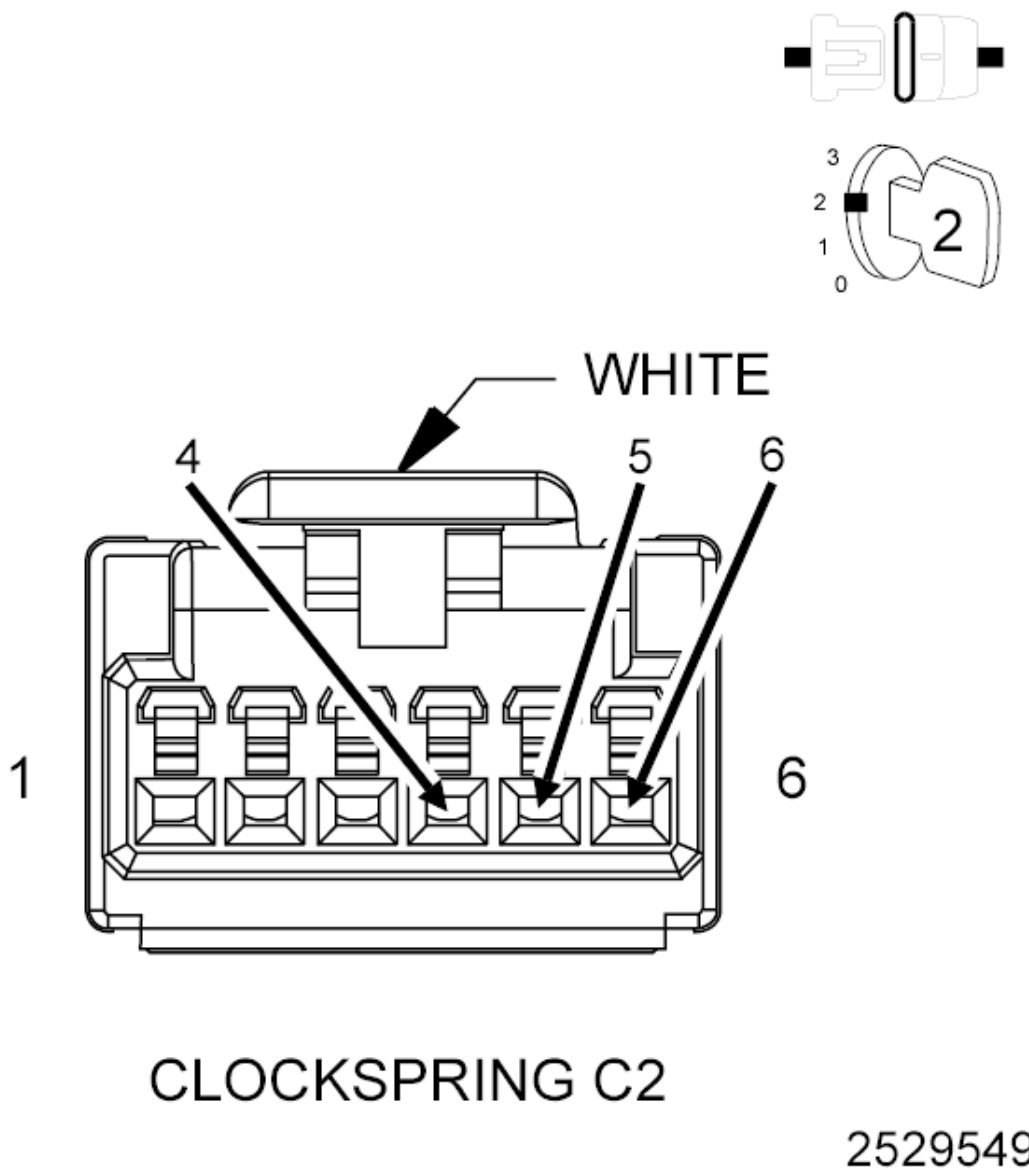


Fig. 3: Identifying Clockspring C2 Connector Terminals
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Clockspring C2 connector.
3. Turn the ignition on.
4. With a scan tool, read the (V37) S/C Signal 1 and (V38) S/C Signal 2 voltages.

