Cruise Control

Schematic and Routing Diagrams

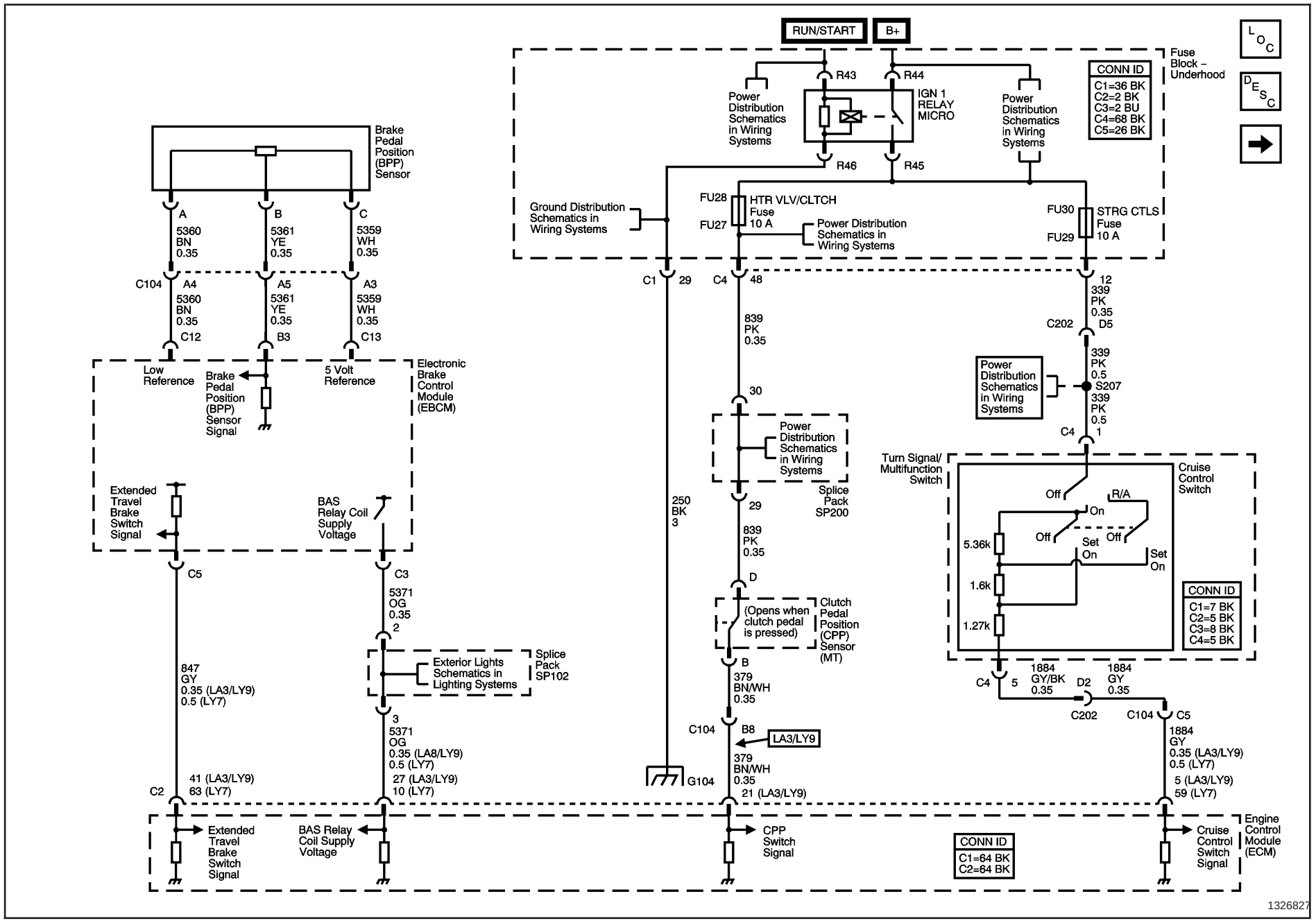
SIE-ID = 1333040 Owner = jsumme01 LMD = 15-may-2003 LMB = jsumme01

Cruise Control Schematic Icons

Icon	Icon Definition
 296880	**Important:** Twisted-pair wires provide an effective ″shield″ that helps protect sensitive electronic components from electrical interference. If the wires were covered with shielding, install new shielding. In order to prevent electrical interference from degrading the performance of the connected components, you must maintain the proper specification when making any repairs to the twisted-pair wires shown: • The wires must be twisted a minimum of 10 turns per 31 cm (12 in) as measured anywhere along the length of the wires • The outside diameter of the twisted wires must not exceed 6.0 mm (0.25 in)

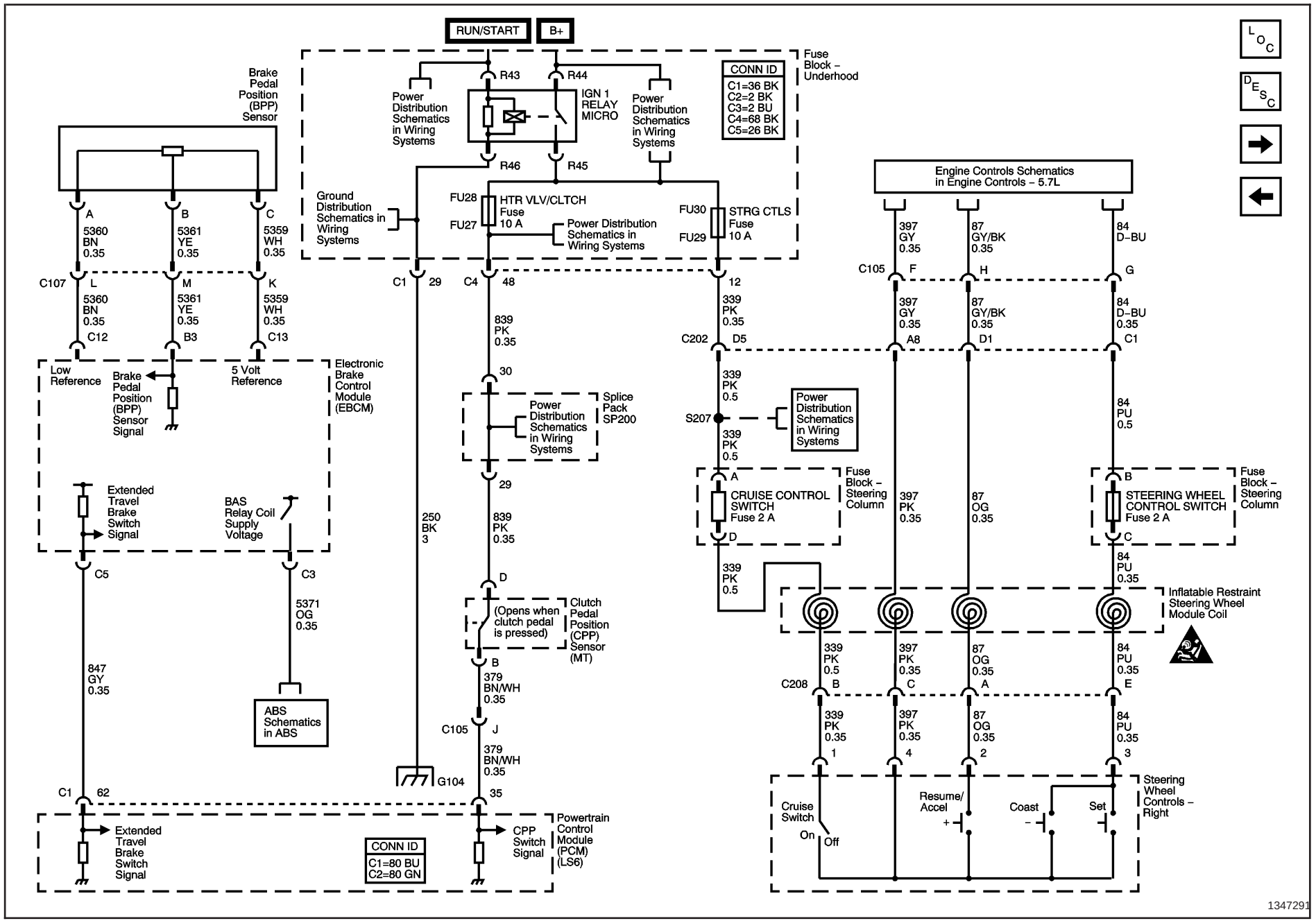
Cruise Control Schematics (Cruise Control Switch, BPP and CPP Sensors, ECM and EBCM — 2.6L/3.2L/3.6L (LY9/LA3/LY7))

SIE-ID = 1227619 SIO-ID = 1226513 LMD = 07-oct-2003



Cruise Control Schematics (Cruise Control Switch, BPP and CPP Sensors, PCM and EBCM — 5.7L (LS6))

