

Theft Deterrent

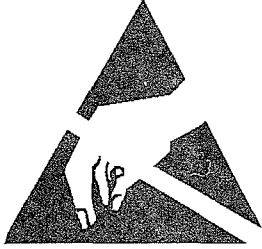
Specifications

GM SPO Group Numbers

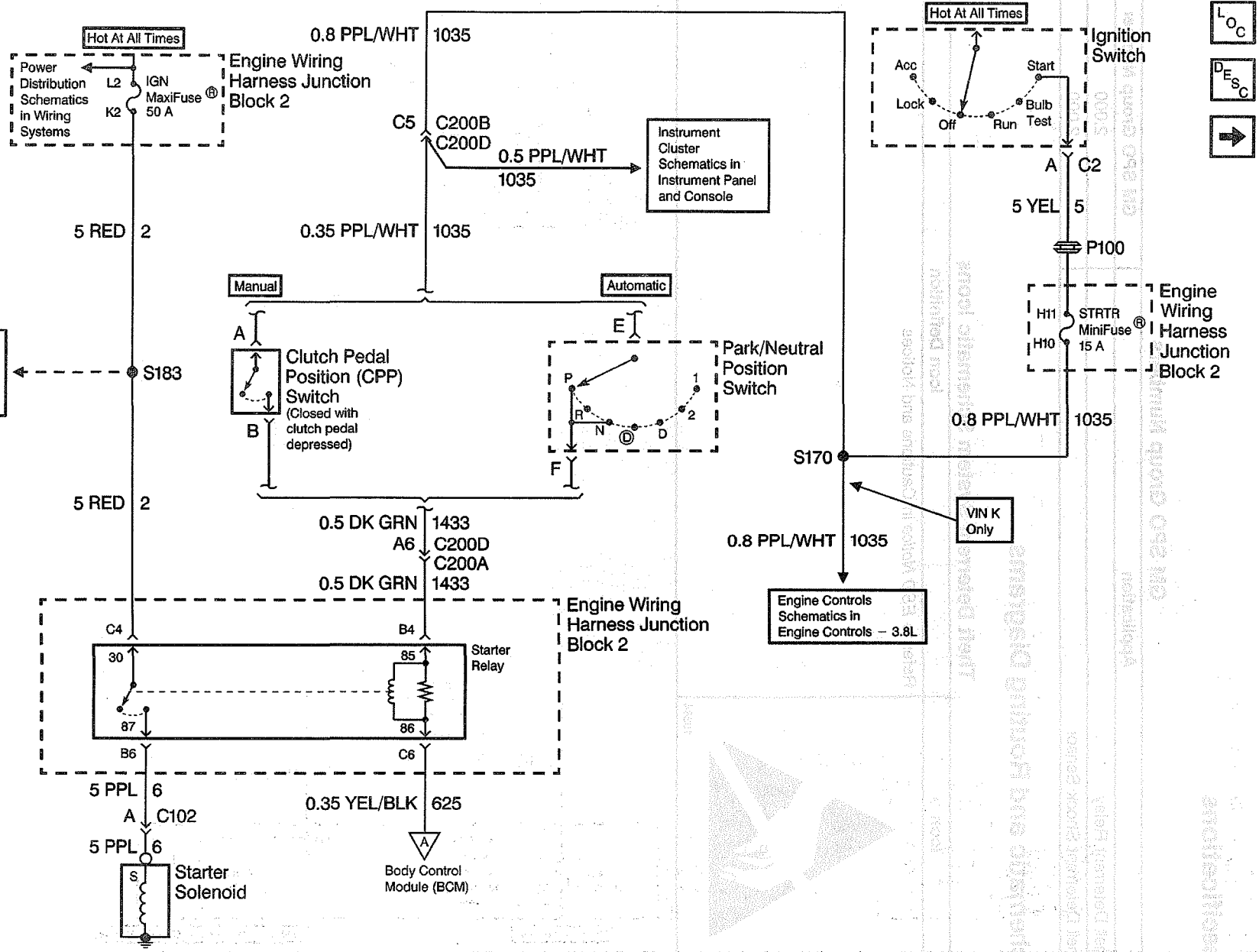
Application	GM SPO Group Number
Theft Deterrent Relay	2.000
Theft Deterrent Shock Sensor	2.000

Schematic and Routing Diagrams

Theft Deterrent System Schematic Icons

Icon	Icon Definition
 19384	Refer to <i>ESD Notice</i> in Cautions and Notices.

Theft Deterrent System Schematics (Starter Relay)



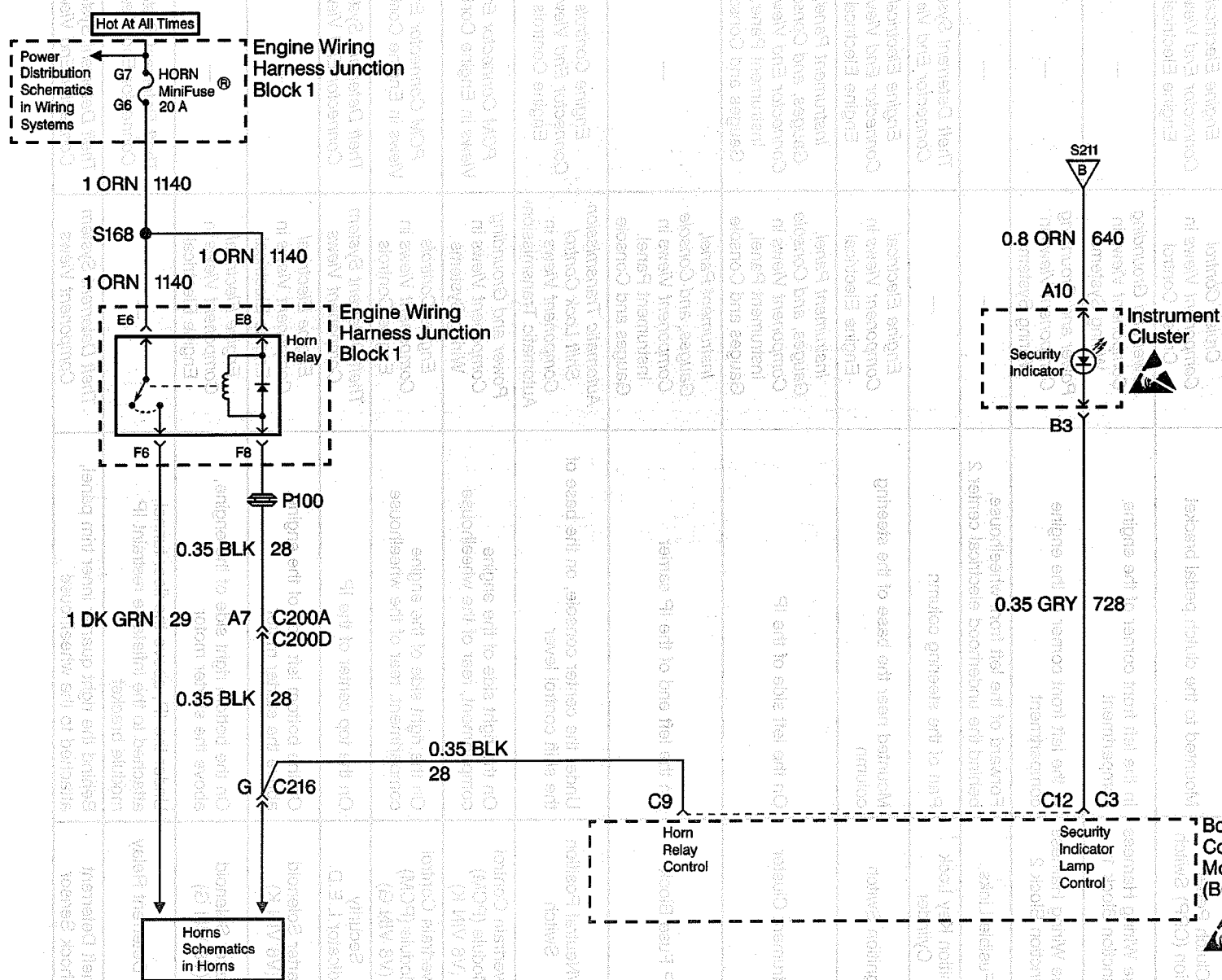
Body and Accessories



8-678 Theft Deterrent



Theft Deterrent System Schematics (Body Control Module and Horn Relay)