NOTE: The voltages should be above 4.8 Volts with the connector disconnected.

5. Connect a jumper wire between the (V37) S/C Signal 1 circuit and the (V937) S/C Switch Ground

circuit in the Clockspring C2 harness connector.

6. With a scan tool, read the (V37) S/C Signal 1 voltage.

NOTE: **The (V37) S/C Signal 1 voltage should be below .2 of a Volt with the jumper wire in place.**

7. Connect a jumper wire between the (V38) S/C Signal 2 circuit and the (V937) S/C Switch Ground circuit in the Clockspring C2 harness connector.
8. With a scan tool, read the (V38) S/C Signal 2 voltage.

NOTE: **The (V38) S/C Signal 2 voltage should be below .2 of a Volt with the jumper wire in place.**

Are the Speed Control voltages displayed as described?

Yes

- Replace the Clockspring in accordance with the Service Information.
- Perform the appropriate VERIFICATION TEST.

No

- Go to step 5

5. (V37) S/C SIGNAL 1 CIRCUIT SHORTED TO VOLTAGE

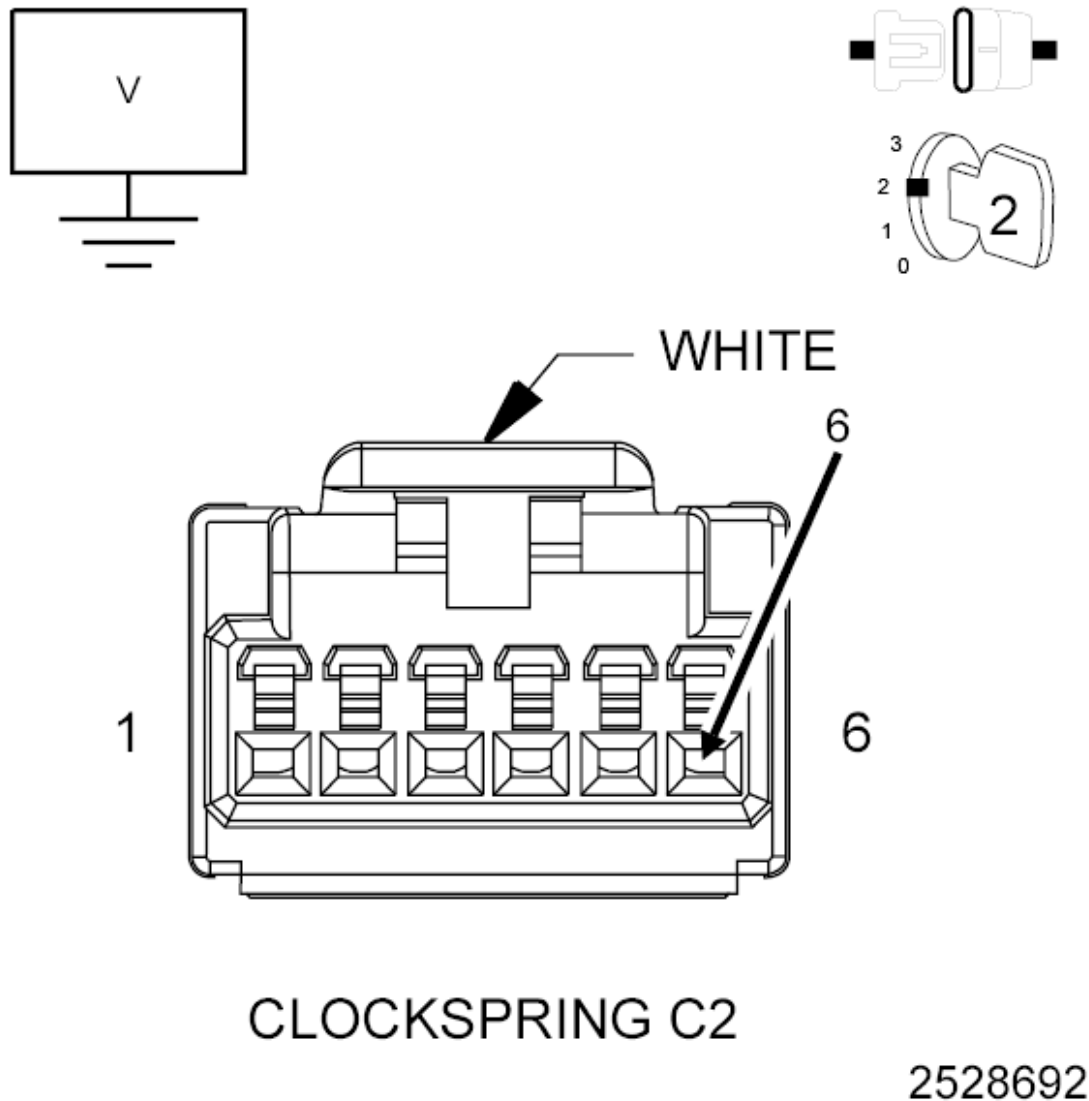


Fig. 4: Checking S/C Signal 1 Circuit For Short To Voltage
 Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Powertrain Control Module (PCM)/Engine Control Module (ECM) harness connectors.
3. Turn the ignition on.
4. Measure the voltage of the (V37) S/C Signal 1 circuit in the Clockspring C2 harness connector.

Is there any voltage present?

Yes

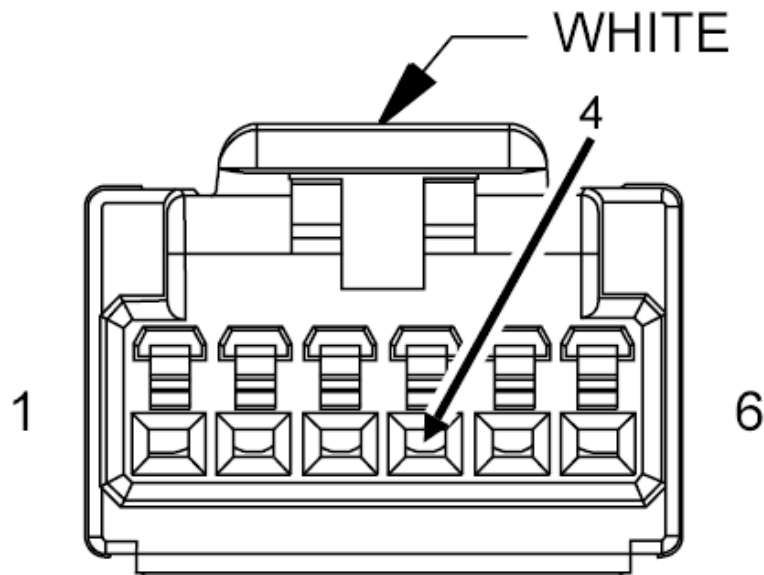
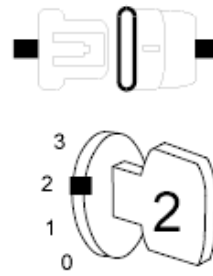
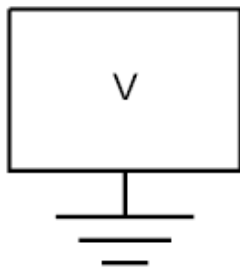
- Repair the (V37) S/C Signal 1 circuit for a short to voltage.

- Perform the appropriate VERIFICATION TEST.

No

- Go to step 6

6. (V38) S/C SIGNAL 2 CIRCUIT SHORTED TO VOLTAGE



CLOCKSPRING C2

2529583

Fig. 5: Checking S/C Signal 2 Circuit For Short To Voltage
Courtesy of CHRYSLER LLC

1. Measure the voltage of the (V38) S/C Signal 2 circuit in the Clockspring C2 harness connector.

Is there any voltage present?