SIE-ID = 1227619 SIO-ID = 1390565 LMD = 07-oct-2003

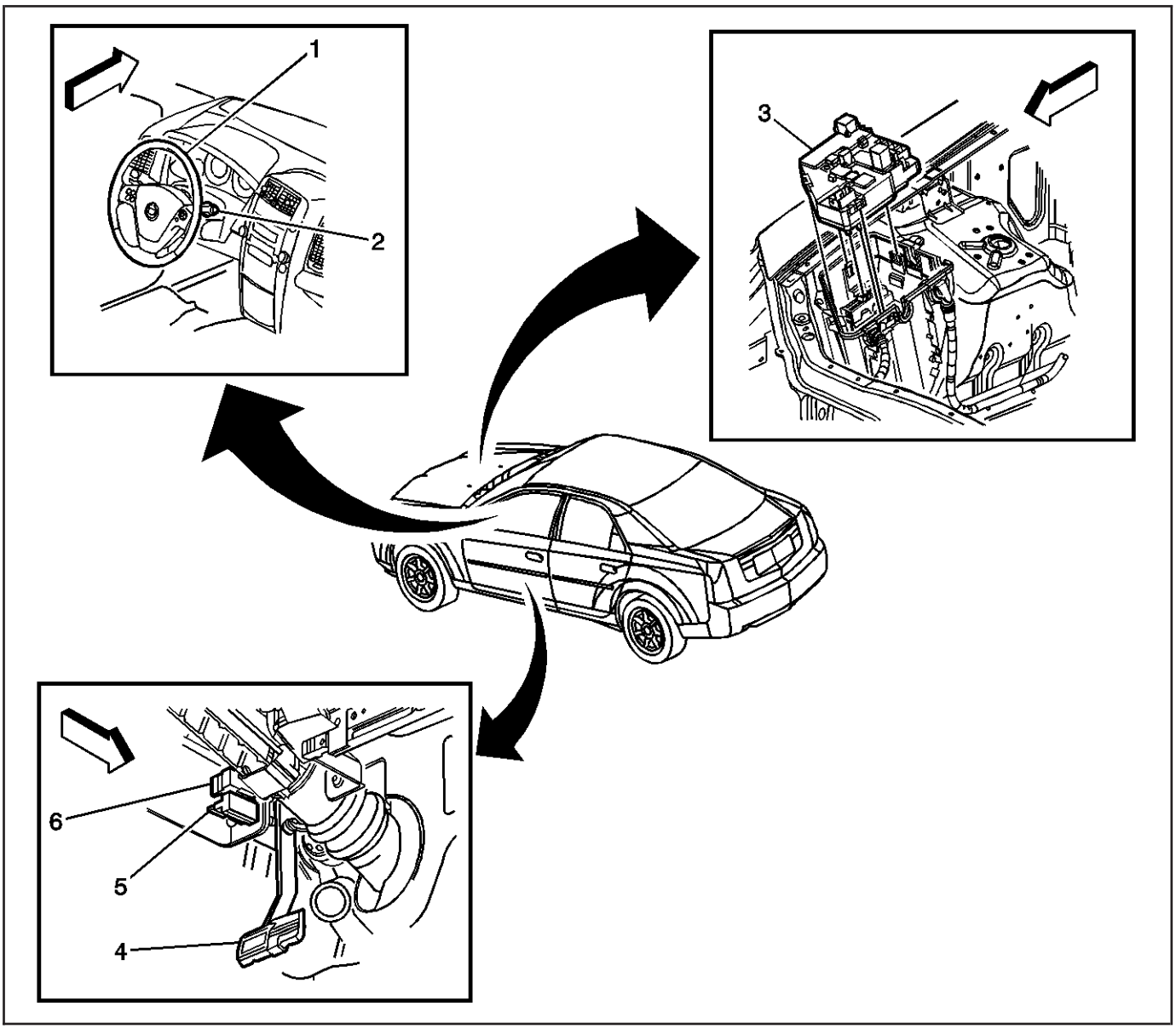


Component Locator

Cruise Control Component Views

SIE-ID = 1228040 Owner = jsumme01 LMD = 21-jan-2003 LMB = jschro01

Cruise Control Sub-System SIO-ID = 808757 LMD = 03-oct-2001



801432

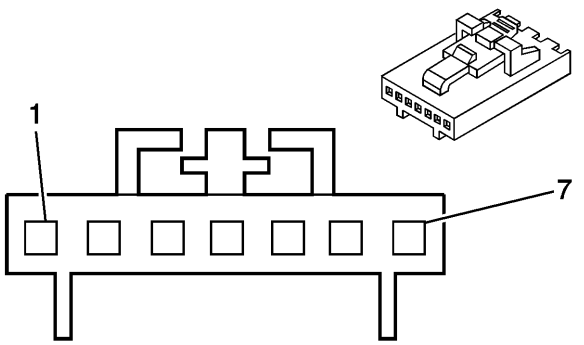
Legend

(1) Steering Wheel
(2) Cruise Control Switch
(3) Fuse Block-Underhood
(4) Brake Pedal
(5) Stop Lamp/ Auto Trans Shift Lock Control Switch
(6) Stop Lamp Switch

Cruise Control Connector End Views

SIE-ID = 1228042 Owner = jsumme01 LMD = 25-sep-2003 LMB = jsumme01

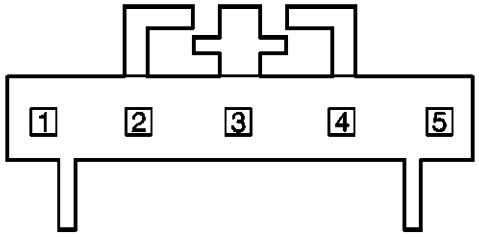
Steering Wheel Controls – Right (LS6)



1333392

Connector Part Information	• 50-57-9407 • 7-Way F Molex (BK)		
Pin	**Wire Color**	**Circuit Number**	**Function**
1	PK	339	Ignition 1 Voltage
2	OG	87	Cruise Control Resume/Accel Switch Signal
3	PU	84	Cruise Control Set/Coast Switch Signal
4	PK	397	Cruise Control On Switch Signal
5	BK	350	Ground
6	YE	1491	Backlight Lamps Control
7	—	—	Not Used

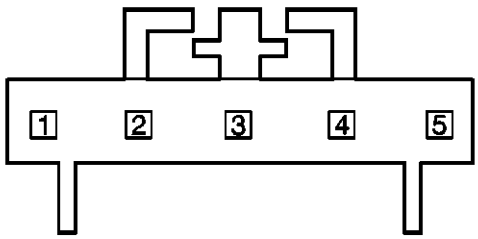
Turn Signal/Multifunction Switch C4 (LHD)



605511

Connector Part Information	• HCMW5B-05-K • 5-Way M (BK)		
Pin	**Wire Color**	**Circuit Number**	**Function**
1	PK	339	Ignition 1 Voltage
2	L-BU	187	Rear Fog Lamp Switch Signal (T79)
3	BK	350	Ground

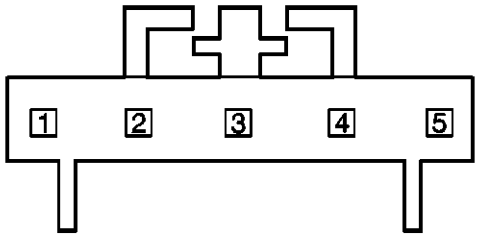
Turn Signal/Multifunction Switch C4 (LHD) (cont'd)



605511

Connector Part Information	• HCMW5B-05-K • 5-Way M (BK)		
Pin	**Wire Color**	**Circuit Number**	**Function**
4	OG	192	Front Fog Lamp Switch Signal
5	GY/BK	1884	Cruise Control Switch Signal (LA3/LY9/LY7)

Turn Signal/Multifunction Switch C4 (RHD)



605511

Connector Part Information	• HCMW5B-05-K • 5-Way M (BK)		
Pin	**Wire Color**	**Circuit Number**	**Function**
1	PK	339	Ignition 1 Voltage
2	OG	192	Front Fog Lamp Switch Signal
3	BK	350	Ground
4	L-BU	187	Rear Fog Lamp Switch Signal (T79)
5	GY/BK	1884	Cruise Control Switch Signal (LA3/LY9/LY7)

Diagnostic Information and Procedures

Diagnostic Starting Point - Cruise Control

SIE-ID = 627675 Owner = kfelik01 LMD = 22-oct-2001 LMB = ckwiat01

Begin the cruise control system diagnosis with the Diagnostic System Check. Refer to the *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*.

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 diagnostic trouble codes (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.

Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L)

SIE-ID = 1217199 Owner = kfelik01 LMD = 01-may-2003 LMB = tdedvu01

Test Description

The numbers below refer to the step numbers on the diagnostic table.

2. Lack of communication may be due to a malfunction in the Keyword or the class 2 serial data circuit. The specified procedure will determine the particular condition.
5. The presence of DTCs which begin with U indicates that some other module is not communicating. The specified procedure will compile all the available information before tests are performed.

Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L)

Step	Action	Yes	No
1	Install a scan tool. Does the scan tool power up?	Go to *Step 2*	Go to *Scan Tool Does Not Power Up on page 8-27* in Data Link Communications
2	1. Turn ON the ignition, with the engine OFF. 2. Attempt to establish communication with the following modules: • Engine Control Module (ECM) • Electronic Brake Control Module (EBCM) Does the scan tool communicate with the modules listed above?	Go to *Step 3*	Go to *Data Link References on page 8-37* in Data Link Communications
3	**Important:** The engine may start during the following step. Turn the engine OFF as soon as you have observed the Crank power mode. 1. With a scan tool, access the Class 2 Power Mode in the Diagnostic Circuit Check. 2. Rotate the ignition switch through all positions while observing the System Power Mode parameter. Does the System Power Mode parameter reading match the ignition switch position for all switch positions?	Go to *Step 4*	Go to *Power Mode Mismatch on page 8-30* in Body Control System
4	Select the DTCs function on the scan tool for the following modules: • ECM • EBCM Does the scan tool display any DTCs for the modules listed above?	Go to *Step 5*	Go to *Symptoms - Cruise Control on page 11-22*
5	Does the scan tool display any DTCs which begin with a "U"?	Go to *Diagnostic Trouble Code (DTC) List on page 8-10* in Data Link Communications	Go to *Step 6*
6	Does the scan tool display DTC P0560, P0562, P0563, P0615, P0616, P0617, P0625, P0626, P2500 or P2501?	Go to *Diagnostic Trouble Code (DTC) List on page 6-13* in Engine Electrical	Go to *Diagnostic Trouble Code (DTC) List on page 11-11*

Diagnostic System Check - Cruise Control (LS6)

SIE-ID = 1346697 Owner = kfelik01 LMD = 16-jun-2003 LMB = ckwiat01

Test Description

The numbers below refer to the step numbers on the diagnostic table.

2. Lack of communication may be due to a malfunction in the Keyword or the class 2 serial data circuit. The specified procedure will determine the particular condition.
5. The presence of DTCs which begin with U indicates that some other module is not communicating. The specified procedure will compile all the available information before tests are performed.