Component Locator

Theft Deterrent System Components

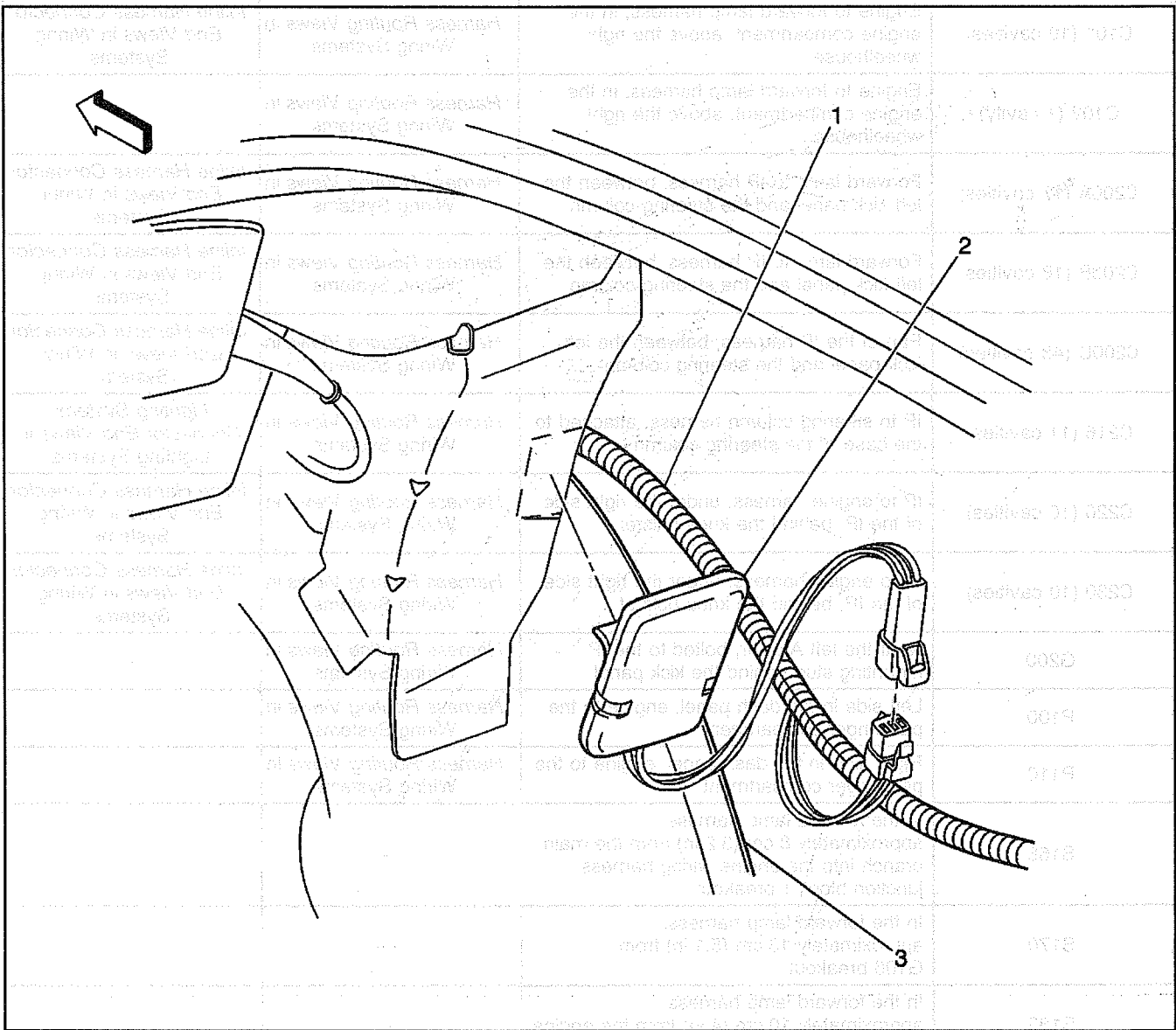
Name	Location	Locator View	Connector End View
Body Control Module (BCM)	Under the right side of the IP near the blower motor	Body Control Module Component Views in Body Control Systems	Body Control Module Connector End Views in Body Control Systems
Clutch Pedal Position (CPP) Switch	Mounted to the clutch pedal bracket	Cruise Control Component Views in Cruise Control	Engine Electrical Connector End Views in Engine Electrical
Engine Wiring Harness Junction Block 1	In the left front corner of the engine compartment	Power and Grounding Component Views in Wiring Systems	—
Engine Wiring Harness Junction Block 2	In the left front corner of the engine compartment	Power and Grounding Component Views in Wiring Systems	—
Fusible Links	Forward of the left front wheelhouse, behind the underhood electrical center 2	—	—
Ignition Key Lock Cylinder	Part of the steering column	—	Theft Deterrent System Connector End Views
Ignition Switch	Mounted near the base of the steering column	Engine Electrical Component Views in Engine Electrical	Engine Electrical Connector End Views in Engine Electrical
Instrument Cluster	On the left side of the IP	Instrument Panel, Gauges, and Console Component Views in Instrument Panel, Gauges and Console	Instrument Panel, Gauges, and Console Connector End Views in Instrument Panel, Gauges and Console
IP Fuse Block	On the left end of the IP carrier	Instrument Panel, Gauges, and Console Component Views in Instrument Panel, Gauges and Console	—
Park/Neutral Position Switch	Under the center console, on the base of the shift control lever	Automatic Transmission Shift Lock Control Component Views in Automatic Transmission	Engine Controls Connector End Views in Engine Controls
Powertrain Control Module (PCM) (V6 VIN K)	On the right side of the engine compartment, rear of the wheelhouse	Power and Grounding Component Views in Wiring Systems	PCM Connector End Views in Engine Controls
Powertrain Control Module (PCM) (V8 VIN G)	On the right side of the engine compartment, rear of the wheelhouse	Engine Controls Component Views in Engine Controls	PCM Connector End Views in Engine Controls
Security Indicator L.E.D.	On the top center of the IP	Theft Deterrent System Component Views	Theft Deterrent System Connector End Views
Starter Solenoid (V6 VIN K)	On the bottom left side of the engine, above the starter motor	Engine Electrical Component Views in Engine Electrical	—
Starter Solenoid (V8 VIN G)	On the bottom right side of the engine, above the starter motor	Engine Electrical Component Views in Engine Electrical	—
Theft Deterrent Relay	Under the IP, above the floor tunnel, attached to the inflatable restraint IP module bracket	—	Theft Deterrent System Connector End Views
Theft Deterrent Shock Sensor	Behind the right quarter inner trim panel, attached to the wheelhouse	Theft Deterrent System Component Views	Theft Deterrent System Connector End Views

Theft Deterrent System Components (cont'd)

Name	Location	Locator View	Connector End View
C101 (10 cavities)	Engine to forward lamp harness, in the engine compartment, above the right wheelhouse	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C102 (1 cavity)	Engine to forward lamp harness, in the engine compartment, above the right wheelhouse	<i>Harness Routing Views in Wiring Systems</i>	—
C200A (17 cavities)	Forward lamp to IP harness, between the left kick panel and the steering column	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C200B (18 cavities)	Forward lamp to IP harness, between the left kick panel and the steering column	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C200D (48 cavities)	Part of the IP harness, between the left kick panel and the steering column	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C216 (11 cavities)	IP to steering column harness, attached to the base of the steering column	<i>Harness Routing Views in Wiring Systems</i>	<i>Lighting Systems Connector End Views in Lighting Systems</i>
C220 (10 cavities)	IP to engine harness, under the right side of the IP, behind the knee bolster	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C230 (10 cavities)	IP to engine harness, under the right side of the IP, behind the knee bolster	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
G200	Near the left A-pillar, bolted to the IP mounting stud behind the kick panel	<i>Harness Routing Views in Wiring Systems</i>	—
P100	Left side in the dash panel, engine to the passenger compartment	<i>Harness Routing Views in Wiring Systems</i>	—
P110	Right side in the dash panel, engine to the passenger compartment	<i>Harness Routing Views in Wiring Systems</i>	—
S168	In the forward lamp harness, approximately 8 cm (3.2 in) from the main branch into the engine wiring harness junction block 1 breakout	—	—
S170	In the forward lamp harness, approximately 13 cm (5.1 in) from G106 breakout	—	—
S183	In the forward lamp harness, approximately 10 cm (4 in) from the engine wiring harness junction block 1 breakout	—	—
S206	In the IP harness, at the rear compartment lid release relay breakout	—	—
S211	In the IP harness, main branch, approximately 7 cm (2.8 in) from the rear compartment lid release relay breakout	—	—
S216	In the IP harness, main branch, approximately 10 cm (4 in) from the instrument cluster breakout	—	—
S217	In the IP harness, main branch, approximately 18 cm (6.8 in) from the body control module (BCM) breakout	—	—
S254	In the IP harness, approximately 7 cm (2.8 in) from the main branch into the C200 breakout	—	—

Theft Deterrent System Component Views

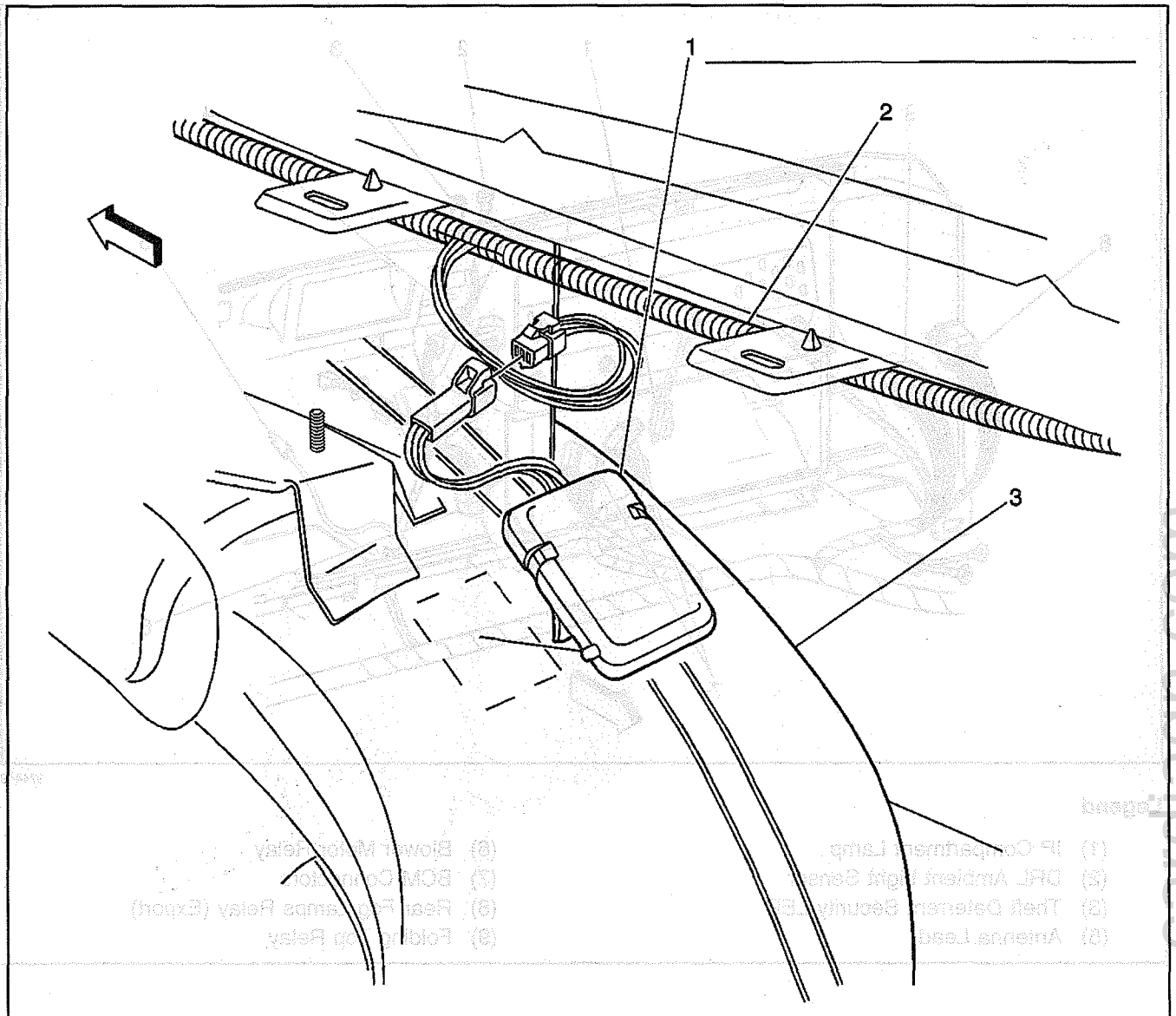
Right Side of the Rear Compartment (Convertible)



