2008 ENGINE

Cruise Control - Ascender, Envoy & Trailblazer

SCHEMATIC & ROUTING DIAGRAMS

CRUISE CONTROL SCHEMATICS

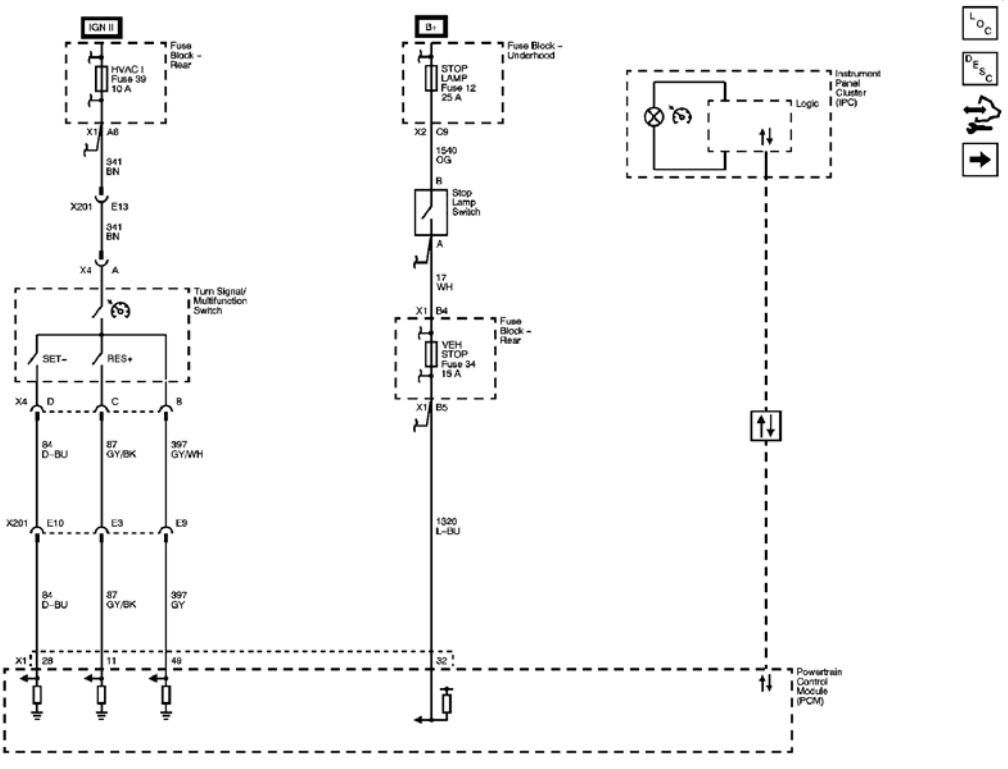

Fig. 1: 4.2L Cruise Control Schematic
Courtesy of GENERAL MOTORS CORP.