Diagnostic System Check - Cruise Control (LS6)

Step	Action	Yes	No
1	Install a scan tool. Does the scan tool power up?	Go to *Step 2*	Go to *Scan Tool Does Not Power Up on page 8-27* in Data Link Communications
2	1. Turn ON the ignition, with the engine OFF. 2. Attempt to establish communication with the following modules: • Engine Control Module (ECM) • Electronic Brake Control Module (EBCM) Does the scan tool communicate with the modules listed above?	Go to *Step 3*	Go to *Data Link References on page 8-37* in Data Link Communications
3	**Important:** The engine may start during the following step. Turn the engine OFF as soon as you have observed the Crank power mode. 1. With a scan tool, access the Class 2 Power Mode in the Diagnostic Circuit Check. 2. Rotate the ignition switch through all positions while observing the System Power Mode parameter. Does the System Power Mode parameter reading match the ignition switch position for all switch positions?	Go to *Step 4*	Go to *Power Mode Mismatch on page 8-30* in Body Control System
4	Select the DTCs function on the scan tool for the following modules: • ECM • EBCM Does the scan tool display any DTCs for the modules listed above?	Go to *Step 5*	Go to *Symptoms - Cruise Control on page 11-22*
5	Does the scan tool display any DTCs which begin with a ″U″?	Go to *Diagnostic Trouble Code (DTC) List on page 8-10* in Data Link Communications	Go to *Step 6*
6	Does the scan tool display DTC P0560, P0562, P0563, P0615, P0616, P0617, P0622, or P1637?	Go to *Diagnostic Trouble Code (DTC) List on page 6-13* in Engine Electrical	Go to *Diagnostic Trouble Code (DTC) List on page 11-11*

Scan Tool Data List

SIE-ID = 1217202 Owner = kfelik01 LMD = 08-oct-2003 LMB = ckwiat01

Powertrain Control Module (PCM) – 2.6L (LY9) and 3.2L (LA3)

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition ON/Engine Idling at normal operating temperature/Transmission in Park or Neutral/Cruise Control On/Off Switch Off			
Battery Voltage	TAC Data	Volts	Varies
Clutch Start Switch (If Equipped)	TAC Data	Applied/Released	Released

Powertrain Control Module (PCM) – 2.6L (LY9) and 3.2L (LA3) (cont'd)

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition ON/Engine Idling at normal operating temperature/Transmission in Park or Neutral/Cruise Control On/Off Switch Off			
Cruise Clutch Switch (If Equipped)	TAC Data	Applied/Released	Released
Cruise Engaged	TAC Data	No/Yes	No
Cruise On/Off Switch	TAC Data	On/Off	Off
Cruise Release Brake Pedal Switch	TAC Data	Applied/Released	Released
Cruise Resume/Accel. Switch	TAC Data	On/Off	Off
Cruise Set/Coast Switch	TAC Data	On/Off	Off
Cruise — VSS Out of Range	TAC Data	No/Yes	Yes
Engine Speed	TAC Data	RPM	Varies
Extended Travel Brake Pedal Switch	TAC Data	Applied/Released	Released
Stoplamp Pedal Switch	TAC Data	Applied/Released	Released
Vehicle Speed	TAC Data	km/h (mph)	0 km/h (0 mph)

Powertrain Control Module (PCM) – 3.6L (LY7)

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition ON/Engine Idling at normal operating temperature/Transmission in Park or Neutral/Cruise Control On/Off Switch Off			
Cruise Control Active	Cruise/Traction Data	Yes/No	No
Cruise Disengage 1–8 History	Cruise/Traction Data	Last Reason for Cruise Control Disengagement	Varies
Cruise Inhibited	Cruise/Traction Data	Ok/Fault	Ok
Cruise Inhibit Reason	Cruise/Traction Data	Reason why the Cruise Control System is Inhibited	Varies
Cruise Resume/Accel. Switch	Cruise/Traction Data	On/Off	Off
Cruise Set/Coast Switch	Cruise/Traction Data	On/Off	Off
Engine Speed	Cruise/Traction Data	RPM	Varies
Initial Brake Apply Signal	Cruise/Traction Data	Applied/Released	Released
Stoplamp Pedal Switch	Cruise/Traction Data	Applied/Released	Released
Traction Control Status	Cruise/Traction Data	Active/Inactive	Inactive
Vehicle Speed Sensor	Cruise/Traction Data	km/h (mph)	0 km/h (0 mph)

Powertrain Control Module (PCM) – 5.7L (LS6)

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition ON/Engine Idling at normal operating temperature/Transmission in Park or Neutral/Cruise Control On/Off Switch Off			
Clutch Pedal Switch	Cruise Control Data	Applied/Released	Released
Cruise Control Active	Cruise Control Data	Yes/No	No
Cruise Disengage 1–8 History	Cruise Control Data	Last Reason for Cruise Control Disengagement	Varies
Cruise On/Off Switch	Cruise Control Data	On/Off	Off
Cruise Release Brake Pedal Switch	Cruise Control Data	Applied/Released	Released
Cruise Resume/Accel. Switch	Cruise Control Data	On/Off	Off
Cruise Set/Coast Switch	Cruise Control Data	On/Off	Off
DTC Set This Ignition	Cruise Control Data	Yes/No	No
Engine Speed	Cruise Control Data	RPM	Varies
Ignition 1 Signal	Cruise Control Data	Volts	Varies

Powertrain Control Module (PCM) – 5.7L (LS6) (cont'd)

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition ON/Engine Idling at normal operating temperature/Transmission in Park or Neutral/Cruise Control On/Off Switch Off			
Reduced Engine Power	Cruise Control Data	Active/Inactive	Inactive
Stop Lamp Pedal Switch	Cruise Control Data	Applied/Released	Released
TAC/PCM Communication Signal	Cruise Control Data	Ok/Fault	Ok
Traction Control Signal	Cruise Control Data	Active/Inactive	Inactive
Vehicle Speed Sensor	Cruise Control Data	km/h (mph)	0 km/h (0 mph)

Scan Tool Data Definitions (Cruise Control)

SIE-ID = 1217204 Owner = kfelik01 LMD = 08-oct-2003 LMB = kfelik01

The Scan Tool Data Definitions list contains a brief description of all of the cruise control related parameters that are available on the scan tool.

Battery Voltage: The scan tool displays the battery voltage. The ECM monitors the battery positive voltage circuit.

Clutch Start Switch (If Equipped): The scan tool displays Applied or Released. The ECM monitors the signal circuit of the clutch start switch. A closed switch is displayed as Applied.

Clutch Pedal Switch: The scan tool displays Applied or Released. The PCM monitors the signal circuit of the clutch pedal position (CPP) switch. A closed switch is displayed as Released.

Cruise Clutch Switch (If Equipped): The scan tool displays Applied or Released. The ECM monitors the signal circuit of the Clutch Pedal Position (CPP) switch. A closed switch is displayed as Released.

Cruise Control Active: The scan tool displays Yes or No. The ECM/PCM determines the current status of cruise control operation. An active cruise control system is displayed as Yes.

Cruise Disengage (1-8) History: The scan tool displays the last 8 reasons why the cruise control system was disengaged. Refer to the Scan Tool Data Definitions (Disengaged History) for descriptions.

Cruise Engaged: The scan tool displays Yes or No. When the ECM detects that the cruise control system has been requested, and the cruise engagement criteria has been met, the cruise control activates and the scan tool displays Yes.

Cruise Inhibited: The scan tool displays Ok or Fault. Fault is displayed when the ECM detects a malfunction that affects the cruise control system.

Cruise Inhibit Reason: The scan tool displays the reason whey the cruise control system is inhibited.

Cruise On/Off Switch: The scan tool displays On or Off. The ECM/PCM monitors the signal circuit of the cruise control switch. A closed switch is displayed as On.

Cruise Release Brake Pedal Switch: The scan tool displays Applied or Released. The ECM/PCM monitors the TCC brake switch/cruise control release signal circuit. A closed switch is displayed as Released.

Cruise Resume/Accel. Switch: The scan tool displays On or Off. The TAC module monitors the signal circuit of the cruise control switch. The TAC module sends a UART serial data message to the PCM indicating the status of the resume/accel (+) switch. The scan tool displays On, when the cruise on/off switch is ON and the resume/accel button is pressed.

Cruise Resume/Accel. Switch: The scan tool displays On or Off. The ECM monitors the signal circuit of the cruise control switch. The scan tool displays On, when the cruise on/off switch is ON and the resume/accel (+) button is pressed, the ECM detects a predetermined voltage value for the resume/accel. switch.

Cruise Set/Coast Switch: The scan tool displays On or Off. The TAC module monitors the signal circuit of the cruise control switch. The TAC module sends a UART serial data message to the PCM indicating the status of the set/coast (–) switch. The scan tool displays ON, when the cruise on/off switch is ON and the cruise set/coast button is pressed.

Cruise Set/Coast Switch: The scan tool displays On or Off. The ECM monitors the signal circuit of the cruise control switch. The scan tool displays On, when the cruise on/off switch is ON and the ECM detects a predetermined voltage value for the set/coast (–) switch.

Cruise — VSS Out of Range: The scan tool displays Yes or No. The ECM monitors the signal circuit of the vehicle speed signal sensor. When the ECM detects that the vehicle speed is below 40.2 km/h (25 mph), the scan tool displays Yes.

Engine Speed: The scan tool displays 0 to 9999 RPM. The ECM/PCM monitors the CKP signal circuit in order to determine the engine RPM.

Extended Travel Brake Pedal Switch: The scan tool displays Applied or Released. The ECM monitors the signal circuit of the extended travel brake pedal switch. A closed switch is displayed as Released.

Ignition 1 Signal: The scan tool displays 6 volts to 18 volts. The PCM monitors the ignition 1 signal circuit in order to determine the system voltage.

Initial Brake Apply Signal: The scan tool displays Applied or Released. The EBCM monitors the signal circuit of the brake pedal position sensor. When

the ECM receives a class 2 message from the EBCM indicating that the brake pedal has been applied the scan tool displays Applied.

Reduced Engine Power: The scan tool displays Active or Inactive. When the PCM detects that reduced engine power condition exists, the scan tool displays Active.

Stoplamp Pedal Switch: The scan tool displays Applied or Released. The ECM/PCM monitors the stop lamp switch signal circuit. When the brake pedal is pressed, the scan tool display Applied.

TAC/PCM Communication Signal: The scan tool displays Ok or Fault. The PCM uses the UART serial data circuit in order to communicate with the TAC module. If the communication between the PCM and the TAC module is interrupted, the scan tool displays Fault.

Traction Control Signal: The scan tool displays Active or Inactive. When the PCM detects that the traction control is active, the scan tool displays Active.

Traction Control Status: The scan tool displays Active or Inactive. When the ECM detects that the traction control is active, the scan tool displays Active.

Vehicle Speed: The scan tool displays km/h or mph. The ECM monitors the signal circuit of the vehicle speed signal sensor.

Vehicle Speed Sensor: The scan tool displays 0 to 150 km/h (93.2 mph). The ECM/PCM monitors the vehicle speed sensor signal circuit in order to calculate the vehicle speed for display.

Scan Tool Data Definitions (Disengage History)

SIE-ID = 986838 Owner = kfelik01 LMD = 09-sep-2003 LMB = ckwiat01

The Cruise Control Scan Tool Definitions — Disengage History is a common list for all of the available cruise control disengagement definitions available on the scan tool. The cruise control system equipped on the vehicle determines which cruise control disengagement parameters are available on the scan tool.