Legend

- (1) IP Wiring Harness
- (2) Theft Deterrent Shock Sensor
- (3) Inside of the Right Wheelhouse

Right Side of the Rear Compartment (Coupe)

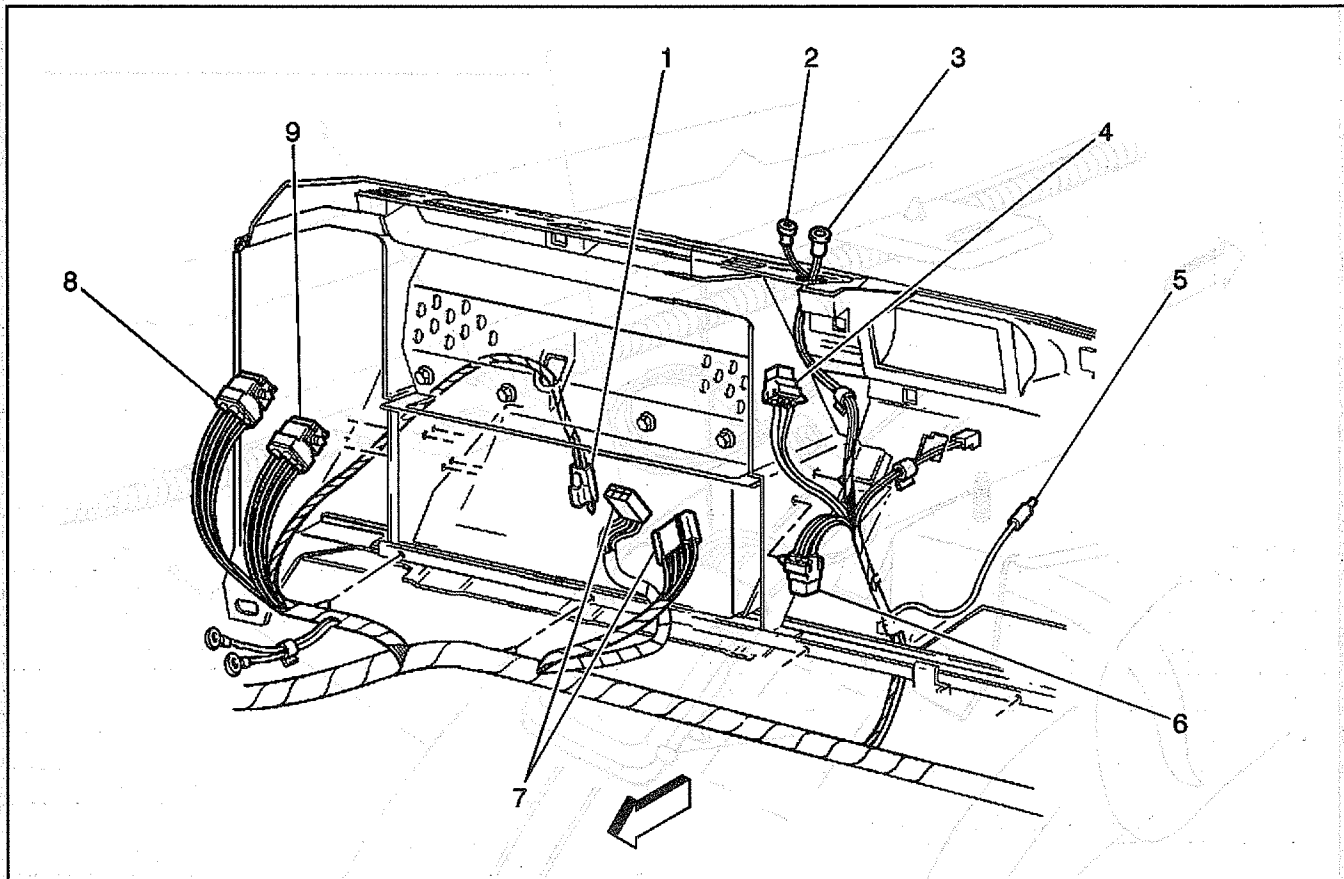


Legend

- (1) Theft Deterrent Shock Sensor
- (2) IP Wiring Harness

- (3) Inside of the Right Wheelhouse

Behind the Right Side of the Instrument Panel



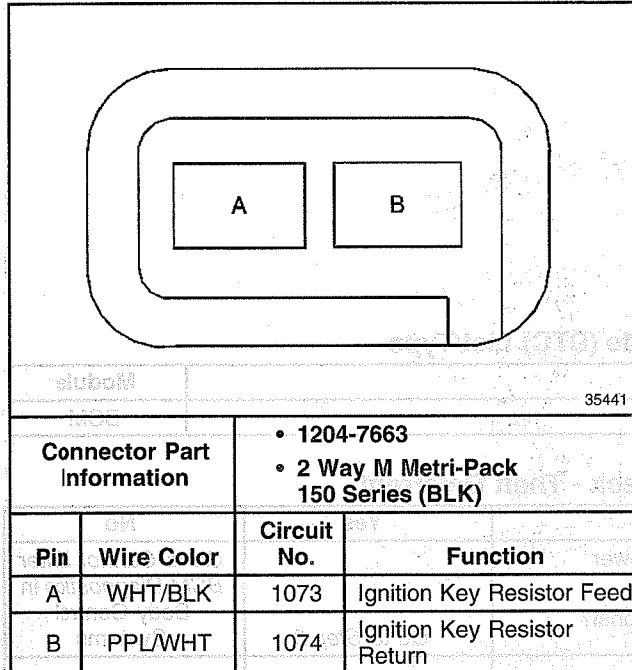
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Legend

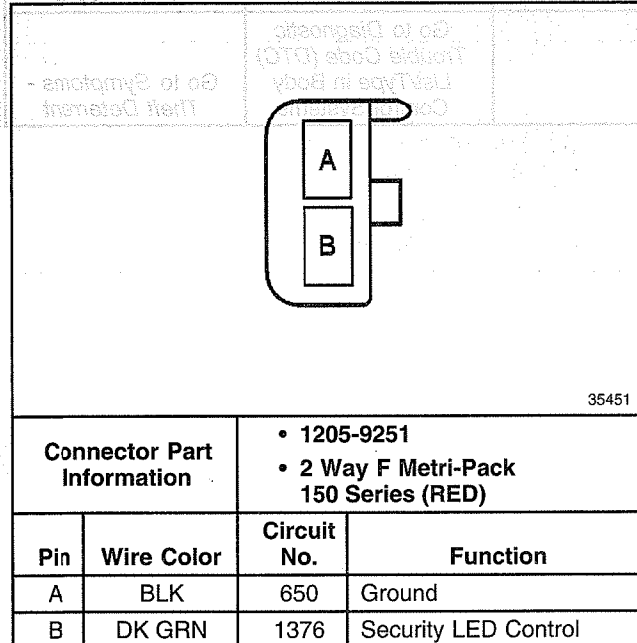
- | | |
|----------------------------------|-----------------------------------|
| (1) IP Compartment Lamp | (6) Blower Motor Relay |
| (2) DRL Ambient Light Sensor | (7) BCM Connectors |
| (3) Theft Deterrent Security LED | (8) Rear Fog Lamps Relay (Export) |
| (5) Antenna Lead | (9) Folding Top Relay |