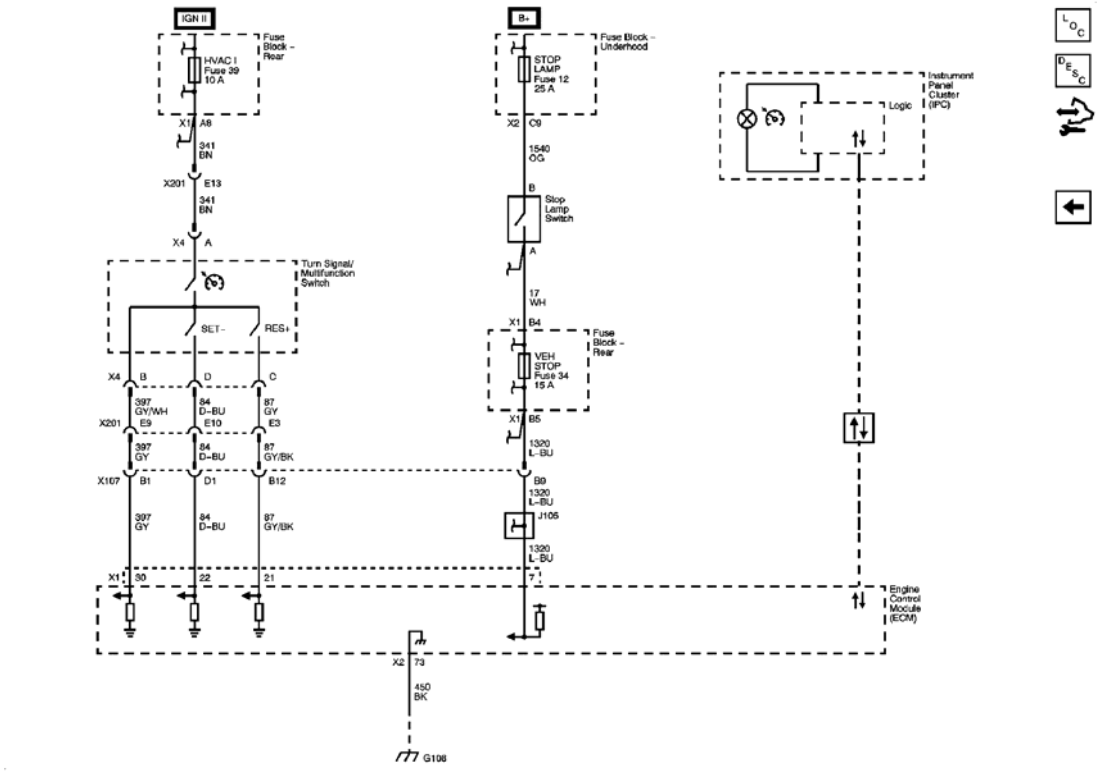

Fig. 2: 5.3L/6.0L Cruise Control Schematic
Courtesy of GENERAL MOTORS CORP.

DIAGNOSTIC INFORMATION & PROCEDURES

DIAGNOSTIC CODE INDEX

DIAGNOSTIC CODE INDEX

DTC	Description
DTC P0567	P0567 00: Cruise Control Resume Switch Circuit
DTC P0568	P0568 00: Cruise Control Set Switch Circuit
DTC P1574	P1574 00: Stop Lamp Switch Circuit

DIAGNOSTIC STARTING POINT - CRUISE CONTROL

Begin the system diagnosis with the **Diagnostic System Check - Vehicle** . The Diagnostic System Check will provide the following information:

- The identification of the control modules which command the system
- The ability of the control modules to communicate through the serial data circuit
- The identification of any stored DTCs and their status

The use of the Diagnostic System Check will identify the correct procedure for diagnosing the system and where the procedure is located.

DTC P0567

Diagnostic Instructions

- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.
- Review **Strategy Based Diagnosis** for an overview of the diagnostic approach.
- **Diagnostic Procedure Instructions** provides an overview of each diagnostic category.

DTC Descriptor

DTC P0567 00

Cruise Control Resume Switch Circuit

Diagnostic Fault Information

Circuit	Short to Ground	High Resistance	Open	Short to Voltage	Signal Performance
Cruise Control Resume/Accel. Switch Signal	1	-	1	P0567	-
Cruise Control Switch Supply Voltage	1	1	1	-	-
1. Cruise Control Inoperative					

Circuit/System Description

The cruise control switch is an input to the engine control module (ECM). The ECM monitors the cruise control switch signal circuits in order to detect when a cruise control function switch has been activated. The ECM detects a voltage signal when a cruise control function switch is applied.

Conditions for Running the DTC

- The ignition is ON.
- The cruise control switch is ON.

Conditions for Setting the DTC

The ECM detects that the resume/accel switch is applied for longer than 90 seconds.

Action Taken When the DTC Sets

- The ECM stores the DTC information into memory when the diagnostic runs and fails.
- The malfunction indicator lamp (MIL) will not illuminate.

- The ECM records the operating conditions at the time the diagnostic fails. The ECM stores this information in the Failure Records.
- The cruise control system is disabled.

Conditions for Clearing the DTC

- A last test failed, or the current DTC, clears when the diagnostic runs and does fail.
- A history DTC clears after 40 consecutive warm-up cycles.

Diagnostic Aids

Ensure that the resume/accel switch is not stuck or sticking in the pressed position.

Reference Information

Schematic Reference

Cruise Control Schematics

Connector End View Reference

Component Connector End Views

Description and Operation

Cruise Control Description and Operation

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

Ignition ON, Cruise Control Switch ON, verify that the Cruise Resume/Accel. Switch parameter reads Inactive (OFF). The switch parameter should change to Active (ON) and back to Inactive (OFF) as the switch is pressed and released.