One of the following conditions must be present in order for a disengagement parameter to appear:

- The cruise control system is active and disengagement is requested.
- The engagement of the cruise control system is requested while a fault is present.

Accel Rate: The PCM/ECM detects that the vehicle acceleration is greater than the calibrated cruise control threshold.

Bad Sequence: The PCM/ECM detects that a cruise control software execution error is present.

Brake: The PCM/ECM detects that the stop lamps have been activated or the PCM/ECM detects that a stop lamp pedal activation had not occurred before the cruise control system was requested.

Cancel: The PCM/ECM detects that the cruise control cancel switch has been activated.

CC Sw. Position: The PCM/ECM detects that the acceleration mode is active without the activation of the Accel. switch.

Clutch: The PCM/ECM detects that the clutch pedal switch has been activated.

Clutch Switch: The PCM/ECM detects that the clutch pedal switch has been activated.

Cruise Off: The PCM/ECM detects that the cruise On/Off switch was turned to Off when the cruise control system was enabled.

Coast Low Speed: The PCM/ECM detects that the Set/Coast switch is activated until the vehicle speed is below 37 km/h (23 mph).

Coast Disengage: When the PCM/ECM detects that the cruise set/coast signal is active and the throttle blade fully closes the cruise control system will disengage until the PCM/ECM detects that the set/coast signal is inactive. The cruise control system will then engage and set with the new vehicle speed.

Decel Rate: The PCM/ECM detects that the vehicle deceleration is greater than the calibrated cruise control threshold.

DTC Set: The PCM/ECM detects that a DTC has been set which affects the cruise control operation.

Engine Run Time: The PCM/ECM detects that the cruise control system has been requested and the engine run time counter is not active.

Engine Speed: The PCM/ECM detects that the engine speed is less than or greater than a calibrated RPM.

ETC: The PCM/ECM detects a fault within the TAC system.

First Gear: While the cruise control system is active, the PCM/ECM detects that the transmission is in Drive 1.

High Accel.: The PCM/ECM detects that the vehicle acceleration is greater than the calibrated cruise control threshold.

High Decel.: The PCM/ECM detects that the vehicle deceleration is greater than the calibrated cruise control threshold.

High Speed: The PCM/ECM detects that the vehicle speed is greater than the calibrated amount.

Illegal Mode: The PCM/ECM detects that the acceleration mode is active without the activation of the Accel. switch.

Injector Disable: The PCM/ECM detects that the engine is overspeed and that the fuel shutoff has been activated.

Low Speed: The PCM/ECM detects that the vehicle speed is less than 37 km/h (23 mph) while the cruise control system was enabled.

Low Voltage: The PCM/ECM detects that the ignition voltage is below 9 volts.

Manual / Neutral: The PCM/ECM detects that transmission is in Neutral, Reverse or Park.

Memory Corrupt: An internal PCM/ECM memory fault is detected.

MPH Limit: The PCM/ECM detects a that the vehicle is overspeed and that the fuel shutoff has been activated.

No History: This parameter is displayed when a new PCM/ECM has been installed.

None: This parameter is displayed when a new PCM/ECM has been installed.

Off: The PCM/ECM detects that the cruise On/Off switch was turned to Off when the cruise control system was enabled.

Over Set Speed: This parameter is displayed when the current vehicle speed is greater than the set vehicle speed by more than a calibrated amount.

Over Speed: This parameter is displayed when the current vehicle speed is greater than the set vehicle speed by more than a calibrated amount.

Over Speed Tap: This parameter is displayed when the Set/Coast switch is briefly applied while the current vehicle speed is greater than the set vehicle speed by more than a calibrated amount.

Pedal Initialize: The PCM/ECM detects that a stop lamp pedal activation had not occurred before the cruise control system was requested.

PCM Error: The PCM/ECM detects that a cruise control software execution error is present.

PCM Inhibit: The PCM/ECM detects a RAM corruption associated to the cruise control system.

Pedal > Cruise: The PCM/ECM detects that the accelerator pedal overrides the set vehicle speed for approximately 60 seconds.

Serial Data: A fault in the serial data circuit from the cruise control switch to the platform module is detected.

S/C On, CC Off: When the PCM/ECM detects that the cruise set/coast signal is active and the throttle blade fully closes the cruise control system will disengage until the PCM/ECM detects that the set/coast signal is inactive. The cruise control system will then engage and set with the new vehicle speed.

S/C On — Speed High: This parameter is displayed when the Set/Coast switch is briefly applied while the current vehicle speed is greater than the set vehicle speed by more than a calibrated amount.

Stop Lamp Switch: The PCM/ECM detects that the stop lamps have been activated.

TAC Inhibit: The PCM/ECM detects a fault within the TAC system.

Traction: The PCM/ECM detects that the traction control system had been activated. It is also possible that a tire with low air pressure can also set this disengagement reason.

Traction Loss: The PCM/ECM detects that the traction control system had been activated. It is also possible that a tire with low air pressure can also set this disengagement reason.

Two Commands: The PCM/ECM detects that the Set/Coast switch and the Resume/Accel switch are active at the same time.

Two CC Commands: The PCM/ECM detects that the Set/Coast switch and the Resume/Accel switch are active at the same time.

Under Speed: The PCM/ECM detects that the vehicle speed is less than the cruise memory speed by more than a calibrated amount.

Under Set Speed: The PCM/ECM detects that the vehicle speed is less than the cruise memory speed by more than a calibrated amount.

SIE-ID = 1217209 Owner = kfelik01 LMD = 02-sep-2003 LMB = ckwiat01

Diagnostic Trouble Code (DTC) List

DTC	Diagnostic Procedure	Module(s)
P0564	*DTC P0564 on page 11-12*	ECM
P0567	*DTC P0567 on page 11-14*	ECM
P0568	*DTC P0568 on page 11-16*	ECM
P0571	*DTC P0571 on page 11-18*	ECM
P0581	*DTC P0581 on page 11-20*	ECM
P0703	*DTC P0703 on page 11-22*	ECM
P0833	• *DTC P0833 on page 7-14* in Manual Transmission – M35. • *DTC P0833 on page 7-29* in Manual Transmission – Tremec 6–Speed.	ECM
CXXXX	*Diagnostic Trouble Code (DTC) List on page 5-24* in Antilock Brake System.	EBCM
PXXXX	• *Diagnostic Trouble Code (DTC) List on page 6-53* in Engine Controls – 2.6L and 3.2L. • *Diagnostic Trouble Code (DTC) List on page 6-68* in Engine Controls – 3.6L (LY7). • *Diagnostic Trouble Code (DTC) List on page 6-62* in Engine Controls – 5.7L.	ECM

DTC P0564

SIE-ID = 1327038 Owner = kfelik01 LMD = 11-jul-2003 LMB = bharri01

Circuit Description

The cruise control switch is an input to the engine control module (ECM). The ECM monitors the cruise control set/coast and resume/accelerate switch signal circuit in order to detect when a cruise control function has been requested. The ECM detects a specific voltage signal on the cruise control set/coast and resume/accelerate switch signal circuit when a cruise control function switch is activated, with each switch having a different predetermined voltage value.

Conditions for Running the DTC

- The ignition is ON.
- The cruise control on/off switch is ON.

Conditions for Setting the DTC

This DTC sets when the ECM detects an invalid voltage signal on the cruise control set/coast and resume/accelerate switch signal circuit for greater than 1.5 seconds.

The ECM runs this diagnostic every 0.05 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 is disabled.

SIO-ID = 203353 LMD = 09-may-2000

Conditions for Clearing the MIL/DTC

- A last test failed, or the current DTC, clears when the diagnostic runs and does not fail.
- A history DTC clears after 40 consecutive warm-up cycles, if failures are not reported by this or any other emission related diagnostic.
- Use a scan tool in order to clear the MIL/DTC.

Diagnostic Aids

For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

DTC P0564

Step	Action	Values	Yes	No
Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Cruise Control Connector End Views on page 11-5* or to *Engine Control Module (ECM) Connector End Views on page 6-41* in Engine Controls–3.6L (LY7)				
1	Did you perform the Cruise Control Diagnostic System Check?	—	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*
2	1. Turn OFF the ignition. 2. Disconnect C4 of the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. With a DMM, measure the voltage of the ignition 1 voltage circuit. Does the voltage measure at the specified value?	B+	Go to *Step 3*	Go to *Step 7*
3	With a DMM, measure the resistance of the cruise control switch between the cruise control set/coast and resume/accelerate switch signal circuit and the ignition 1 voltage circuit while individually activating and holding the cruise control function switches. Do the resistance values measure at approximately the specified values?	Off = O.L. On = 8.23 Ω Resume = 2.879 Ω Set = 1.276 Ω	Go to *Step 4*	Go to *Step 5*

DTC P0564 (cont'd)

Step	Action	Values	Yes	No
4	Test the cruise control set/coast and resume/accelerate switch signal circuit for a high resistance, for a short to voltage, or for a short to ground between the cruise control switch and the ECM. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 10*	Go to *Step 6*
5	Inspect for poor connections at the harness connector of the cruise control switch. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 10*	Go to *Step 8*
6	Inspect for poor connections at the harness connector of the ECM. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 10*	Go to *Step 9*
7	Repair the high resistance in the ignition 1 voltage circuit. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you complete the repair?	—	Go to *Step 10*	—
8	Replace the cruise control switch. Refer to *Multifunction, Turn Signal Switch Replacement on page 2-31* in Steering Wheel and Column. Did you complete the replacement?	—	Go to *Step 10*	—
9	**Important:** Program the replacement ECM. Replace the ECM. Refer to *Engine Control Module (ECM) Replacement on page 6-469* in Engine Controls–3.6L (LY7). Did you complete the replacement?	—	Go to *Step 10*	—
10	1. Use the scan tool in order to clear the DTCs. 2. Operate the vehicle within the Conditions for Running the DTC. Does the DTC reset?	—	Go to *Step 2*	System OK

DTC P0567

SIE-ID = 1375211 Owner = kfelik01 LMD = 08-oct-2003 LMB = ckwiat01

Caution: Refer to SIR Caution on page P-5 in Cautions and Notices.

Disable the inflatable restraint steering wheel module when performing this diagnostic table. Refer to *SIR Disabling and Enabling Zone 3 on page 9-58* in SIR.