Theft Deterrent System Connector End Views

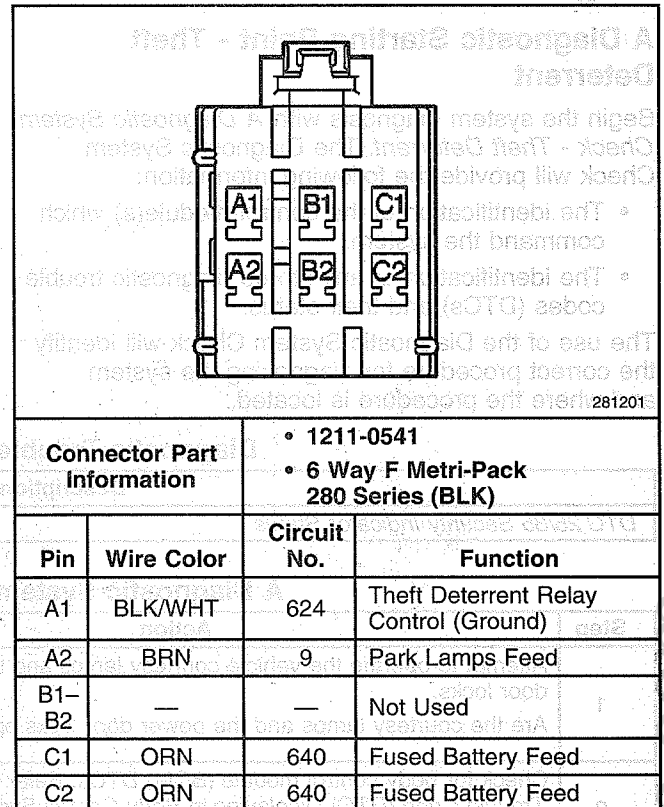
Ignition Key Lock Cylinder



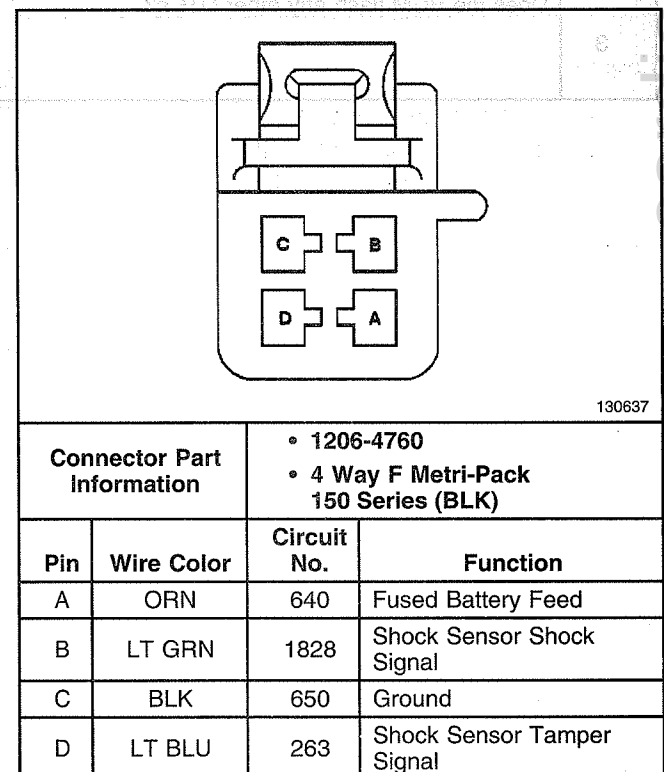
Security Indicator LED



Theft Deterrent Relay



Theft Deterrent Shock Sensor



Diagnostic Information and Procedures

A Diagnostic Starting Point - Theft Deterrent

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

- The identification of the control module(s) which command the system.
- 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.

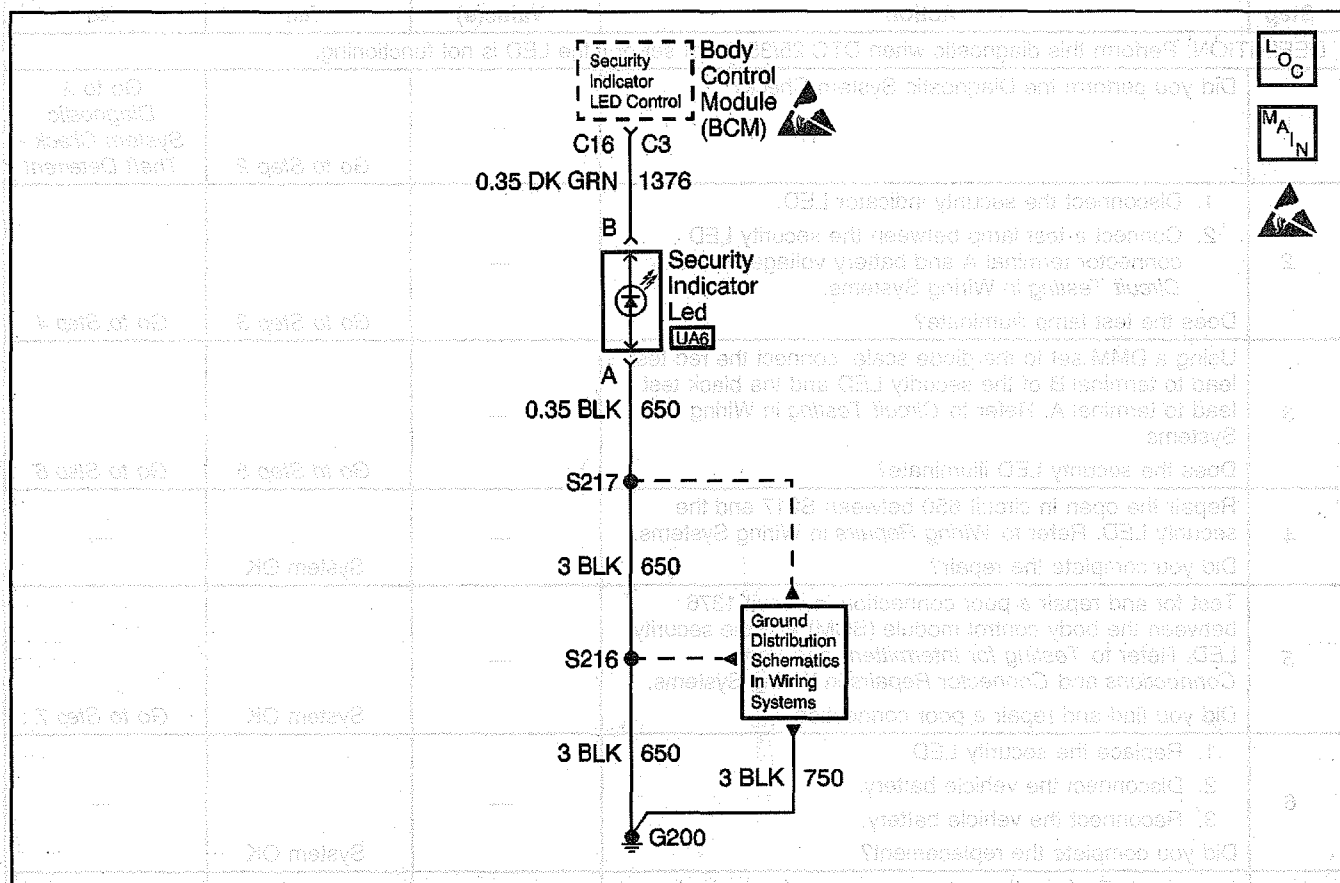
Diagnostic Trouble Code (DTC) List/Type

Description	Module
DTC 25/35 Security Indicator Status	BCM

A Diagnostic System Check - Theft Deterrent

Step	Action	Yes	No
1	Attempt to operate the vehicle courtesy lamps and the power door locks. Are the courtesy lamps and the power door locks operational?	Go to Step 2	Go to <i>Cannot Enter BCM Diagnostics</i> in Body Control Systems
2	Check for body control module (BCM) DTCs. Refer to <i>Diagnostic Trouble Code (DTC) Displaying</i> in Body Control Systems. Does the BCM flash DTC 25/35?	Go to <i>Diagnostic Trouble Code (DTC) List/Type</i>	Go to Step 3
3	Does the BCM flash any other DTCs?	Go to <i>Diagnostic Trouble Code (DTC) List/Type</i> in Body Control Systems	Go to <i>Symptoms - Theft Deterrent</i>

DTC 25/35 Security Indicator Status

**Circuit Description**

The body control module (BCM) provides an output on circuit 1376 to the security LED.

Conditions for Setting the DTC

DTC 25 is set when the BCM detects the security LED at connector C3 terminal C16 when the ignition is turned to the RUN position.

DTC 35 is set when the BCM detects the security LED at any time since the codes were last cleared.

Action Taken When the DTC Sets

DTC 35 is required for content theft deterrent operation. The security LED must be detected for the alarm to function.

Test Description

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

2. This step tests the security LED ground circuit 650.
3. This step tests the security LED.
5. This step tests circuit 1376 for an open or poor connection.

DTC 25/35 Security Indicator Status

Step	Action	Value(s)	Yes	No
DEFINITION: Perform this diagnostic when DTC 25/35 is not set or if the LED is not functioning.				
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	1. Disconnect the security indicator LED. 2. Connect a test lamp between the security LED connector terminal A and battery voltage. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 3	Go to Step 4
3	Using a DMM set to the diode scale, connect the red test lead to terminal B of the security LED and the black test lead to terminal A. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the security LED illuminate?	—	Go to Step 5	Go to Step 6
4	Repair the open in circuit 650 between S217 and the security LED. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	System OK	—
5	Test for and repair a poor connection in circuit 1376 between the body control module (BCM) and the security LED. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	System OK	Go to Step 7
6	1. Replace the security LED. 2. Disconnect the vehicle battery. 3. Reconnect the vehicle battery. Did you complete the replacement?	—	System OK	—
7	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	System OK	—

Symptoms - Theft Deterrent

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

1. Perform *A Diagnostic System Check - Theft Deterrent* before using the Symptom Tables in order to verify that there are no DTCs set.
2. Review the system operation in order to familiarize yourself with the system functions. Refer to one of the following operations:
 - *Content Theft Deterrent (CTD) Operation*
 - *Vehicle Theft Deterrent (VTD) Operation*

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the Theft Deterrent System. Refer to *Checking Aftermarket Accessories in Wiring Systems*.
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Intermittent

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

Symptom List

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

- *Content Theft Deterrent (CTD) Alarm Mode Always On*
- *Content Theft Deterrent (CTD) Alarm Mode Inoperative*
- *Horn Inoperative in Content Theft Deterrent (CTD) Alarm Mode*
- *Lights Inoperative in Content Theft Deterrent (CTD) Alarm Mode*
- *SECURITY Indicator Inoperative*
- *SECURITY Indicator Off, Engine Does Not Crank*
- *SECURITY Indicator On, Engine Starts*
- *Vehicle Speed Output Circuit Diagnosis*
- *Theft Deterrent System Feature Customization Inoperative*
- *Theft Deterrent Shock Sensor Inoperative*
- *Ignition Key Lock Cylinder Test*

Content Theft Deterrent (CTD) Alarm Mode Always On

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	Is the Content Theft Deterrent alarm mode on continuously?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Open the driver door. 2. Close the driver door. Do the courtesy lamps turn off?	—	Go to Step 4	Go to A Diagnostic System Check - Lighting Systems
4	Disconnect the theft deterrent shock sensor. Is the theft deterrent alarm still on?	—	Go to Step 6	Go to Step 5
5	Replace the theft deterrent shock sensor. Refer to <i>Shock Sensor Replacement</i> . Did you complete the replacement?	—	Go to Step 11	—
6	1. Disconnect the BCM connector C3. 2. Connect a test lamp from BCM connector C3 terminal D14 to battery voltage. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 7	Go to Step 8
7	Repair the short to ground in circuit 1828 between the BCM connector C3 terminal D14 and the theft deterrent shock sensor terminal B. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 11	—