Circuit/System Testing

1. Ignition OFF, disable the SIR system. Refer to **SIR Disabling and Enabling** .
2. Disconnect the turn signal multifunction switch harness connector X4.
3. Ignition ON, verify that the scan tool Cruise Resume/Accel. Switch parameter displays Off or Inactive.
    - If the scan tool parameter reads On, Active or Invalid, test the cruise control resume/accel switch signal circuit for a short to voltage. If the circuit tests normal, replace the ECM.
4. Connect a 3 amp fused jumper between terminals A and C of the turn signal multifunction switch harness connector X4. Verify that the scan tool Cruise Resume/Accel. Switch parameter displays On.
    - If the scan tool parameter reads Off test the cruise control resume/accel. switch signal circuit for an open/high resistance. If the circuit tests normal, replace the ECM.
5. If the circuit tests normal, test or replace the cruise control switch assembly.

Component Testing

1. Ignition OFF, disable the SIR system. Refer to **SIR Disabling and Enabling** .
2. Disconnect the turn signal multifunction switch harness connector X4.
3. Turn the cruise control ON/OFF switch ON.
4. Test for infinite resistance between terminals A and C of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.
5. Press and hold the resume/accel switch. Test for less than 1 ohm resistance between terminals A and C of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.

Repair Procedures

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Turn Signal Multifunction Switch Replacement**
- **Control Module References** for ECM replacement, setup, and programming

DTC P0568

Diagnostic Instructions

- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.
- Review **Strategy Based Diagnosis** for an overview of the diagnostic approach.
- **Diagnostic Procedure Instructions** provides an overview of each diagnostic category.

DTC Descriptor

DTC P0568 00

Cruise Control Set Switch Circuit

Diagnostic Fault Information

Circuit	Short to Ground	High Resistance	Open	Short to Voltage	Signal Performance
Cruise Control Set/Coast Switch Signal	1	-	1	P0568	-
Cruise Control Switch Supply Voltage	1	1	1	-	-
1. Cruise Control Inoperative					

Circuit/System Description

The cruise control switch is an input to the engine control module (ECM). The ECM monitors the cruise control switch signal circuits in order to detect when a cruise control function switch has been activated. The ECM detects a voltage signal when a cruise control function switch is applied.

Conditions for Running the DTC

- The ignition is ON.
- The cruise control switch is ON.

Conditions for Setting the DTC

The ECM detects that the set/coast switch is applied for longer than 90 seconds.

Action Taken When the DTC Sets

- The ECM stores the DTC information into memory when the diagnostic runs and fails.
- The malfunction indicator lamp (MIL) will not illuminate.
- The ECM records the operating conditions at the time the diagnostic fails. The ECM stores this information in the Failure Records.
- The cruise control system is disabled.

Conditions for Clearing the DTC

- A last test failed, or the current DTC, clears when the diagnostic runs and does fail.
- A history DTC clears after 40 consecutive warm-up cycles.

Diagnostic Aids

Ensure that the set/coast switch is not stuck or sticking in the pressed position.

Reference Information

Schematic Reference

Cruise Control Schematics

Connector End View Reference

Component Connector End Views

Description and Operation

Cruise Control Description and Operation

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

Ignition ON, Cruise Control Switch ON, verify that the Cruise Set/Coast Switch parameter reads Inactive (OFF). The switch parameter should change to Active (ON) and back to Inactive (OFF) as the switch is pressed and released.

Circuit/System Testing

1. Ignition OFF, disable the SIR system. Refer to **SIR Disabling and Enabling** .
2. Disconnect the turn signal multifunction switch harness connector X4.
3. Ignition ON, verify that the scan tool Cruise Set/Coast Switch parameter displays Off or Inactive.
    - If the scan tool parameter reads On, Active or Invalid, test the cruise control set/coast switch signal circuit for a short to voltage. If the circuit tests normal, replace the ECM.
4. Connect a 3 amp fused jumper between terminals A and D of the turn signal multifunction switch harness connector X4. Verify that the scan tool Cruise Set/Coast Switch parameter displays On.
    - If the scan tool parameter reads Off test the cruise control set/coast switch signal circuit for an open/high resistance. If the circuit tests normal, replace the ECM.
5. If the circuit tests normal, test or replace the cruise control switch.