Circuit Description

The cruise control resume/accel switch is an input to the throttle actuator control (TAC) module. The TAC module uses the cruise control resume/accel switch signal circuit in order to detect when the driver has requested to accelerate the set vehicle speed or to resume the cruise control system. The TAC module detects a voltage signal on the cruise control resume/accel switch signal circuit when the switch is applied. The TAC module sends a serial data signal to the PCM via the UART serial data circuit indicating the status of the resume/accel switch.

Conditions for Running the DTC

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

Conditions for Setting the DTC

The PCM receives a serial data signal from the TAC module indicating that the resume/accel switch is applied for longer than 90 seconds.

Action Taken When the DTC Sets

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

SIO-ID = 203353 LMD = 09-may-2000

Conditions for Clearing the MIL/DTC

- A last test failed, or the current DTC, clears when the diagnostic runs and does not fail.
- A history DTC clears after 40 consecutive warm-up cycles, if failures are not reported by this or any other emission related diagnostic.
- Use a scan tool in order to clear the MIL/DTC.

Diagnostic Aids

Perform the following in order to avoid misdiangosis:

- Rotate the steering wheel to both steering stops and activate each cruise control switch separately. With a scan tool, observe the associated Cruise Control Switch parameter in the PCM Cruise Control Data data list. This will help eliminate the possibility of a internally open or shorted inflatable restraint steering wheel module coil.
- Ensure that the resume/accel switch is not stuck or sticking in the engaged position.
- For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

Test Description

The numbers below refer to the step numbers on the diagnostic table.

2. This step determines if condition is present.

DTC P0567

Step	Action	Yes	No
Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Cruise Control Connector End Views on page 11-5*, *Powertrain Control Module (PCM) Connector End Views on page 6-34* in Engine Controls–5.7 L, or *Engine Controls Connector End Views on page 6-36* in Engine Controls–5.7 L			
1	Did you perform the Cruise Control Diagnostic System Check?	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*
2	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. Turn the cruise On/Off control switch ON. 4. With the scan tool, observe the Cruise Resume/Accel. Switch parameter in the PCM data list. Does the Cruise Resume/Accel. Switch parameter display On?	Go to *Step 3*	Go to Diagnostic Aids

DTC P0567 (cont'd)

Step	Action	Yes	No
3	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. With the scan tool, observe the Cruise Resume/Accel. Switch parameter. Does the Cruise Resume/Accel. Switch parameter display On?	Go to *Step 4*	Go to *Step 5*
4	Test the cruise control resume/accel switch signal circuit for a short to voltage. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 6*
5	Inspect for poor connections at the harness connector of the cruise control switch. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 8*
6	Inspect for poor connections at the harness connector of the TAC module. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 7*
7	Replace the TAC module. Refer to *PSD SIE TITLE Error: SIE linked to empty Cell ID 32726 on page 0-0* in Engine Controls–5.7 L. Did you complete the replacement?	Go to *Step 9*	—
8	Replace the cruise control switch. Refer to *Steering Wheel Control Switch Assembly Replacement on page 2-33* in Steering Wheel and Column. Did you complete the replacement?	Go to *Step 9*	—
9	1. Enable the inflatable restraint steering wheel module. Refer to *SIR Disabling and Enabling Zone 3 on page 9-58* in SIR. 2. Use the scan tool in order to clear the DTCs. 3. Operate the vehicle within the Conditions for Running the DTC. Does the DTC reset?	Go to *Step 2*	System OK

DTC P0568

SIE-ID = 1375213 Owner = kfelik01 LMD = 08-oct-2003 LMB = ckwiat01

Caution: Refer to SIR Caution on page P-5 in Cautions and Notices.

Disable the inflatable restraint steering wheel module when performing this diagnostic table. Refer to *SIR Disabling and Enabling Zone 3 on page 9-58* in SIR.

Circuit Description

The cruise control set/coast switch is an input to the throttle actuator control (TAC) module. The TAC module uses the cruise control set/coast switch signal circuit in order to detect when the driver has requested to set the vehicle speed or to decelerate the vehicle speed. The TAC module detects a voltage signal on the cruise control set/coast switch signal circuit when the switch is applied. The TAC module sends a serial data signal to the PCM via the UART serial data circuit indicating the status of the set/coast switch.

Conditions for Running the DTC

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

Conditions for Setting the DTC

The PCM receives a serial data signal from the TAC module indicating that the set/coast switch is ON for longer than 90 seconds.

Action Taken When the DTC Sets

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

SIO-ID = 203353 LMD = 09-may-2000

Conditions for Clearing the MIL/DTC

- A last test failed, or the current DTC, clears when the diagnostic runs and does not fail.
- A history DTC clears after 40 consecutive warm-up cycles, if failures are not reported by this or any other emission related diagnostic.
- Use a scan tool in order to clear the MIL/DTC.

Diagnostic Aids

Perform the following in order to avoid misdiagnosis:

- Rotate the steering wheel to both steering stops and activate each cruise control switch separately. With a scan tool, observe the associated Cruise Control Switch parameter in the PCM Cruise Control Data data list. This will help eliminate the possibility of a internally open or shorted inflatable restraint steering wheel module coil.
- Ensure that the set/coast switch is not stuck or sticking in the engaged position.
- For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

Test Description

The number below refers to the step number on the diagnostic table.

2. This step determines if condition is present.

DTC P0568

Step	Action	Yes	No
Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Cruise Control Connector End Views on page 11-5 Powertrain Control Module (PCM) Connector End Views on page 6-34* in Engine Controls–5.7 L, or *Engine Controls Connector End Views on page 6-36* in Engine Controls–5.7 L			
1	Did you perform the Cruise Control Diagnostic System Check?	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*
2	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. Turn the cruise On/Off control switch ON. 4. With the scan tool, observe the Cruise Set/Coast Switch parameter in the PCM data list. Does the Cruise Set/Coast Switch parameter display On?	Go to *Step 3*	Go to Diagnostic Aids

DTC P0568 (cont'd)

Step	Action	Yes	No
3	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. With the scan tool, observe the Cruise Set/Coast Switch parameter in the PCM data list. Does the Cruise Set/Coast Switch parameter display On?	Go to *Step 4*	Go to *Step 5*
4	Test the cruise control set/coast switch signal circuit for a short to voltage. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 6*
5	Inspect for poor connections at the harness connector of the cruise control switch. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 8*
6	Inspect for poor connections at the harness connector of the TAC module. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 7*
7	Replace the TAC module. Refer to *PSD SIE TITLE Error: SIE linked to empty Cell ID 32726 on page 0-0* in Engine Controls–5.7 L. Did you complete the replacement?	Go to *Step 9*	—
8	Replace the cruise control switch. Refer to *Steering Wheel Control Switch Assembly Replacement on page 2-33* in Steering Wheel and Column. Did you complete the replacement?	Go to *Step 9*	—
9	1. Enable the inflatable restraint steering wheel module. Refer to *SIR Disabling and Enabling Zone 3 on page 9-58* in SIR. 2. Use the scan tool in order to clear the DTCs. 3. Operate the vehicle within the Conditions for Running the DTC. Does the DTC reset?	Go to *Step 2*	System OK

DTC P0571

SIE-ID = 1331412 Owner = kfelik01 LMD = 13-may-2003 LMB = tdedvu01

Circuit Description

The stop lamp switch signal circuit is a direct hardwire input to the powertrain control module (PCM) from the electronic brake control module (EBCM). The PCM monitors the stop lamp switch signal circuit in order to detect when the brake pedal has been applied. When the brake pedal is pressed, the EBCM sends a class 2 serial data message to the PCM indicating that the brake pedal has been applied. The EBCM also sends a high voltage signal on the stop lamp switch signal circuit to the PCM. This DTC will set if the class 2 serial data message and the voltage signal on the stop lamp switch signal circuit do not match.

Conditions for Running the DTC

- The engine speed is greater than 700 RPM.
- The traction control system or the antilock brake system are not active and have not failed.

Conditions for Setting the DTC

- The (PCM) detects that there is a 8.3 km/h (5.1 mph) or greater decrease in vehicle speed within 1 second.
- The PCM detects that the class 2 serial data message and the voltage signal on the stop lamp switch signal circuit do not match for 10 consecutive times that this diagnostic is run.
- The above condition is present for greater than 2 seconds.

Action Taken When the DTC Sets

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

SIO-ID = 203353 LMD = 09-may-2000

Conditions for Clearing the MIL/DTC

- A last test failed, or the current DTC, clears when the diagnostic runs and does not fail.
- A history DTC clears after 40 consecutive warm-up cycles, if failures are not reported by this or any other emission related diagnostic.
- Use a scan tool in order to clear the MIL/DTC.

Diagnostic Aids

In order to avoid a misdiagnosis, inspect for proper operation of the stop lamps. Refer to *Exterior Lighting Systems Description and Operation on page 8-192* in Lighting Systems.

For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

DTC P0571

Step	Action	Yes	No
Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Engine Control Module (ECM) Connector End Views on page 6-41* in Engine Controls – 3.6L (LY7)			
1	Did you perform the Cruise Control Diagnostic System Check?	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*
2	Do the stop lamps operate properly?	Go to *Step 3*	Go to *Stop Lamps Inoperative on page 8-148* or to *Stop Lamps Always On on page 8-147* in Lighting Systems
3	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. With the scan tool, observe the Stoplamp Pedal Switch parameter in the PCM Cruise/Traction data list. 4. Press and hold the brake pedal. Does the Stoplamp Pedal Switch parameter display Applied?	Go to *Step 5*	Go to *Step 4*

DTC P0571 (cont'd)

Step	Action	Yes	No
4	Test the stop lamp switch signal circuit for an open or for a high resistance between the EBCM and the ECM. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 6*
5	Inspect for poor connections at the harness connector of the EBCM. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 7*
6	Inspect for poor connections at the harness connector of the PCM. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 9*	Go to *Step 8*
7	Replace the EBCM. Refer to *Electronic Brake Control Module (EBCM) Replacement (CTS) on page 5-96* or *Electronic Brake Control Module (EBCM) Replacement (CTS-V) on page 5-98* in Antilock Brake System. Did you complete the replacement?	Go to *Step 9*	—
8	**Important:** Program the replacement PCM. Replace the PCM. Refer to *Engine Control Module (ECM) Replacement on page 6-469* in Engine Controls – 3.6L (LY7). Did you complete the replacement?	Go to *Step 9*	—
9	1. Use the scan tool in order to clear the DTCs. 2. Operate the vehicle within the conditions for running the DTC. Does the DTC reset?	Go to *Step 2*	System OK

DTC P0581

SIE-ID = 1328356 Owner = kfelik01 LMD = 11-jul-2003 LMB = bharri01

Circuit Description

The cruise control switch is an input to the engine control module (ECM). The ECM monitors the cruise control set/coast and resume/accelerate switch signal circuit in order to detect when a cruise control function has been requested. The ECM detects a specific voltage signal on the cruise control set/coast and resume/accelerate switch signal circuit when a cruise control function switch is activated, with each switch having a different predetermined voltage value.