Content Theft Deterrent (CTD) Alarm Mode Always On (cont'd)

Step	Action	Value(s)	Yes	No
8	Connect a test lamp from BCM connector C3 terminal D2 to battery voltage. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 9	Go to Step 10
9	Repair the short to ground in circuit 263 between the BCM connector C3 terminal D2 and the theft deterrent shock sensor terminal D. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 11	—
10	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 11	—
11	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

Content Theft Deterrent (CTD) Alarm Mode Inoperative

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	Does the Content Theft Deterrent alarm mode system operate normally?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	Check for body control module (BCM) diagnostic trouble codes (DTCs). Refer to <i>Diagnostic Trouble Code (DTC) Displaying</i> in Body Control System. Is DTC 25/35 displayed?	—	Go to Step 4	Go to Step 5
4	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 8	—
5	Test for and repair a poor connection at the BCM connector C3 terminal C16. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 7	Go to Step 6
6	Test for and repair a poor connection at the security LED. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 7	Go to SECURITY Indicator Inoperative
7	1. Disconnect the battery. 2. Re connect the battery. Did you complete the repair?	—	Go to Step 8	—
8	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

Horn Inoperative in Content Theft Deterrent (CTD) Alarm Mode

Step	Action	Value(s)	Yes	No
Important: The horns may be turned off in feature customization. Refer to <i>Feature Customization</i> .				
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	1. Remove the key from the ignition. 2. Open any door. 3. Lock the doors using the transmitter. 4. Close the doors. Does the horn chirp upon system arming?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Disconnect the Body Control Module (BCM) connector C3. 2. Connect a test lamp between battery voltage and the BCM connector C3 terminal C9. Refer to <i>Circuit Testing</i> in Wiring Systems. 3. Press the horn switch on the steering wheel. Does the test lamp illuminate?	—	Go to Step 4	Go to Step 5
4	Test for and repair a poor connection at the BCM connector C3 terminal C9. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 7	Go to Step 6
5	Repair the open in circuit 28 between the BCM C9 terminal C9 and connector C216 terminal G. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 7	—
6	Important: Perform the set up procedure for the body control system. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 7	—
7	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

Lights Inoperative in Content Theft Deterrent (CTD) Alarm Mode

Step	Action	Value(s)	Yes	No
Important: Verify that the arming verification feature of the theft deterrent system is enabled prior to performing this diagnostic. Refer to <i>Feature Customization</i> .				
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	1. Remove the key from the ignition. 2. Open any door. 3. Lock the doors using the transmitter. 4. Close the doors. Do the park lamps flash upon system arming?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Remove the theft deterrent relay. 2. Connect a test lamp between the theft deterrent relay terminal C1 and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 4	Go to Step 11

Lights Inoperative in Content Theft Deterrent (CTD) Alarm Mode (cont'd)

Step	Action	Value(s)	Yes	No
4	1. Connect a test lamp between the theft deterrent relay terminal C1 and terminal A1. Refer to <i>Circuit Testing</i> in Wiring Systems. 2. While observing the test lamp, press the lock button on the remote control door lock transmitter. Does the test lamp illuminate?	—	Go to Step 5	Go to Step 12
5	Connect a test lamp between the theft deterrent relay connector terminal C2 and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 6	Go to Step 9
6	1. Connect a test lamp between the theft deterrent relay connector terminal A2 and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. 2. Turn on the park lamps. Does the test lamp illuminate?	—	Go to Step 7	Go to Step 10
7	Test for and repair a poor connection at the theft deterrent relay connector terminal A2. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 16	Go to Step 8
8	Replace the theft deterrent relay. Refer to <i>Theft Deterrent Relay Replacement</i> . Did you complete the replacement?	—	Go to Step 16	—
9	Repair the open in the battery voltage circuit of the theft deterrent relay switch. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 16	—
10	Repair the open in circuit 9 between S226 and the theft deterrent relay connector terminal A2. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 16	—
11	Repair the open in the battery voltage circuit of the theft deterrent relay coil. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 16	—
12	1. Connect the test lamp between the theft deterrent relay connector terminal C1 and the body control module (BCM) connector terminal C8. Refer to <i>Circuit Testing</i> in Wiring Systems. 2. While observing the test lamp, press the lock button on the remote control door lock transmitter. Does the test lamp illuminate?	—	Go to Step 13	Go to Step 14
13	Repair the open in circuit 624 between the theft deterrent relay terminal A1 and the BCM connector C3 terminal C8. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 16	—
14	Test for and repair a poor connection at the BCM connector C3 terminal C8. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 16	Go to Step 15
15	Important: Perform the set up procedure for the body control system. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 16	—
16	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

SECURITY Indicator Inoperative

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	Turn the ignition to the RUN position. Does the SECURITY indicator illuminate during the bulb test?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Disconnect the body control module (BCM) connector C3. 2. Connect a 15A fused jumper between the BCM connector C3 terminal C12 and ground. Refer to <i>Circuit Testing in Wiring Systems</i> . Does the SECURITY indicator illuminate?	—	Go to Step 4	Go to Step 6
4	Test for and repair a poor connection at the BCM connector C3 terminal C12. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems</i> . Did you find and repair a poor connection?	—	Go to Step 11	Go to Step 5
5	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement in Body Control System</i> . Did you complete the replacement?	—	Go to Step 11	—
6	1. Remove the instrument cluster. 2. Connect a test lamp between the instrument cluster connector terminal B3 and terminal A10. 3. Connect a 15A fused jumper between BCM connector C3 terminal C12 and ground. Refer to <i>Circuit Testing in Wiring Systems</i> . Does the test lamp illuminate?	—	Go to Step 7	Go to Step 9
7	Test for and repair a poor connection at the instrument cluster connector terminal A10 and terminal B3. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems</i> . Did you find and repair a poor connection?	—	Go to Step 11	Go to Step 8
8	Replace the instrument cluster. Refer to <i>IP Cluster Replacement in Instrument Cluster, Gauges, and Console</i> . Did you complete the replacement?	—	Go to Step 11	—
9	Test for an open in circuit 728 between the instrument cluster connector terminal B3 and the BCM connector C3 terminal C12. Refer to <i>Circuit Testing and Wiring Repairs in Wiring Systems</i> . Did you find and repair an open?	—	Go to Step 11	Go to Step 10
10	Repair the open in circuit 640 between S211 and the instrument cluster connector terminal A10. Refer to <i>Wiring Repairs in Wiring Systems</i> . Did you complete the repair?	—	Go to Step 11	—
11	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

SECURITY Indicator Off, Engine Does Not Crank

Step	Action	Value(s)	Yes	No
Important: In order to avoid misdiagnosis, check for powertrain control module (PCM) DTCs. Refer to <i>A Powertrain On Board Diagnostic (OBD) System Check 5.7L</i> or <i>A Powertrain On Board Diagnostic (OBD) System Check 3.8L</i> in Engine Controls.				
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	Attempt to start the vehicle. Does the engine crank and the SECURITY indicator illuminate?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Disconnect the starter relay. 2. Connect a test lamp between the engine wiring harness junction block 2 terminal C6 and battery voltage. Refer to <i>Circuit Testing</i> in Wiring Systems. 3. While observing the test lamp, turn the ignition switch to the RUN position. Does the test lamp illuminate?	—	Go to Step 4	Go to Step 9
4	1. Connect a test lamp between the engine wiring harness junction block 2 terminal B4 and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. 2. Depress the clutch pedal (manual transmission). 3. Place the vehicle in park (automatic transmission). 4. While observing the test lamp, turn the ignition switch to the START position. Does the test lamp illuminate?	—	Go to Step 5	Go to Step 13
5	Connect a test lamp between the engine wiring harness junction block 2 terminal C4 and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 6	Go to Step 20
6	1. Disconnect circuit 6 (PPL wire) from the starter solenoid. 2. Connect a 20A fused jumper from circuit 6 (PPL wire) to ground. 3. Connect a test lamp from the engine wiring harness junction block terminal C4 to terminal B6. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 7	Go to Step 21
7	Test for and repair a poor connection at the starter solenoid. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 22	Go to Step 8
8	Replace the starter motor. Refer to <i>Starter Motor Replacement (3.8 L)</i> or <i>Starter Motor Replacement (5.7 L)</i> in Engine Electrical. Did you complete the replacement?	—	Go to Step 22	Go to Step 10
9	Test for and repair a poor connection in circuit 625 between the body control module (BCM) and the engine wiring harness junction block 2. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 22	Go to Step 10
10	Test for and repair an open in circuit 625 between the BCM and the engine wiring harness junction block 2. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and repair an open?	—	Go to Step 22	Go to Step 11

SECURITY Indicator Off, Engine Does Not Crank (cont'd)