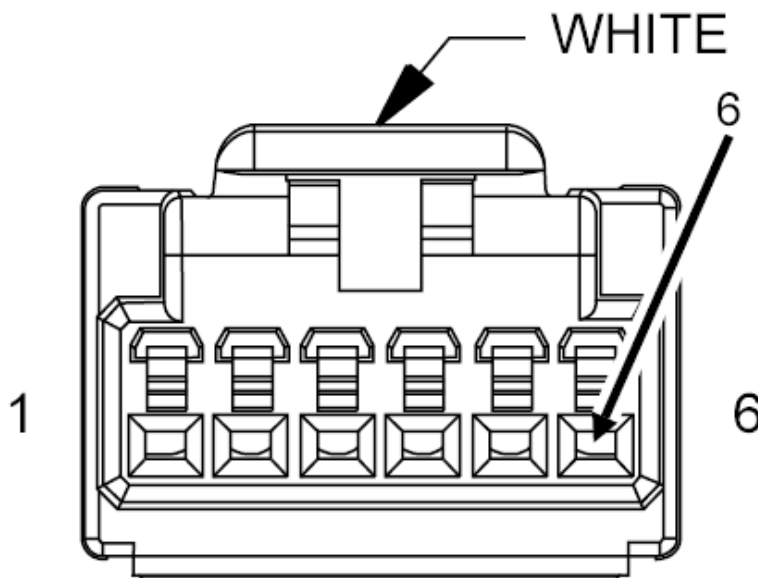
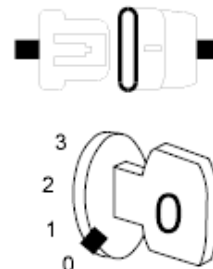
Yes

- Repair the (V38) S/C Signal 2 circuit for a short to voltage.
- Perform the appropriate VERIFICATION TEST.

No

- Go to step 7

7. (V37) S/C SIGNAL 1 CIRCUIT SHORTED TO GROUND



CLOCKSPRING C2

2528706

Fig. 6: Checking S/C Signal 1 Circuit For Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between ground and the (V37) S/C Signal 1 circuit in the Clockspring C2 harness connector.

Is the resistance above 100 Ohms?

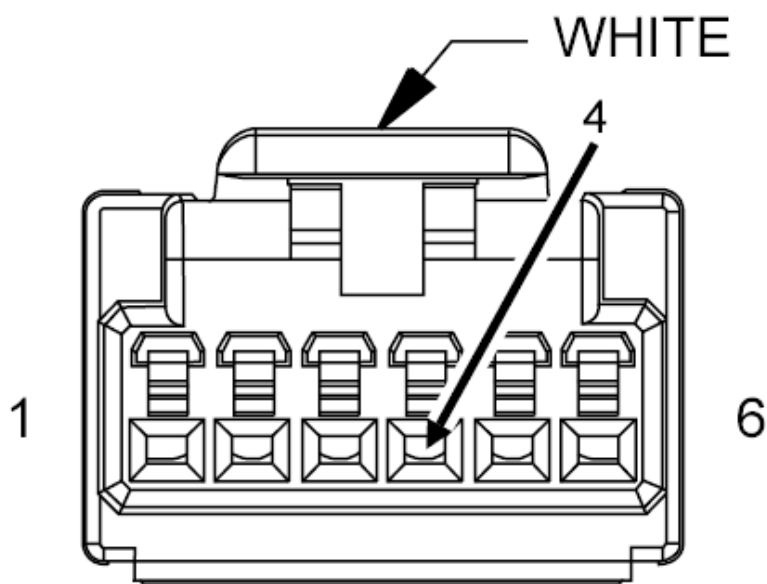
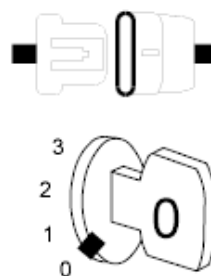
Yes

- Go to step 8

No

- Repair the (V37) S/C Signal 1 circuit for a short to ground.
- Perform the appropriate VERIFICATION TEST.