Conditions for Running the DTC

- The ignition is ON.
- The cruise control on/off switch is ON.

Conditions for Setting the DTC

This DTC sets when the ECM detects that the voltage on the cruise control set/coast and resume/accelerate switch signal circuit is greater than 3.5 volts for greater than 1.5 seconds.

The ECM runs this diagnostic every 0.05 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 is disabled.

SIO-ID = 203353 LMD = 09-may-2000

Conditions for Clearing the MIL/DTC

- A last test failed, or the current DTC, clears when the diagnostic runs and does not fail.
- A history DTC clears after 40 consecutive warm-up cycles, if failures are not reported by this or any other emission related diagnostic.
- Use a scan tool in order to clear the MIL/DTC.

Diagnostic Aids

For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

DTC P0581

Step	Action	Values	Yes	No
	Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Cruise Control Connector End Views on page 11-5* or to *Engine Control Module (ECM) Connector End Views on page 6-41* in Engine Controls – 3.6L (LY7)			
1	Did you perform the Cruise Control Diagnostic System Check?	—	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*
2	1. Turn OFF the ignition. 2. Disconnect C4 of the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. With a DMM, measure the voltage of the cruise control set/coast and resume/accelerate switch signal circuit between C4 and the ECM. Does the voltage measure at or greater than the specified value?	3.5 Volts	Go to *Step 3*	Go to *Step 4*
3	Test the cruise control set/coast and resume/accelerate switch signal circuit for a short to voltage between C4 of the cruise control switch and the ECM. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 9*	Go to *Step 6*

DTC P0581 (cont'd)

Step	Action	Values	Yes	No
4	Test the cruise control set/coast and resume/accelerate switch signal circuit for a short to voltage between C4 and the cruise control switch. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 9*	Go to *Step 5*
5	Inspect for poor connections at the harness connector of the cruise control switch. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 9*	Go to *Step 7*
6	Inspect for poor connections at the harness connector of the ECM. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 9*	Go to *Step 8*
7	Replace the cruise control switch. Refer to *Multifunction, Turn Signal Switch Replacement on page 2-31* in Steering Wheel and Column. Did you complete the replacement?	—	Go to *Step 9*	—
8	**Important:** Program the replacement ECM. Replace the ECM. Refer to *Engine Control Module (ECM) Replacement on page 6-469* in Engine Controls – 3.6L (LY7). Did you complete the replacement?	—	Go to *Step 9*	—
9	1. Use the scan tool in order to clear the DTCs. 2. Operate the vehicle within the Conditions for Running the DTC. Does the DTC reset?	—	Go to *Step 2*	System OK

DTC P0703

SIE-ID = 1374660 Owner = kfelik01 LMD = 29-aug-2003 LMB = kfelik01

Circuit Description

The electronic brake control module (EBCM) monitors the brake pedal position sensor. When the brake pedal is applied, the EBCM detects a predetermined voltage signal. The EBCM sends a class 2 serial data message to the engine control module (ECM) indicating the status of the stop lamps.

Conditions for Running the DTC

The ignition is ON.

Conditions for Setting the DTC

- The ECM receives an invalid brake pedal status class 2 serial data message from the EBCM.
- This diagnostic runs continuously.

Action Taken When the DTC Sets

- The cruise control system is disabled.
- The ECM stores the DTC information into memory when the diagnostic runs and fails.
- The multifunction 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.

Conditions for Clearing the MIL/DTC

- A last test failed, or the current DTC, clears when the diagnostic runs and does not fail.
- A history DTC clears after 40 consecutive warm—up cycles, if failures are not reported by this or any other emission related diagnostic.
- Use the scan tool in order to clear the DTC.

Diagnostic Aids

- This DTC may be stored as a history DTC without affecting the operation of the module. If stored only as a history DTC and not retrieved as a current DTC, do not replace the module.
- For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

DTC P0703

Step	Action	Yes	No
Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Cruise Control Connector End Views on page 11-5* or to *ABS Connector End Views on page 5-12* in Antilock Brake System			
1	**Important:** Repair all DTCs related to the stop lamps and to the brake system before performing this table. Did you perform the Cruise Control Diagnostic System Check?	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*
2	Is DTC P0703 current in the ECM?	Go to *Step 3*	Go to Diagnostic Aids
3	Inspect for poor connections at the harness connector of the EBCM. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 5*	Go to *Step 4*
4	Replace the EBCM. Refer to *Electronic Brake Control Module (EBCM) Replacement (CTS) on page 5-96* or *Electronic Brake Control Module (EBCM) Replacement (CTS-V) on page 5-98* in Antilock Brake System. Did you complete the replacement?	Go to *Step 5*	—
5	1. Use the scan tool in order to clear the DTCs. 2. Operate the vehicle within the Conditions for Running the DTC. Does the DTC reset?	Go to *Step 2*	System OK

Symptoms - Cruise Control

SIE-ID = 1217211 Owner = kfelik01 LMD = 02-jan-2003 LMB = kfelik01

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

1. Before using the symptom diagnostic table, perform the *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7* 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 (LY7, 2.6L, and 3.2L) on page 11-31* or *Cruise Control Description and Operation (LS6) on page 11-32*.

Visual/Physical Inspection

- Inspect for aftermarket devices which can affect the operation of the cruise control system. Refer to *Checking Aftermarket Accessories on page 8-10* in Wiring Systems.
- 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 and Poor Connections on page 8-14* in Wiring Systems.

Symptom List

Refer to *Cruise Control Inoperative/Malfunctioning (LY7) on page 11-23* or *Cruise Control Inoperative/Malfunctioning (2.6L and 3.2L) on page 11-24* or *Cruise Control Inoperative/Malfunctioning (LS6) on page 11-27* in order to diagnose the system.

Cruise Control Inoperative/Malfunctioning (LY7)

SIE-ID = 1311152 Owner = kfelik01 LMD = 11-jul-2003 LMB = bharri01

Diagnostic Aids

Perform the following in order to avoid misdiagnosis:

- Ensure that the following cruise control switches are not stuck in the engaged position:
  - On/Off switch
  - Set/Coast switch
  - Resume/Accel switch
- Inspect for proper operation of the stop lamps. Refer to *Exterior Lighting Systems Description and Operation on page 8-192* in Wiring Systems.
- EMI on the speed sensor signal circuit may cause erratic cruise control operation.
- For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

Cruise Control Inoperative/Malfunctioning (LY7)

Step	Action	Yes	No
Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Engine Control Module (ECM) Connector End Views on page 6-41* in Engine Controls – 3.6L (LY7)			
1	Did you perform the Cruise Control Diagnostic System Check?	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*
2	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. Turn the cruise control On/Off switch OFF. 4. With the scan tool, observe the following cruise control parameters in the Cruise/Traction Data list: • Cruise Resume/Accel Switch • Cruise Set/Coast Switch Do any of the parameters listed above display ON?	Go to *Step 5*	Go to *Step 3*
3	1. Turn the cruise control switch ON. 2. With the scan tool, observe the Cruise Set/Coast Switch parameter. 3. Press and hold the set/coast switch. Does the Cruise Set/Coast Switch parameter display On?	Go to *Step 4*	Go to *Step 6*
4	1. With the scan tool, observe the Cruise Resume/Accel Switch parameter. 2. Press and hold the resume/accel switch. Does the Cruise Resume/Accel Switch parameter display On?	Go to Diagnostic Aids	Go to *Step 9*

Cruise Control Inoperative/Malfunctioning (LY7) (cont'd)

Step	Action	Yes	No
5	1. Turn OFF the ignition. 2. Disconnect the cruise switch. 3. Turn ON the ignition, with the engine OFF. 4. With the scan tool, observe the following cruise control parameters: • Cruise Resume/Accel Switch • Cruise Set/Coast Switch Do any of the parameters listed above display On?	Go to *Step 7*	Go to *Step 9*
6	1. Turn OFF the ignition. 2. Disconnect the cruise switch. 3. Turn ON the ignition, with the engine OFF. 4. Connect a test lamp between the ignition 1 voltage circuit and a good ground. Does the test lamp illuminate?	Go to *Step 8*	Go to *Step 11*
7	Test the cruise control set/coast and resume/accel switch signal circuit for a short to voltage. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 14*	Go to *Step 10*
8	Test the cruise control set/coast and resume/accel switch signal circuit for an open, for a short to ground, for a short to voltage, or for a high resistance. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 14*	Go to *Step 9*
9	Inspect for poor connections at the harness connector of the cruise control switch. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 14*	Go to *Step 12*
10	Inspect for poor connections at the harness connector of the ECM. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 14*	Go to *Step 13*
11	Repair the open, the short to ground, or the high resistance in the ignition 1 voltage circuit. Refer to *Wiring Repairs on page 8-16* in Wiring Systems. Did you complete the repair?	Go to *Step 14*	—
12	Replace the cruise control switch. Refer to *Multifunction, Turn Signal Switch Replacement on page 2-31* in Steering Wheel and Column. Did you complete the replacement?	Go to *Step 14*	—
13	**Important:** Program the replacement ECM. Replace the ECM. Refer to *Engine Control Module (ECM) Replacement on page 6-469* in Engine Controls – 3.6L (LY7). Did you complete the replacement?	Go to *Step 14*	—
14	Operate the cruise control system in order to verify the repair. Does the cruise control system operate properly?	System OK	Go to *Step 2*

Cruise Control Inoperative/Malfunctioning (2.6L and 3.2L)

SIE-ID = 1331405 Owner = kfelik01 LMD = 11-jul-2003 LMB = bharri01

Diagnostic Aids

Perform the following in order to avoid a misdiagnosis:

- Ensure that the following cruise control switches are not stuck in the engaged position:
  - On/off switch
  - Set/coast switch
  - Resume/accel switch
- Inspect for proper operation of the stop lamps. Refer to *Exterior Lighting Systems Description and Operation on page 8-192* in Lighting Systems.