Step	Action	Value(s)	Yes	No
11	Test for and repair a short to battery voltage in circuit 625. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in <i>Wiring Systems</i> . Did you find and repair a short?	—	Go to Step 22	Go to Step 12
12	Replace the BCM. Refer to <i>Body Control Module Replacement</i> in <i>Body Control System</i> . Did you complete the replacement?	—	Go to Step 22	Go to Step 13
13	Is the vehicle equipped with a manual transmission?	—	Go to Step 14	Go to Step 17
14	Test for and repair an open or a poor connection in circuit 1443 between the engine wiring harness junction block 2 terminal B4 and the clutch pedal position switch. Refer to <i>Circuit Testing</i> or <i>Testing for Intermittent and Poor Connections</i> and <i>Wiring Repairs</i> or <i>Connector Repairs</i> in <i>Wiring Systems</i> . Did you find and repair an open or a poor connection?	—	Go to Step 22	Go to Step 15
15	Test for and repair an open or a poor connection in circuit 1035 between the clutch pedal position switch and C200. Refer to <i>Circuit Testing</i> or <i>Testing for Intermittent and Poor Connections</i> and <i>Wiring Repairs</i> or <i>Connector Repairs</i> in <i>Wiring Systems</i> . Did you find and repair an open or a poor connection?	—	Go to Step 22	Go to Step 16
16	Replace the clutch pedal position switch. Refer to <i>Clutch Pedal Position Switch Replacement</i> in <i>Clutch</i> . Did you complete the replacement?	—	Go to Step 22	Go to Step 17
17	Test for and repair an open or a poor connection in circuit 1443 between the engine wiring harness junction block 2 terminal B4 and the park neutral position switch. Refer to <i>Circuit Testing</i> or <i>Testing for Intermittent and Poor Connections</i> and <i>Wiring Repairs</i> or <i>Connector Repairs</i> in <i>Wiring Systems</i> . Did you find and repair an open or a poor connection?	—	Go to Step 22	Go to Step 18
18	Test for and repair an open or a poor connection in circuit 1035 between the park neutral position switch and C200. Refer to <i>Circuit Testing</i> or <i>Testing for Intermittent and Poor Connections</i> and <i>Wiring Repairs</i> or <i>Connector Repairs</i> in <i>Wiring Systems</i> . Did you find and repair an open or a poor connection?	—	Go to Step 22	Go to Step 19
19	Adjust or replace the park/neutral position switch. Refer to <i>Park/Neutral Position Switch Replacement</i> or <i>Park/Neutral Position Switch Adjustment</i> in <i>Automatic Transmission - 4L60-E</i> . Did you complete the adjustment or replacement?	—	Go to Step 22	—
20	Repair the open in circuit 2 between the engine wiring harness junction block terminal C4 and S183. Refer to <i>Wiring Repairs</i> in <i>Wiring Systems</i> . Did you complete the repair?	—	Go to Step 22	—
21	Repair an open or a poor connection in circuit 6 between the starter solenoid and the engine wiring harness junction block 2. Refer to <i>Wiring Repairs</i> or <i>Connector Repairs</i> in <i>Wiring Systems</i> . Did you complete the repair?	—	Go to Step 22	—
22	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

SECURITY Indicator On, Engine Starts

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	Start the vehicle. Does the engine start and the SECURITY indicator turn off after the bulb test?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Disconnect the body control module (BCM) connector C3. 2. Turn the ignition switch to the RUN position. Is the SECURITY indicator illuminated?	—	Go to Step 4	Go to Step 6
4	Test for and repair a short to ground in circuit 728 between the BCM connector C3 terminal C12 and the instrument cluster connector terminal B3. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and repair a short?	—	Go to Step 8	Go to Step 5
5	Replace the instrument cluster. Refer to <i>IP Cluster Replacement</i> in Instrument Cluster, Gauges, and Console. Did you complete the replacement?	—	Go to Step 8	—
6	Perform a lock cylinder and harness test. Refer to <i>Ignition Key Lock Cylinder Test</i> . Did the keys, the lock cylinder, and the cylinder harness test OK?	—	Go to Step 7	—
7	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control Module. The security indicator will remain illuminated for approximately 1 minute after the repair is complete if a failure occurred in the previous ignition cycle. Did you complete the replacement?	—	Go to Step 8	—
8	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

Security Indicator LED Inoperative

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	1. Remove the key from the ignition. 2. Open any door. 3. Lock the doors using the transmitter. 4. Close the door. Does the security LED flash?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Using a DMM set to the diode scale, backprobe the BCM connector C3 terminal C16 with the red test lead. 2. Backprobe the BCM connector C3 terminal C1 with the black test lead. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the security LED illuminate?	—	Go to Step 4	Go to Step 6
4	Test for and repair a poor connection at the BCM connector C3 terminal C1 and terminal C16. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 10	Go to Step 5
5	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 10	
6	1. Disconnect the security LED. 2. Connect a test lamp between battery voltage and terminal A of the security LED harness. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 7	Go to Step 9
7	Test for and repair a poor connection in circuit 1376 between the security LED and the BCM. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 10	Go to Step 8
8	1. Replace the security LED. 2. Disconnect the vehicle battery. 3. Reconnect the vehicle battery. Did you complete the replacement?	—	Go to Step 10	
9	Repair the open in circuit 650 between S217 and the security indicator. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 10	
10	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	

Theft Deterrent System Feature Customization Inoperative

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	Attempt to customize the theft deterrent system features. Refer to <i>Feature Customization</i> . Did you customize the theft deterrent system?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Is the repair complete?	—	Go to Step 4	—
4	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	—

Theft Deterrent Shock Sensor Inoperative

Step	Action	Value(s)	Yes	No
Important: The factory sets the theft deterrent shock sensor to a middle range of sensitivity. Depending on your area or usage, the factory setting may be too sensitive or not sensitive enough. Make sure that the tamper label on the knob that adjusts the shock sensor is not broken or altered. If the label is broken or altered, the shock sensor may be misadjusted to a setting that is less sensitive.				
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	Does the shock sensor operate normally?	—	Go to Testing for Intermittent and Poor Connections in Wiring Systems	Go to Step 3
3	1. Enter the body control module (BCM) diagnostic mode. Refer to <i>Diagnostic Trouble Code (DTC) Displaying</i> . 2. Access the theft deterrent shock sensor. 3. While in the diagnostic mode, tap the shock sensor with your index finger. Does the BCM chime sound when you tap the shock sensor?	—	Go to Step 4	Go to Step 5
4	The shock sensor may be misadjusted. In order to adjust the shock sensor, refer to <i>Shock Sensor Replacement</i> . Is the adjustment complete?	—	Go to Step 20	—
5	1. Disconnect the shock sensor connector. 2. Connect a test lamp between the shock sensor connector terminal A and terminal C. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 9	Go to Step 6
6	Connect a test lamp between the shock sensor terminal A and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 8	Go to Step 7
7	Repair the open in circuit 640 between S211 and the shock sensor terminal A. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 20	—

Theft Deterrent Shock Sensor Inoperative (cont'd)

Step	Action	Value(s)	Yes	No
8	Repair the open in circuit 650 between S217 and the shock sensor terminal C. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 20	—
9	Connect a test lamp between the shock sensor harness connector terminal D and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the BCM chime sound when the test lamp is connected (the horn may also sound)?	—	Go to Step 10	Go to Step 16
10	Connect a test lamp between the shock sensor harness connector terminal B and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the BCM chime sound when the test lamp is connected (the horn may also sound)?	—	Go to Step 11	Go to Step 13
11	Test for and repair a poor connection at the shock sensor. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 20	Go to Step 12
12	Replace the shock sensor. Refer to <i>Shock Sensor Replacement</i> . Did you complete the replacement?	—	Go to Step 20	—
13	Connect a test lamp between the BCM connector C3 terminal D14 and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the BCM chime sound when the test lamp is connected (the horn may also sound)?	—	Go to Step 14	Go to Step 15
14	Repair the open in circuit 1828 between the BCM and the shock sensor. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 20	—
15	Test for and repair a poor connection at the BCM connector C3 terminal D14. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 20	Go to Step 19
16	Connect a test lamp between the BCM connector C3 terminal D2 and ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the BCM chime sound when the test lamp is connected (the horn may also sound)?	—	Go to Step 17	Go to Step 18
17	Repair the open in circuit 263 between the BCM and the shock sensor. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the replacement?	—	Go to Step 20	—
18	Test for and repair a poor connection at the BCM connector C3 terminal D2. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 20	Go to Step 19
19	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement</i> in Body Control System. Did you complete the replacement?	—	Go to Step 20	—
20	Operate the system in order to verify the repair.	—	System OK	Go to Step 3

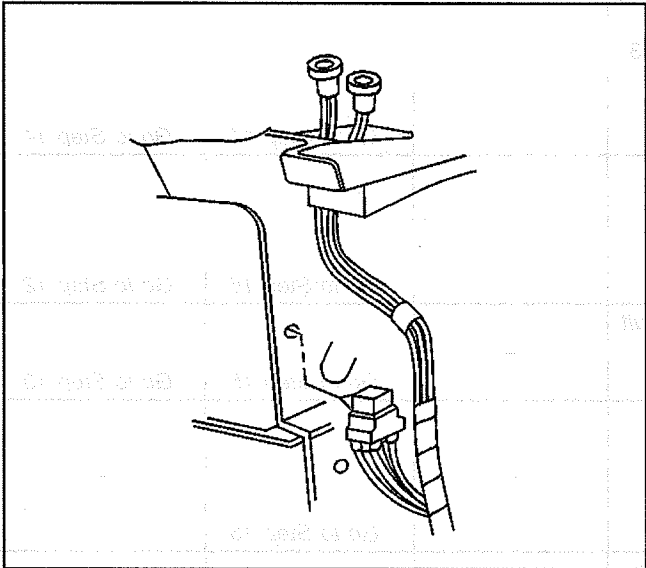
Ignition Key Lock Cylinder Test

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check?	—	Go to Step 2	Go to A Diagnostic System Check - Theft Deterrent
2	Important: Inspect all of the keys for matching codes. 1. Insert the ignition key into the J 35628-A. 2. Turn the J 35628-A ON. 3. Read the key code on the display of the J 35628-A. Is the key code a value of 1–15?	1–15	Go to Step 3	Go to Step 7
3	1. Write down the key code that the J 35628-A displayed. 2. Turn the J 35628-A OFF. 3. Connect the J 35628-A to the 2-way ignition switch lock cylinder harness connector at the base of the steering column. 4. Insert the ignition key into the ignition switch lock cylinder. 5. Turn the J 35628-A ON. 6. Observe the display on the J 35628-A. Is the key code the same as the code recorded in step 1?	—	Go to Step 4	Go to Step 8
4	Using a test lamp, frontprobe the 2-way connector at the base of the steering column, between terminal B (BCM side) and battery voltage. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 5	Go to Step 10
5	Test for and repair a poor connection at the ignition key lock cylinder and I/P harness connector terminals A and B. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 15	Go to Step 6
6	Test for and repair an open, a short to battery voltage, or a short to ground in circuit 1073. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and repair an open or a short?	—	Go to Step 15	Go to Step 13
7	1. Clean the key. 2. Retest the key. If the key code is invalid, replace the key. Refer to <i>Programming Additional Keys</i> or <i>Programming Replacement Keys, Ign Cyl, or PCM</i> . Did you replace the key?	—	Go to Step 15	—
8	Important: If you repair the lock cylinder harness, the SECURITY indicator will remain ON for approximately 1 minute. Test for and repair a poor connection at the ignition key lock cylinder connector terminals A and B. Refer to <i>Testing for Intermittent and Poor Connections</i> and <i>Connector Repairs</i> in Wiring Systems. Did you find and repair a poor connection?	—	Go to Step 15	Go to Step 9
9	Replace the ignition switch lock cylinder. Refer to <i>Ignition Switch Replacement - On Vehicle</i> in Steering Wheel and Column. Did you complete the replacement?	—	Go to Step 15	—