Component Testing

1. Ignition OFF, disable the SIR system. Refer to **SIR Disabling and Enabling** .
2. Disconnect the turn signal multifunction switch harness connector X4.

3. Turn the cruise control ON/OFF switch ON.
4. Test for infinite resistance between terminals A and D of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.
5. Press and hold the set/coast switch. Test for less than 1 ohm resistance between terminals A and D of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.

Repair Procedures

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Turn Signal Multifunction Switch Replacement**
- **Control Module References** for ECM replacement, setup, and programming

DTC P1574

Diagnostic Instructions

- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.
- Review **Strategy Based Diagnosis** for an overview of the diagnostic approach.
- **Diagnostic Procedure Instructions** provides an overview of each diagnostic category.

DTC Descriptor

DTC P1574 00

Stop Lamp Switch Circuit

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
TCC Brake Switch/Cruise Control Release Signal	P1574	P1574	P1574	-
Stop Lamp Switch Ignition Voltage Supply	P1574	P1574	-	-

Circuit/System Description

This diagnostic test functions on the assumption that a sudden decrease in vehicle speed is caused by a brake pedal application. When the engine control module (ECM) detects that there is a 4.2 km/h (2.6 mph) or greater decrease in vehicle speed within 0.25 second and a transition of the torque converter clutch (TCC) brake switch circuit without a transition of the stop lamp switch circuit, the ECM sets DTC P1574.

Conditions for Running the DTC

- DTCs P0502, P0503, P0719, and P0724 are not set.
- The engine speed is greater than 700 RPM.
- The traction control system or the antilock brake system are not active and have not failed.
- The vehicle speed is greater than 48 km/h (30 mph) in order to enable the diagnostic.
- The diagnostic will disable when the wheel speed is less than 16 km/h (10 mph).

Conditions for Setting the DTC

- The vehicle speed decreases by at least 4.2 km/h (2.6 mph) within 0.25 second.
- The ECM detects a TCC brake transition.
- The ECM does not detect a stop lamp switch transition.

Action Taken When the DTC Sets

- The ECM sets the stop lamp switch status to released.
- The ECM disables the operation of the cruise control system.

Conditions for Clearing the DTC

- The history DTC clears after 40 malfunction-free warm-up cycles.
- The DTC becomes history when the conditions for setting the DTC are no longer present.
- The ECM receives the clear code command from the scan tool.

Diagnostic Aids

Ensure the stop lamps operate properly. Refer to **Exterior Lighting Systems Description and Operation** in order to avoid misdiagnosis.

Reference Information

Schematic Reference

- **Cruise Control Schematics**
- **Exterior Lights Schematics**
- **Antilock Brake System Schematics**

Connector End View Reference

Component Connector End Views

Description and Operation

Cruise Control Description and Operation

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

Ignition ON, observe the TCC/Cruise Brake Pedal parameter while applying and releasing the brake pedal. The reading should change between Applied/Released, and all brake lights should turn ON and OFF accordingly.

Circuit/System Testing

1. Ignition ON, verify the TCC/Cruise Brake Pedal parameter displays Released.
    - If the parameter reads Applied, test the TCC Brake Switch/Cruise Control Release Signal circuit for a short to voltage. If the circuit tests normal, test or replace the stop lamp switch.
2. Disconnect the stop lamp switch.
3. Ignition ON, test for B+ at terminal D of the stop lamp switch harness.
    - If less than the specified value, test the ignition voltage supply circuit for an open/high resistance or short to ground.
4. Reconnect the stop lamp switch and apply the brake pedal. Verify the TCC/Cruise Brake Pedal parameter displays Applied.
    - If the parameter reads Released, test the TCC Brake Switch/Cruise Control Release Signal circuit for an open/high resistance or short to ground. If the circuit tests normal, test or replace the stop lamp switch.
5. If all circuit and component tests are normal, replace the ECM.

Component Testing

1. Ignition OFF, disconnect the harness connector at the stop lamp switch.
2. Test for less than 1 ohm resistance between terminals C and D of the switch.
    - If not the specified value, replace the stop lamp switch.
3. Depress the brake pedal. Test for infinite resistance between terminals C and D of the switch.
    - If not the specified value, replace the stop lamp switch.