8. (V38) S/C SIGNAL 2 CIRCUIT SHORTED TO GROUND



CLOCKSPRING C2

2529605

Fig. 7: Checking S/C Signal 2 Circuit For Short To Ground
Courtesy of CHRYSLER LLC

2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Speed Control - Non-DTC-Based Diagnostics - Journey

1. Turn the ignition off.
2. Measure the resistance between ground and the (V38) S/C Signal 2 circuit in the Clockspring C2 harness connector.

Is the resistance above 100 Ohms?

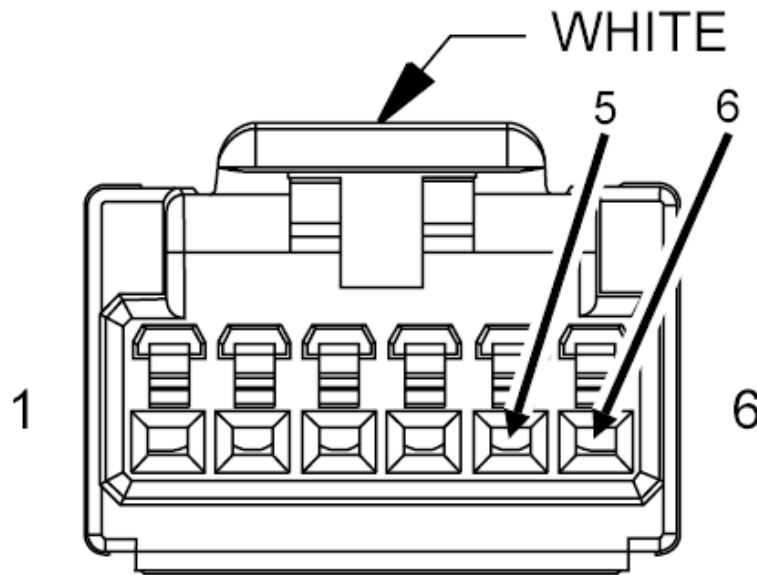
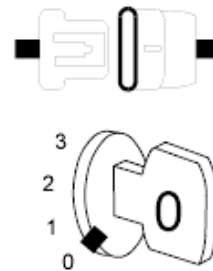
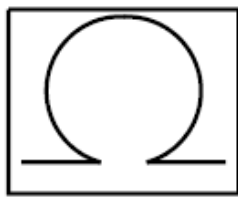
Yes

- Go to step 9

No

- Repair the (V38) S/C Signal 2 circuit for a short to ground.
- Perform the appropriate VERIFICATION TEST.

9. (V37) S/C SIGNAL 1 CIRCUIT SHORTED TO THE (V937) S/C SWITCH GROUND CIRCUIT



CLOCKSPRING C2

2528733

Fig. 8: Checking S/C Signal 1 Circuit For Short To S/C Switch Ground Circuit
Courtesy of CHRYSLER LLC

1. Measure the resistance between the (V37) S/C Signal 1 circuit and the (V937) S/C Switch Ground circuit in the Clockspring C2 harness connector.

Is the resistance above 100 Ohms?