Ignition Key Lock Cylinder Test (cont'd)

Step	Action	Value(s)	Yes	No
10	1. Disconnect the BCM. 2. Connect a test lamp between the BCM connector C3 terminal C1 and battery voltage. Refer to <i>Circuit Testing in Wiring Systems</i> . Does the test lamp illuminate?	—	Go to Step 11	Go to Step 14
11	Test for and repair a poor connection at BCM connector C3 terminal C2 and terminal D7. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems</i> . Did you find and repair a poor connection?	—	Go to Step 15	Go to Step 12
12	Test for and repair an open in circuit 1074. Refer to <i>Circuit Testing and Wiring Repairs in Wiring Systems</i> . Did you find and repair an open?	—	Go to Step 15	Go to Step 13
13	Important: Perform the set up procedure for the body control module. Replace the BCM. Refer to <i>Body Control Module Replacement in Body Control System</i> . Did you complete the replacement?	—	Go to Step 15	—
14	Repair the open in circuit in 650. Refer to <i>Wiring Repairs in Wiring Systems</i> . Did you complete the repair?	—	Go to Step 15	—
15	Operate the system in order to verify the repair. Did you correct the condition?	—	System OK	Go to Step 3

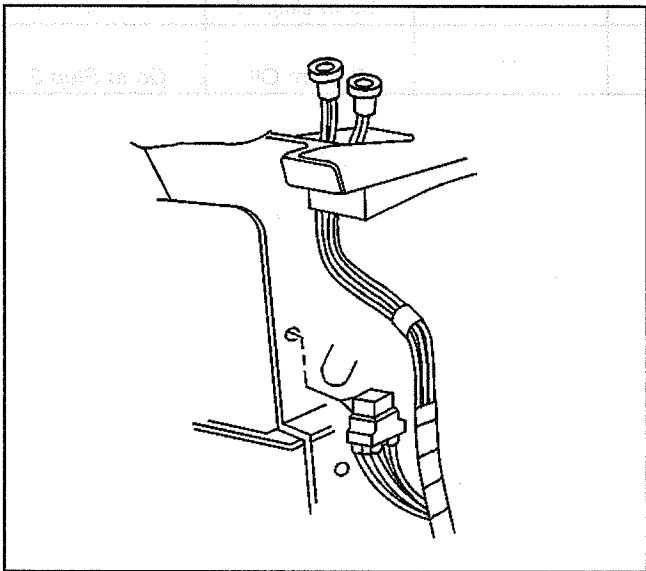
Repair Instructions



Theft Deterrent Relay Replacement

Removal Procedure

1. Locate the theft deterrent relay behind the instrument panel on the inflatable restraint bracket.
2. Unclip the relay from the inflatable restraint bracket.
3. Disconnect the theft deterrent relay electrical connector.



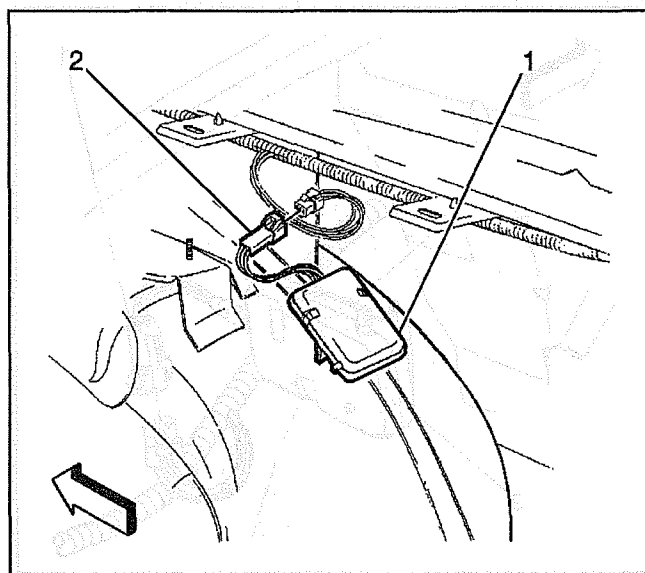
Installation Procedure

1. Connect the theft deterrent relay electrical connector.
2. Clip the relay to the inflatable restraint bracket.

Shock Sensor Replacement

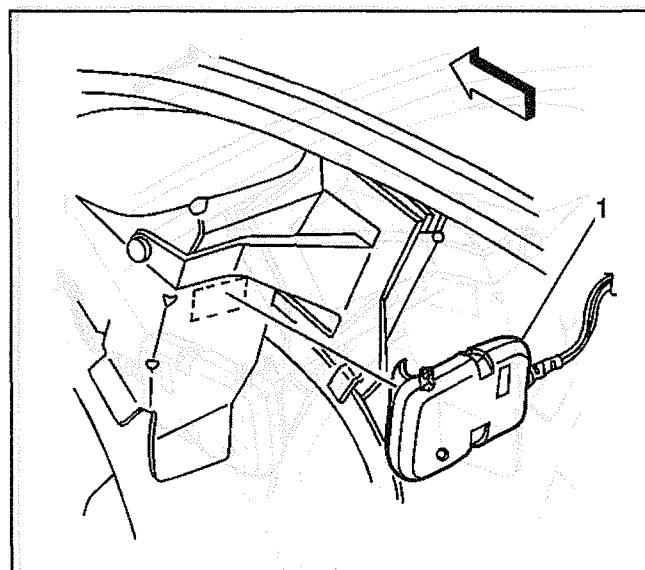
Removal Procedure

1. Remove the right quarter inner rear trim finishing panel. Refer to *Trim Panel Replacement - Cargo Area Side (Coupe)* in Interior Trim.
2. If vehicle is a coupe, remove the shock sensor (1) from the right rear inner wheelhouse panel.



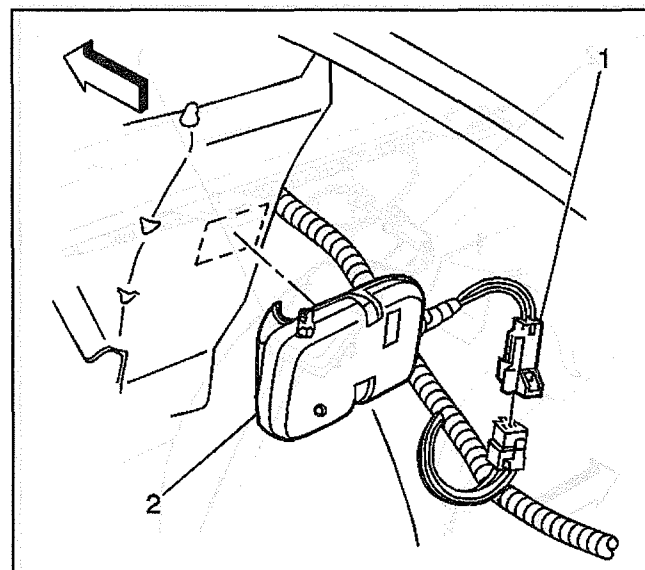
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3. If vehicle is a convertible with a audio amplifier, remove the shock sensor (1) from the wheelhouse bracket.

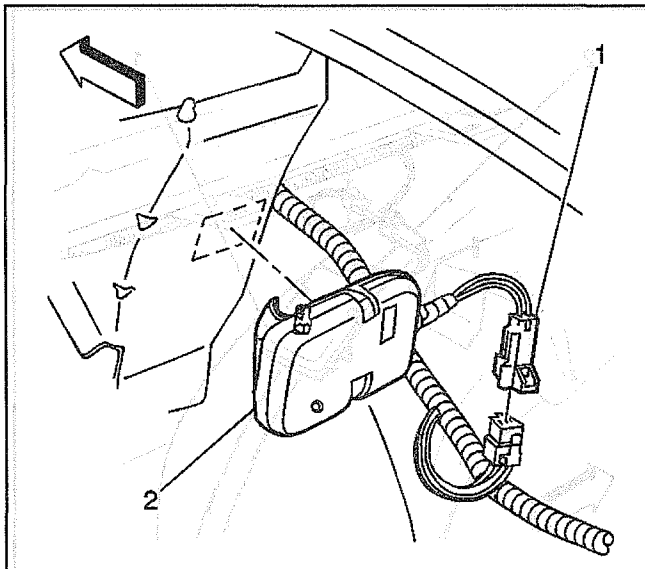


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4. If vehicle is a convertible without a audio amplifier, remove the shock sensor (1) from the wheelhouse bracket.
5. Disconnect the shock sensor electrical connector (2).
6. Remove the shock sensor (1) from the vehicle.
7. Using a clean cloth, clean the sensor mounting surface with a suitable cleaning solution.
8. Allow the sensor mounting location time to dry.