Repair Procedures

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Stop Lamp Switch Replacement**
- **Control Module References** for ECM module replacement, setup, and programming

SYMPTOMS - CRUISE CONTROL

IMPORTANT: The following steps must be completed before using the symptom tables.

1. Before using the symptom diagnostic table, perform the **Diagnostic System Check - Vehicle** , in order to verify the following conditions:
   - There are no DTCs set.
   - The module can communicate via the serial data link.
2. Review the system operation in order to understand the system functions. Refer to **Cruise Control Description and Operation**.

Visual/Physical Inspection

- Inspect for aftermarket devices which can affect the operation of the cruise control system. Refer to **Checking Aftermarket Accessories** .
- Inspect the accessible system components or the visible system components for obvious damage or for obvious conditions which can cause the symptom.

Intermittent

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer to **Testing for Intermittent Conditions and Poor Connections** .

Symptom List

Refer to a symptom diagnostic procedure from the following list in order to diagnose the symptom:

- **Cruise Control Malfunction**
- **Cruise Control Indicator Malfunction (IPC Indicator Malfunction)**

CRUISE CONTROL INDICATOR MALFUNCTION (IPC INDICATOR MALFUNCTION)

Diagnostic Instructions

- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.
- Review **Strategy Based Diagnosis** for an overview of the diagnostic approach.
- **Diagnostic Procedure Instructions** provides an overview of each diagnostic category.

Circuit/System Description

The instrument panel cluster (IPC) illuminates the cruise control engaged indicator based on serial data messages received from the engine control module (ECM) or the powertrain control module (PCM). The

indicator is commanded ON when the cruise control system is controlling vehicle speed, and turned OFF with the system disengaged.

Diagnostic Aids

- This diagnostic assumes the cruise control system is functioning normally and there are no DTCs set. If the cruise control system is malfunctioning, refer to **Cruise Control Malfunction**.
- If any DTCs are set, refer to **Diagnostic Trouble Code (DTC) List - Vehicle** .

Reference Information

Schematic Reference

- **Cruise Control Schematics**
- **Instrument Cluster Schematics**

Connector End View Reference

Component Connector End Views

Description and Operation

- **Cruise Control Description and Operation**
- **Indicator/Warning Message Description and Operation**

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

Ignition ON, perform the IPC display test using a scan tool. Verify the indicator illuminates and turns OFF.

- If the indicator does not operate as expected during this test, replace the IPC.
- If the indicator functions normally during this test, replace the ECM/PCM.

Repair Procedures

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

Control Module References for ECM, PCM or IPC replacement, setup and programming

CRUISE CONTROL MALFUNCTION

Diagnostic Instructions

- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.
- Review **Strategy Based Diagnosis** for an overview of the diagnostic approach.
- **Diagnostic Procedure Instructions** provides an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	High Resistance	Open	Short to Voltage	Signal Performance
Cruise Control ON Switch Signal	1	-	1		-
Cruise Control Resume/Accel. Switch Signal	1	-	2	P0567	-
Cruise Control Set/Coast Switch Signal	1	-	1	P0568	-
Cruise Control Switch Supply Voltage	1	1	1	-	-
1. Cruise Control Inoperative 2. Resume/Accel. Functions Inoperative					

Circuit/System Description

The cruise control switch is an input to the engine control module (ECM). The ECM monitors the cruise control switch signal circuits in order to detect when a cruise control function switch has been activated. The ECM detects a voltage signal when a cruise control function switch is applied.

Reference Information

Schematic Reference

Cruise Control Schematics

Connector End View Reference

Component Connector End Views

Description and Operation

Cruise Control Description and Operation

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

Ignition ON, Cruise Control Switch ON, verify that the Cruise Set/Coast and Cruise Resume/Accel. Switch parameters read Inactive (OFF). The switch parameter should change to Active (ON) and back to Inactive (OFF) as the switch is pressed and released.