- EMI on the speed sensor signal circuit may cause erratic cruise control operation.
- For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

Cruise Control Inoperative/Malfunctioning (2.6L and 3.2L)

Step	Action	Values	Yes	No
Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Engine Control Module (ECM) Connector End Views on page 6-33* in Engine Controls – 2.6L and 3.2L				
1	Did you perform the Cruise Control Diagnostic System Check?	—	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*
2	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. Turn the cruise control On/Off switch Off. 4. With the scan tool, observe the following cruise control parameters in the TAC Data list: • Cruise On/Off Switch • Cruise Resume/Accel Switch • Cruise Set/Coast Switch Do all of the parameters listed above display Off?	—	Go to *Step 3*	Go to *Step 8*
3	1. With the scan tool, observe the Cruise On/Off Switch parameter. 2. Turn the cruise On/Off switch On. Does the Cruise On/Off Switch parameter display On?	—	Go to *Step 4*	Go to *Step 9*
4	1. With the scan tool, observe the Cruise Set/Coast Switch parameter. 2. Press the set/coast switch. Does the Cruise Set/Coast Switch parameter display On?	—	Go to *Step 5*	Go to *Step 10*
5	1. With the scan tool, observe the Cruise Resume/Accel Switch parameter. 2. Press the resume/accel switch. Does the Cruise Resume/Accel Switch parameter display On?	—	Go to *Step 6*	Go to *Step 10*
6	Do the stop lamps operate properly?	—	Go to *Step 7*	Go to *Stop Lamps Always On on page 8-147* or to *Stop Lamps Inoperative on page 8-148*
7	1. With the scan tool, observe the Stoplamp Pedal Switch parameter. 2. press and hold the brake pedal. Does the Stoplamp Pedal Switch parameter display Applied?	—	Go to Diagnostic Aids	Go to *Step 12*

Cruise Control Inoperative/Malfunctioning (2.6L and 3.2L) (cont'd)

Step	Action	Values	Yes	No
8	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. Observe the Cruise On/Off Switch parameter in the TAC Data list. Does the Cruise On/Off Switch parameter display Off?	—	Go to *Step 15*	Go to *Step 13*
9	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. Connect a test lamp between the ignition 1 voltage circuit and a good ground. Does the test lamp illuminate?	—	Go to *Step 11*	Go to *Step 17*
10	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. With a DMM, measure the resistance of the cruise control switch between the ignition 1 voltage circuit and the cruise control set/coast and resume/accelerate switch signal circuit. 5. Individually activate and hold the cruise control function switches. Do the resistance values measure at approximately the specified values?	Off = O.L. On = 8.23Ω Resume = 2.879Ω Set = 1.276Ω	Go to *Step 14*	Go to *Step 15*
11	1. With a DMM, measure the resistance of the cruise control switch between the ignition 1 voltage circuit and the cruise control set/coast and resume/accelerate switch signal circuit. 2. Individually activate and hold the cruise control function switches. Do the resistance values measure at approximately the specified values?	Off = O.L. On = 8.23Ω Resume = 2.879Ω Set = 1.276Ω	Go to *Step 16*	Go to *Step 15*
12	Test the stop lamp switch signal circuit for an open or for a high resistance. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 20*	Go to *Step 16*
13	Test the cruise control set/coast and resume/accelerate switch signal circuit for a short to voltage. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 20*	Go to *Step 16*
14	Test the cruise control set/coast and resume/accelerate switch signal circuit for an open, for a short to ground, or for a high resistance. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 20*	Go to *Step 16*
15	Inspect for poor connections at the harness connector of the cruise control switch. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 20*	Go to *Step 18*
16	Inspect for poor connections at the harness connector of the ECM. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	—	Go to *Step 20*	Go to *Step 19*

Cruise Control Inoperative/Malfunctioning (2.6L and 3.2L) (cont'd)

Step	Action	Values	Yes	No
17	Repair the open, the short to ground, or the high resistance in the ignition 1 voltage circuit. Refer to *Wiring Repairs on page 8-16* in Wiring Systems. Did you complete the repair?	—	Go to *Step 20*	—
18	Replace the cruise control switch. Refer to *Multifunction, Turn Signal Switch Replacement on page 2-31* in Steering Wheel and Column. Did you complete the replacement?	—	Go to *Step 20*	—
19	**Important:** Program the replacement ECM. Replace the ECM. Refer to *Engine Control Module (ECM) Replacement on page 6-343* in Engine Controls – 2.6L and 3.2L. Did you complete the replacement?	—	Go to *Step 20*	—
20	Operate the vehicle with in the conditions for cruise control operation. Does the cruise control system operate properly?	—	System OK	Go to *Step 2*

Cruise Control Inoperative/Malfunctioning (LS6)

SIE-ID = 1375902 Owner = kfelik01 LMD = 08-oct-2003 LMB = ckwiat01

Caution: Refer to SIR Caution on page P-5 in Cautions and Notices.

Disable the inflatable restraint steering wheel module when performing this diagnostic table. Refer to *SIR Disabling and Enabling Zone 3 on page 9-58* in SIR.

Diagnostic Aids

Perform the following in order to avoid a misdiagnosis:

- Rotate the steering wheel to both steering stops and activate each cruise control switch separately. With a scan tool, observe the associated Cruise Control Switch parameter in the PCM Cruise Control Data data list. This will help eliminate the possibility of a internally open or shorted inflatable restraint steering wheel module coil.
- Inspect for proper operation of the brake lamps. Refer to *Exterior Lighting Systems Description and Operation on page 8-192* in Lighting Systems.
- Electromagnetic interference (EMI) on the vehicle speed sensor signal circuit may cause erratic cruise control operation.

For an intermittent condition, refer to *Testing for Intermittent and Poor Connections on page 8-14* in Wiring Systems.

Conditions for Enabling Cruise Control

- The vehicle speed is greater than 40 km/h (25 mph).
- The vehicle is not in PARK, REVERSE, NEUTRAL, or 1st gear.
- The system voltage is within 12 volts and 16 volts.

Test description

The numbers below refer to the step numbers on the diagnostic table.

7. This step tests the cruise control set/coast switch signal circuit for an open or for a high resistance.
8. This step tests the cruise control resume/accel switch signal circuit for an open or for a high resistance.
9. This step tests the ignition 1 voltage circuit for an open, for a short to ground, or for a high resistance.
26. DTCs will set in the PCM when you perform this table.

Cruise Control Inoperative/Malfunctioning (LS6)

Step	Action	Yes	No
Schematic Reference: *Cruise Control Schematics on page 11-2* **Connector End View Reference:** *Cruise Control Connector End Views on page 11-5*, or *Powertrain Control Module (PCM) Connector End Views on page 6-34* in Engine Controls–5.7L, or *Engine Controls Connector End Views on page 6-36* in Engine Controls–5.7L			
1	Did you perform the Cruise Control Diagnostic System Check?	Go to *Step 2*	Go to *Diagnostic System Check - Cruise Control (LY7, 2.6L, and 3.2L) on page 11-6* or *Diagnostic System Check - Cruise Control (LS6) on page 11-7*

Cruise Control Inoperative/Malfunctioning (LS6) (cont'd)

Step	Action	Yes	No
2	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. Turn the cruise control On/Off switch OFF. 4. With the scan tool, observe the Cruise On/Off Switch parameter in the powertrain control module (PCM) Cruise Control Data data list. Does the Cruise On/Off Switch parameter display Off?	Go to *Step 4*	Go to *Step 3*
3	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. With the scan tool, observe the Cruise On/Off Switch parameter. Does the Cruise On/Off Switch parameter display Off?	Go to *Step 20*	Go to *Step 11*
4	1. Turn the cruise control On/Off switch ON. 2. With the scan tool, observe the Cruise On/Off Switch parameter. Does the Cruise On/Off Switch parameter display On?	Go to *Step 5*	Go to *Step 9*
5	1. With the scan tool, observe the Cruise Set/Coast Switch parameter in the PCM Cruise Control Data data list. 2. Turn the cruise control On/Off switch On. 3. Press and hold the cruise control Set/Coast button. Does the Cruise Set/Coast Switch parameter display On?	Go to *Step 6*	Go to *Step 7*
6	1. With the scan tool, observe the Cruise Resume/Accel. Switch parameter in the PCM Cruise Control Data data list. 2. Press and hold the Resume/Accel switch. Does the Cruise Resume/Accel. Switch parameter display On?	Go to Diagnostic Aids	Go to *Step 8*
7	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. Connect a 3 ampere fused jumper between the cruise control set/coast switch signal circuit and the ignition 1 voltage circuit. 5. With the scan tool, observe the Cruise Set/Coast Switch parameter. Does the Cruise Set/Coast Switch parameter display On?	Go to *Step 20*	Go to *Step 17*
8	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. Connect a 3 ampere fused jumper between the cruise control resume/accel switch signal circuit and the ignition 3 voltage circuit. 5. With the scan tool, observe the Cruise Resume/Accel. Switch parameter. Does the Cruise Resume/Accel. Switch parameter display On?	Go to *Step 20*	Go to *Step 18*
9	1. Turn OFF the ignition. 2. Disconnect the cruise control switch. 3. Turn ON the ignition, with the engine OFF. 4. Connect a test lamp between the ignition 1 voltage circuit and a good ground. Does the test lamp illuminate?	Go to *Step 10*	Go to *Step 13*

Cruise Control Inoperative/Malfunctioning (LS6) (cont'd)

Step	Action	Yes	No
10	1. Connect a 3 ampere fused jumper between the ignition 1 voltage circuit and the cruise control on switch signal circuit. 2. With the scan tool, observe the Cruise On/Off Switch parameter. Does the Cruise On/Off Switch parameter display On?	Go to *Step 20*	Go to *Step 16*
11	Test the cruise control on switch signal circuit for a short to voltage. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 12*
12	1. Turn OFF the ignition. 2. Disconnect C1 of the TAC module. 3. Turn ON the ignition, with the engine OFF. 4. With the scan tool, observe the Cruise On/Off Switch parameter. Does the Cruise On/Off Switch parameter display On?	Go to *Step 22*	Go to *Step 21*
13	Test the cruise control set/coast switch signal circuit for a short to ground. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 14*
14	Test the cruise control resume/accel switch signal circuit for a short to ground. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 15*
15	Test the cruise control on switch signal circuit for a short to ground. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 19*
16	Test the cruise control on switch signal circuit for an open or for a high resistance. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 21*
17	Test the cruise control set/coast switch signal circuit for an open or for a high resistance. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 21*
18	Test the cruise control resume/accel switch signal circuit for an open or for a high resistance. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 21*
19	Repair the open, the high resistance, or the short to ground in the Ignition 1 voltage circuit. Refer to *Circuit Testing on page 8-10* and to *Wiring Repairs on page 8-16* in Wiring Systems. Did you complete the repair?	Go to *Step 26*	—
20	Inspect for poor connections at the harness connector of the cruise control switch. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 23*
21	Inspect for poor connections at the harness connector of the TAC module. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 24*