Yes

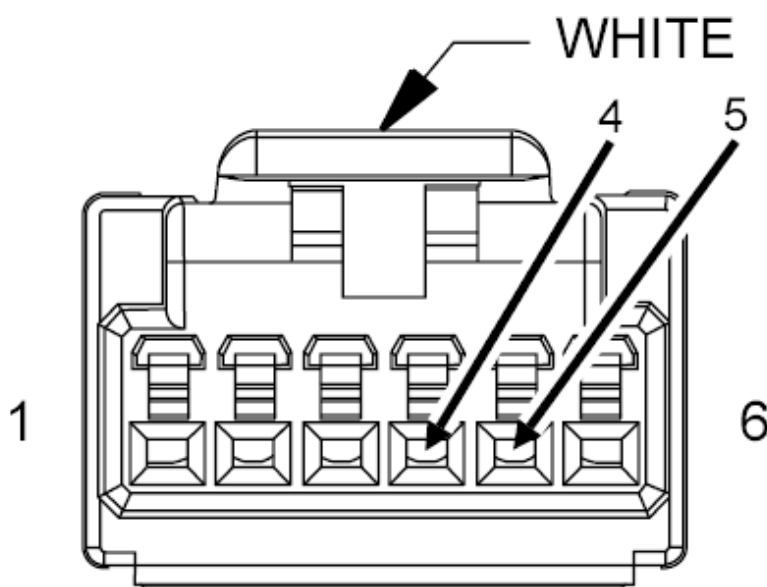
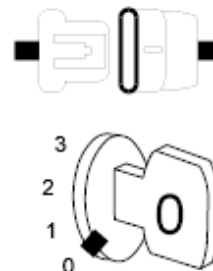
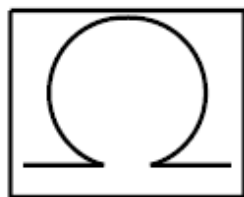
- Go to step 10

No

- Repair the (V37) S/C Signal 1 circuit for a short to the (V937) S/C Switch Ground circuit.

- Perform the appropriate VERIFICATION TEST.

10. (V38) S/C SIGNAL 2 CIRCUIT SHORTED TO THE (V937) S/C SWITCH GROUND CIRCUIT



CLOCKSPRING C2

2529620

Fig. 9: Checking S/C Signal 2 Circuit For Short To S/C Switch Ground Circuit
Courtesy of CHRYSLER LLC

1. Measure the resistance between the (V38) S/C Signal 2 circuit and the (V937) S/C Switch Ground circuit in the Clockspring C2 harness connector.

Is the resistance above 100 Ohms?

Yes

- Go to step 11

No

- Repair the (V38) S/C Signal 2 circuit for a short to the (V937) S/C Switch Ground circuit.
- Perform the appropriate VERIFICATION TEST.

11. (V37) S/C SIGNAL 1 CIRCUIT OPEN OR HIGH RESISTANCE

1. Measure the resistance of the (V37) S/C Signal 1 circuit between the Clockspring C2 harness connector and the PCM/ECM harness connector.

Is the resistance below 5.0 Ohms?

Yes

- Go to step 12

No

- Repair the (V37) S/C Signal 1 circuit for an open circuit or high resistance.
- Perform the appropriate VERIFICATION TEST.

12. (V38) S/C SIGNAL 2 CIRCUIT OPEN OR HIGH RESISTANCE

1. Measure the resistance of the (V38) S/C Signal 2 circuit between the Clockspring C2 harness connector and the PCM/ECM harness connector.

Is the resistance below 5.0 Ohms?

Yes

- Go to step 13

No

- Repair the (V38) S/C Signal 2 circuit for an open circuit or high resistance.
- Perform the appropriate VERIFICATION TEST.

13. (V937) S/C SWITCH GROUND CIRCUIT OPEN OR HIGH RESISTANCE

1. Measure the resistance of the (V937) S/C Switch Ground circuit between the Clockspring C2 harness connector and the PCM/ECM harness connector.

Is the resistance below 5.0 Ohms?

Yes

- Go to step 14

No

- Repair the (V937) S/C Switch Ground circuit for an open circuit or high resistance.
- Perform the appropriate VERIFICATION TEST.

14. PCM/ECM

1. Using the wiring diagram/schematic as a guide, inspect the wiring and harness connectors between the Speed Control Switch and the PCM/ECM.
2. Look for any chafed, pierced, pinched, or partially broken wires.
3. Look for broken, bent, pushed out or corroded terminals.
4. Perform any Technical Service Bulletins that may apply.

Were any problems found?

Yes

- Repair as necessary.
- Perform the appropriate VERIFICATION TEST.

No

- Replace the PCM/ECM in accordance with the Service Information.
- Perform the appropriate VERIFICATION TEST.