Circuit/System Testing

IMPORTANT: In order to avoid misdiagnosis, inspect for the following:

- **Verify there are no DTCs set as current. If any DTCs are set as current, refer to Diagnostic Trouble Code (DTC) List - Vehicle and perform the appropriate diagnostics/repairs before proceeding with symptom based diagnostics**
- **Inspect the cruise control switches for any sticking or binding conditions.**
- **Inspect for proper operation of the stop lamps. Refer to Exterior Lighting Systems Description and Operation .**

1. Ignition OFF, disable the SIR system. Refer to **SIR Disabling and Enabling** .
2. Disconnect the turn signal multifunction switch harness connector X4.
3. Ignition ON, verify the Cruise Control On/Off Switch parameter displays Off.
   - If the Cruise Control On/Off Switch parameter displays On, test the cruise ON switch signal circuit for a short to voltage. If the circuit tests normal, replace the ECM.
4. Test for B+ between the turn signal multifunction switch harness connector X4 terminal A and ground.
   - If the reading is less than specified, test the cruise control switch voltage supply circuit for an open or high resistance.
5. Connect a 3-amp fused jumper between terminals A and B of the turn signal multifunction switch harness connector X4. Verify the Cruise Control On/Off Switch parameter displays On.
   - If the Cruise On/Off Switch parameter displays Off, test the cruise control ON switch signal circuit for an open/high resistance or short to ground. If the circuit tests normal, replace the ECM.
6. Verify the Cruise Control Resume/Accel. Switch parameter displays Off.
   - If the Cruise Control Resume/Accel. Switch parameter displays On, test the cruise control

resume/accel. switch signal circuit for a short to voltage. If the circuit tests normal, replace the ECM.

7. Connect a 3-amp fused jumper between terminals A and C of the turn signal multifunction switch harness connector X4. Verify the Cruise Control Resume/Accel. Switch parameter displays On.
    - If the Cruise Resume/Accel. Switch parameter displays Off, test the cruise control resume/accel. switch signal circuit for an open/high resistance or short to ground. If the circuit tests normal, replace the ECM.
8. Verify the Cruise Control Set/Coast Switch parameter displays Off.
    - If the Cruise Control Set/Coast Switch parameter displays On, test the cruise control set/coast switch signal circuit for a short to voltage. If the circuit tests normal, replace the ECM.
9. Connect a 3-amp fused jumper between terminals A and D of the turn signal multifunction switch harness connector X4. Verify the Cruise Control Set/Coast Switch parameter displays On.
    - If the Cruise Control Set/Coast Switch parameter displays Off, test the cruise control set/coast switch signal circuit for an open/high resistance or short to ground. If the circuit tests normal, replace the ECM.
10. If all circuits test normal, replace the cruise control switch.

Component Testing

1. Ignition OFF, disable the SIR system. Refer to **SIR Disabling and Enabling** .
2. Disconnect the turn signal multifunction switch harness connector X4.
3. Test for infinite resistance between terminals A and B of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.
4. Turn the cruise control ON/OFF switch ON. Test for less than 1 ohm between terminals A and B of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.
5. Test for infinite resistance between terminals A and D of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.
6. Press and hold the set/coast switch. Test for less than 1 ohm between terminals A and D of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.
7. Test for infinite resistance between terminals A and C of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.
8. Press and hold the resume/accel. switch. Test for less than 1 ohm between terminals A and C of the turn signal multifunction switch.
    - If not the specified value, replace the turn signal multifunction switch.

Repair Procedures

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Turn Signal Multifunction Switch Replacement**

- **Control Module References** for ECM replacement, setup, and programming

DESCRIPTION & OPERATION

CRUISE CONTROL DESCRIPTION & OPERATION

Cruise control is a speed control system that maintains a desired vehicle speed under normal driving conditions at vehicle speeds above 40 km/h (25 mph). Steep grades may cause variations in the selected vehicle speed.

The following are the main components of the Cruise Control System:

- The engine control module (ECM)
- The on/off switch
- The resume/accel switch
- The set/coast switch
- The torque converter clutch (TCC) brake/cruise release switch
- The stop lamp switch
- The throttle actuator control (TAC) motor
- The vehicle speed sensor (VSS)

Cruise Control Engaged

The Cruise Control System will engage and adjust the vehicle speed based on the activation of the following cruise control switches:

- On/off
- Resume/accel.
- Set/coast

The engine control module (ECM) monitors the signal circuits of the cruise control switches in order to determine when to capture and maintain the selected vehicle speed. The ECM uses the throttle actuator control (TAC) motor in order to control the vehicle speed. For further information on the TAC system, refer to **Throttle Actuator Control (TAC) System Description** for the 4.2L engine, or Throttle Actuator Control (TAC) System Description for the 5.3L and 6.0L engines.