Cruise Control Inoperative/Malfunctioning (LS6) (cont'd)

Step	Action	Yes	No
22	Inspect for poor connections at the harness connector of the PCM. Refer to *Testing for Intermittent and Poor Connections on page 8-14* and to *Connector Repairs on page 8-25* in Wiring Systems. Did you find and correct the condition?	Go to *Step 26*	Go to *Step 25*
23	Replace the cruise control switch. Refer to *Steering Wheel Control Switch Assembly Replacement on page 2-33* in Steering Wheel and Column. Did you complete the replacement?	Go to *Step 26*	—
24	Replace the TAC module. Refer to *PSD SIE TITLE Error: SIE linked to empty Cell ID 32726 on page 0-0* in Engine Controls–5.7L. Did you complete the replacement?	Go to *Step 26*	—
25	**Important:** Program the replacement PCM. Replace the PCM. Refer to *PSD SIE TITLE Error: SIE linked to empty Cell ID 32375 on page 0-0* in Engine Controls–5.7L. Did you complete the replacement?	Go to *Step 26*	—
26	1. Use the scan tool in order to clear the PCM DTCs. 2. Operate the vehicle within the conditions for cruise control operation. Does the cruise control system operate properly?	System OK	Go to *Step 2*

Description and Operation

Cruise Control Description and Operation (LY7, 2.6L, and 3.2L)

SIE-ID = 1217216 Owner = kfelik01 LMD = 23-apr-2003 LMB = tdedvu01

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

The following are the main components of the cruise control system:

- The brake pedal position (BPP) sensor
- The clutch pedal position (CPP) switch, if equipped with a manual transmission
- The cruise control switch
- The electronic brake control module (EBCM)
- The engine control module (ECM)
- The throttle actuator control (TAC) motor
- The vehicle speed sensor

Cruise Control Engaged

The cruise control system will engage and adjust vehicle speeds, based on the activation of the On/Off cruise control switch.

The ECM monitors the signal circuits of the cruise control switches The ECM uses the cruise control switch signal circuit in order to determine when to capture and maintain the vehicle speed. The ECM monitors the vehicle speed sensor signal circuit in order to maintain the vehicle speed. The ECM uses the TAC motor in order control the vehicle speed. For further information on the TAC system, refer to *Throttle Actuator Control (TAC) System Description on page 6-436* in Engine Controls – 2.6L and 3.2L or to *Throttle Actuator Control (TAC) System Description on page 6-559* in Engine Controls – 3.6L (LY7).

Ignition voltage is supplied to the cruise control switch from the 10-ampere STRG CTLS fuse via the ignition 1 voltage circuit. The cruise control switches are arranged in a resistive ladder, with each cruise control function switch having a different resistance value. The ECM detects a specific voltage value that is associated with the cruise control function switch being activated. When the normally open cruise control On/Off switch is turned ON, the switch closes and the ECM detects a predetermined voltage signal on the cruise control switch signal circuit, indicating that the On/Off switch is active. Similarly, when the resume/accel button or the set/coast button are activated, the ECM detects the predetermined voltage signal on the cruise control switch signal circuit. To engage the cruise control system, turn the cruise control system ON by pressing the cruise On/Off button On and momentarily press the set/coast button. The ECM will confirm that the cruise control criteria has been met. The ECM will record the vehicle speed and sends a class 2 message to the instrument panel cluster in order to illuminate the cruise indicator. The set/coast button and the resume/accel button will remain inactive when the ECM has not received the predetermined voltage signal from the On/Off switch. 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 button and the resume/accel button. When the cruise control system is engaged, pressing and holding the set/coast button will allow the vehicle to decelerate from the current set vehicle speed without deactivating the cruise control system. When the set/coast button is released, the ECM will record the vehicle speed and maintain the vehicle speed as the new set vehicle speed. When the cruise control system is engaged, momentarily pressing the set/coast button will allow the vehicle to decelerate at 1.6 km/h (1 mph) increments for each time that the set/coast button is momentarily pressed, with a minimum vehicle speed of 37 km/h (23 mph). Activating and holding the resume/accel button, 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 button is released, the ECM will record the vehicle speed and maintain the vehicle speed as the new set vehicle speed. When the cruise control system is engaged, momentarily activating the resume/accel button will allow the vehicle to accelerate at 1.6 km/h (1 mph) increments for each time that the resume/accel button 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 button, 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 ECM disengages the cruise control operation based on the signals from the following switches:

- The BPP sensor
- The CPP switch, if equipped
- The cruise control On/Off switch

The BPP sensor is mounted on the brake pedal bracket. Pressing the brake pedal while the cruise control is engaged will disengage the cruise control system. The EBCM monitors the brake pedal position sensor via the brake pedal position sensor signal circuit. The ECM receives a class 2 serial data message and detects a high voltage signal on stop lamp switch signal circuit from the EBCM indicating that the brake pedal has been pressed. For further information on the brake pedal position sensor, refer to *Exterior Lighting Systems Description and Operation on page 8-192* in Lighting Systems. When the clutch pedal is applied, the normally closed CCP switch opens and the ECM detects a low signal voltage on the CCP switch signal circuit. The vehicle speed stored

in the memory of the ECM will be erased when the cruise control On/Off button is pressed, or the ignition switch is turned off.

The cruise control system will disengage when the ECM detects that a driver override function has been active for approximately 60 seconds.

When the cruise control system is disengaged, the ECM sends a class 2 message to the IPC in order to deactivate the cruise indicator.

Cruise Control Inhibited

The ECM inhibits the cruise control operation when any of the following conditions exist:

- The vehicle speed is less than 40.2 km/h (25 mph).
- The vehicle is in PARK, REVERSE, NEUTRAL, or 1st gear.
- The engine RPM is low.
- The engine RPM is high, with fuel cut off.
- The vehicle speed is too high, with fuel cut off.
- The system voltage is not between 9 volts and 16 volts.
- The antilock brake system/traction control system is active for more than 2 seconds

Cruise Control Description and Operation (LS6)

SIE-ID = 1375172 Owner = kfelik01 LMD = 08-oct-2003 LMB = kfelik01

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 speeds.

The following are the main components of the cruise control system:

- The accelerator pedal
- The brake pedal position (BPP) sensor
- The Clutch Pedal Position (CPP) switch, if equipped with a manual transmission
- The cruise control switch
- The electronic brake control module (EBCM)
- The powertrain control module (PCM)
- The throttle actuator control (TAC) module
- The throttle actuator control (TAC) motor
- The vehicle speed sensor

Cruise Control Engaged

The TAC module monitors the signal circuits of the following cruise control switches:

- On/off
- "+"

  The "+" button is the equivalent to a resume/accel button.
- "–"

  The "–" is the equivalent to a set/coast button.

The PCM will engage and adjust vehicle speed based on the information received from the TAC module via the UART serial data link. For further information on the TAC system, refer to *Throttle Actuator Control (TAC) System Description on page 6-346* in Engine Controls—5.7 L.

The cruise control switches are located on the steering wheel.

Ignition voltage is supplied to the cruise control switch from the 10-ampere STRG CTLS fuse via the ignition 1 voltage circuit. When the normally open cruise control on/off switch is turned ON, the switch closes and the amber switch indicator illuminates. The TAC module detects a high signal voltage on the cruise control on switch signal circuit indicating that the on/off switch is active. When the normally open "–" switch is pressed, the switch closes and the TAC module 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 "–" switch. The TAC module sends a UART serial data message to the PCM, in order to confirm that the cruise control enable criteria has been met. The TAC module will engage the cruise control system and record the selected vehicle speed. The PCM sends a class 2 message to the instrument panel cluster in order to illuminate the cruise control 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 "–" switch and the "+" switch. When the cruise control system is engaged, pressing and holding the "–" switch will allow the vehicle to decelerate from the current set vehicle speed without deactivating the cruise control system. When the "–" switch is released, the TAC module will record the vehicle speed and maintain the vehicle speed as the new set vehicle speed. When the cruise control system is engaged, momentarily pressing the "–" switch will allow the vehicle to decelerate at 1.6 km/h (1 mph) increments for each time that the "–" is momentarily pressed, with a minimum vehicle speed of 37 km/h (23 mph). When the normally open "+" switch is activated, the switch closes and the TAC module detects a high signal voltage on the cruise control resume/accel switch signal circuit. Activating and holding the "+" 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 "+" switch is released, the TAC module will record the vehicle speed and maintain the vehicle speed as the new set vehicle speed. When the cruise control system is engaged, momentarily activating the "+" switch will allow the vehicle to accelerate at 1.6 km/h (1 mph) increments for each time that the "+" switch is momentarily activated, with the maximum acceleration total of 16 km/h (10 mph) over the current set vehicle speed. Momentarily activating

the “+” switch, after the cruise control system has been disengaged by pressing the brake pedal or the clutch pedal will recall the previous set vehicle speed that is recorded in the TAC module.

Cruise Control Disengaged

The PCM or the TAC module disengages the cruise control operation based on the signals from the following switches:

- The BPP sensor
- The CPP switch
- The on/off switch

The BPP sensor is mounted on the brake pedal bracket. Pressing the brake pedal while the cruise control is engaged will disengage the cruise control system. The EBCM monitors the BPP sensor via the brake pedal position sensor signal circuit. The PCM receives a class 2 serial data message and detects a high voltage signal on the BAS relay coil supply voltage circuit from the EBCM indicating that the brake pedal has been pressed. For further information on the brake pedal position sensor, refer to *Exterior Lighting Systems Description and Operation on page 8-192* in Lighting Systems. When the clutch pedal is applied, the normally closed CCP switch opens and the PCM detects a low signal voltage on the CCP switch signal circuit. The vehicle speed stored in the memory of the TAC module will be erased when the cruise control on/off button is turned OFF, or the ignition switch is turned OFF.

The cruise control system will disengage when the PCM detects that a driver override function has been active for approximately 60 seconds.

When the cruise control system is disengaged, the PCM sends a class 2 message to the IPC in order to deactivate the cruise indicator.

Cruise Control Inhibited

The PCM 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 6 volts and 16 volts.
- The antilock brake system/traction control system is active for more than 2 seconds.