Ignition positive voltage is supplied from the 10-amp HVAC 1 fuse to the cruise control switch via a switched ignition voltage circuit. When the normally open cruise control on/off switch is turned ON, the switch closes and the ECM detects a high signal voltage on the cruise control on switch signal circuit. When the normally open set/coast switch is pressed, the switch closes and the ECM detects a high signal voltage on the cruise control set/coast switch signal circuit. To engage the Cruise Control System, turn the on/off switch ON and momentarily press the set/coast switch. The ECM will confirm that the cruise control enable criteria has been achieved. The ECM will engage the Cruise Control System and record the selected vehicle speed. The ECM also sends a serial data message to the instrument panel cluster (IPC) to illuminate the cruise engaged indicator.

Pressing the accelerator pedal, while the Cruise Control System is engaged, will allow the driver to override the Cruise Control System in order to accelerate the vehicle beyond the current set vehicle speed. When the accelerator pedal is released, the vehicle will decelerate and resume the current set vehicle speed. The driver can also override the current set vehicle speed via the set/coast switch and the resume/accel switch. When the Cruise Control System is engaged, pressing and holding the set/coast switch will allow the vehicle to decelerate from the current set vehicle speed without deactivating the Cruise Control System. When the set/coast switch is released, the ECM will record and maintain the vehicle speed as the new set vehicle speed. Momentarily pressing the set/coast switch will allow the vehicle to decelerate at 1.6 km/h (1 mph) increments for each time that the set/coast is momentarily pressed, with a minimum vehicle speed of 37 km/h (23 mph).

When the normally open resume/accel switch is activated, the switch closes and the ECM detects a high signal voltage on the cruise control resume/accel switch signal circuit. Activating and holding the resume/accel switch, when the Cruise Control System is engaged, will allow the vehicle to accelerate to a greater vehicle speed than the current set vehicle speed. When the resume/accel switch is released, the ECM will record and maintain the vehicle speed as the new set vehicle speed. Momentarily activating the resume/accel switch will allow the vehicle to accelerate at 1.6 km/h (1 mph) increments for each time that the resume/accel switch is momentarily activated, with the maximum acceleration total of 16 km/h (10 mph) over the current set vehicle speed. Momentarily activating the resume/accel switch, after the Cruise Control System has been disengaged by pressing the brake pedal, will recall the previous set vehicle speed that is recorded in the ECM.

Cruise Control Disengaged

The engine control module (ECM) disengages the cruise control operation based on the signals from the following switches:

- The on/off switch
- The torque converter clutch (TCC) brake/cruise release switch
- The stop lamp switch

The TCC brake/cruise release switch and the stop lamp switch are incorporated into an assembly and are mounted to the brake pedal bracket. Pressing the brake pedal while the cruise control is engaged will disengaged the Cruise Control System. The ECM monitors the TCC brake switch/cruise control release signal circuit and the stop lamp switch signal circuit. When the brake pedal is pressed, the normally closed TCC brake switch opens and the normally open stop lamp switch closes. The ECM detects a low signal voltage on the TCC brake switch/cruise control release signal circuit and detects a high signal voltage on the stop lamp switch signal circuit, and disengages the cruise control system.

The Cruise Control System will disengage when the ECM detects that the accelerator pedal override is active for greater than 60 seconds.

The Cruise Control System will disengage when the cruise control on/off switch is turned OFF. The vehicle speed stored in the memory of the ECM will be erased when the cruise control on/off switch is turned to OFF, or the ignition switch is turned OFF.

When the Cruise Control System is disengaged, the ECM sends a serial data message to the instrument panel cluster (IPC) in order to deactivate the cruise engaged indicator.

Cruise Control Inhibited

The engine control module (ECM) inhibits the cruise control operation when any of the following conditions exist:

- A Cruise Control System related DTC has been set.
- The vehicle speed is less than 40 km/h (25 mph).
- The vehicle is in PARK, REVERSE, NEUTRAL, or 1st gear.
- The engine RPM is too low.
- The engine RPM is too high.
- The vehicle speed is too high.
- The system voltage is not between 9-16 volts.
- The antilock brake system/traction control system (TCS) is active for more than 2 seconds.