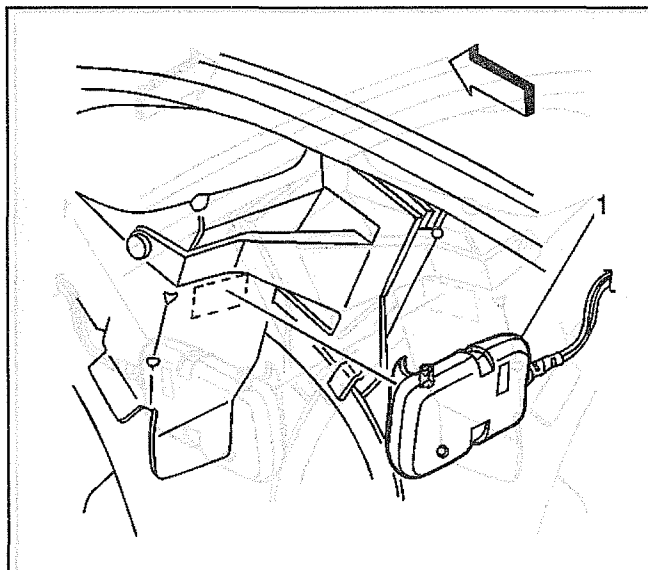
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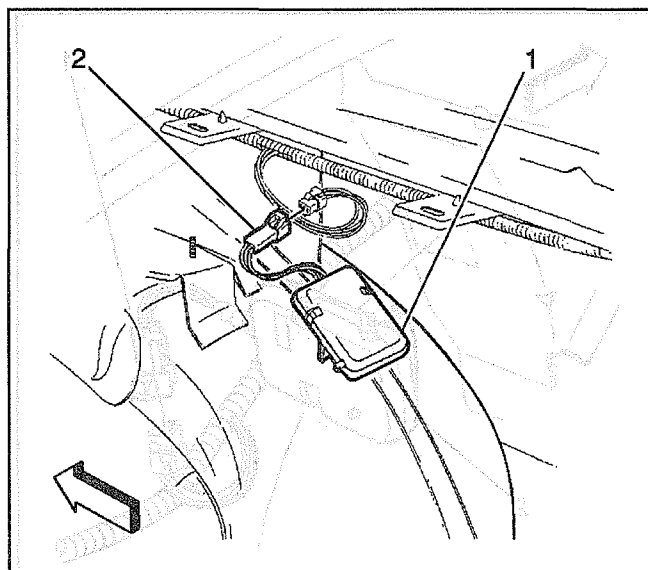
Installation Procedure

Important: The shock sensor sensitivity is preset and does not require adjustment. If more or less sensitivity is needed, refer to System Components under *Content Theft Deterrent (CTD) Operation*.

1. Connect the shock sensor electrical connector (2).
2. Locate the shock sensor (1) to the vehicle.
3. Pull paper backing from tape on back of sensor (1).
4. If vehicle is a convertible without a audio amplifier, press shock sensor (1) to the wheelhouse bracket as shown.



5. If vehicle is a convertible with a audio amplifier, press shock sensor (1) to the wheelhouse bracket as shown.



6. If vehicle is a coupe, press shock sensor (1) to the right rear inner wheelhouse panel as shown.

7. Using a clean cloth, clean the sensor mounting surface with a suitable cleaning solution.
8. Allow the sensor mounting location time to dry.
9. Remove the shock sensor (1) from the vehicle.
10. Disconnect the shock sensor electrical connector (2).

Programming Additional Keys

Duplicating Ignition Keys

Tools Required

J 35628-A PASS/VATS Interrogator

In order to duplicate an ignition key, determine the proper electrical code of the key.

1. Insert the customer's spare ignition key into the key code reader on J 35628-A.
2. Press the ON-OFF rocker switch to the ON position.
3. A number from 1 to 15 appears in the window. This number indicates the electrical code of the key. If the interrogator displays E, replace the ignition key.
4. Cut a new key having the electrical code determined in step 3.
5. Use the new key to start the vehicle. Ensure the following conditions:

- The key is mechanically correct.
- The key is electrically correct.

Programming Replacement Keys, Ign Cyl, or PCM

Tools Required

J 35628-A PASS/VATS Interrogator

1. Use one of the following methods to determine the code if the ignition key is lost and there is no spare:
 - Determine the mechanical code from the code on the ignition key lock cylinder or recode the cylinder.
 - Determine the code from the dealer invoice for the vehicle or from the Divisional Roadside Assistance.
2. Retrieve a blank personal automotive security system key (PASS-Key®) (a test key that has no resistance pellet).
3. Cut the blank PASS-Key® to the correct mechanical cut. Use this new key to operate the ignition switch for the remaining steps.
4. Remove the driver side knee bolster. Refer to *Knee Bolster Replacement - Left* in Instrument Panel, Gauges and Console.

Important: Ensure to differentiate between the PASS-Key® connector and the supplemental inflatable restraint (SIR) connector. The PASS-Key® connector has PPL/WHT and WHT/BLK wires.

5. Disconnect the key resistor sensing connector (the two-way connector leading into the steering column).
6. Connect the connector end on the vehicle harness to the connector on the J 35628-A.

7. Set the key code selector on the J 35628-A to number 1.

Important: Do not connect to the steering column wiring.

8. Use the key made in step 3 to attempt to start the vehicle. Perform the appropriate step:
 - The key code selector is set to the correct electrical code if the vehicle STARTS. Cut a new key having this electrical code. The new key is now the customers replacement key.
 - Go to step 10 if the vehicle does NOT START.
9. Turn the ignition switch to the OFF position.
10. Turn the key code selector to the next higher position.
11. Press START rocker switch on the 4 minute timer on the J 35628-A to initiate a 4 minute time period.
12. The red indicator turns off at the end of the 4 minute time interval.
13. Attempt to start the vehicle.
14. Repeat step 10 through step 14 until the vehicle starts.
15. Cut a new key having the electrical code which allowed the vehicle to start.

Feature Customization

Many features of the universal theft deterrent system, including horn chirps, how the system arms and delay times, may be set to the customer's preference. The alarm system can also be turned off. To customize features, after the system is in programming mode, refer to the appropriate chart below.

Programming Mode

Programming mode is necessary to customize features of the system. To set the Body Control Module (BCM) in the programming mode, refer to the following procedure.

Entering Programming Mode

To enter the programming mode, perform the following:

1. Turn the ignition ON.
This will disarm the theft system, if necessary.
2. Turn the ignition OFF.
3. Remove the RADIO fuse (#17).
4. Turn the ignition to the ACC position.

The chime will sound to verify the system is in programming mode.

- When the chime sounds once; exit lighting, delayed illumination, last door closed locking and unlocking prevention can be customized.
- When the chime sounds twice and the vehicle is equipped with universal theft deterrent; remote lock control verification, arming method, arming verification, driver's door delay and shock sensor enable/disable can be customized.

Exiting Programming Mode

To exit the programming mode, perform the following:

1. When the programming is done, turn the ignition switch OFF.
2. Install the RADIO fuse (#17).

Customization Charts

Exit Lighting and Delayed Illumination

Exit lighting illuminates interior lamps when the key is removed from the ignition switch to help in exiting the vehicle. Delayed illumination illuminates interior lamps for 25 seconds after the doors are closed. The 25 seconds is shortened if the ignition is turned on or if the power locks are activated. Both exit lighting and delayed illumination are enabled from the factory, and can be disabled if desired.

1. Enter the programming mode.
2. Turn the courtesy lamp switch ON then OFF (instrument panel (IP) dimmer switch, not parking lamps).

Listen to the number of chimes to determine current setting.

The factory setting below is listed in CAPITAL print.

3. Turn the courtesy lamp switch ON and OFF to increment desired setting below.
4. Continue customizing other features or exit the programming mode.

Number of Chimes	Exit Lighting Feature	Delayed Illumination Feature
1	Disabled	Disabled
2	Disabled	Enabled
3	Enabled	Disabled
4	ENABLED	ENABLED

Last Door Closed Locking and Lockout Prevention

Last door closed locking is available on cars with power locks, this feature provides for delayed locking of the door (three seconds after the last door is closed). This allows the driver to exit the vehicle and press the lock button (either on the key fob or the door panel), but the doors will not lock until both doors are closed. When the locked switch is pressed, the chime will sound three times, indicating a last door closed locking is pending. Pressing the lock switch again will lock the doors immediately. Pressing the unlock switch will cancel a pending last door closed locking. Last door closed locking is disabled from the factory, and can be enabled if desired.

Lockout prevention protects the driver from locking the keys in the vehicle, this feature disables the power lock from locking when the keys are in the ignition and a door is open. If the power lock button is pressed when a door is open, the chime will sound 5 times as a reminder to take the keys before locking the door. Lockout prevention is enabled from the factory, and can be disabled if desired.

1. Enter the programming mode.
2. Press the lock switch on the door.

Listen to the number of chimes to determine current setting.

The factory setting below is listed in CAPITAL print.

3. Press the lock switch on the door to increment desired setting below.
4. Continue customizing other features or exit the programming mode.

Number of Chimes	Last Door Closed Locking	Lockout Prevention
1	Disabled	Disabled
2	DISABLED	ENABLED
3	Enabled	Disabled
4	Enabled	Enabled

Remote Lock Control Verification (Horn Chirp and Parking Lamps Flash)

Available on vehicles equipped with Universal Theft Deterrent (UTD) system, this feature provides horn chirps and/or parking lamp illumination to indicate that the remote transmitter LOCK or UNLOCK command was received.

1. Enter the programming mode.
2. Press the unlock switch on the remote transmitter.

Listen to the number of chimes to determine current setting.

The factory setting below is listed in CAPITAL print.

3. Press the unlock switch on the remote transmitter to increment desired setting below.
4. Continue customizing other features or exit the programming mode.

Number of Chimes	Key Fob Lock 1st Push	Key Fob Lock 2nd Push	Key Fob Unlock
1	Verification Off	Verification Off	Verification Off
2	Horns and Lamps	Horns and Lamps	Lamps
3	Horns and Lamps	Horns and Lamps	Horns and Lamps
4	Lamps	Lamps	Lamps
5	LAMPS	HORNS AND LAMPS	LAMPS

Theft Deterrent Arming Method

Available on vehicles equipped with Universal Theft Deterrent (UTD) system, this feature provides different methods of arming the UTD system.

1. Enter the programming mode.
2. Press the unlock switch on the door.
Listen to the number of chimes to determine current setting.

The factory setting below is listed in CAPITAL print.

3. Press the unlock switch on the door to increment desired setting below.
4. Continue customizing other features or exit the programming mode.

Number of Chimes	Theft Deterrent Arming Method
1	Alarm System Off
2	Remote Transmitter Arms
3	REMOTE TRANSMITTER OR DOOR LOCK SWITCH ARMS
4	Passive (Automatic)

Theft Deterrent Arming Verification (Horn Chirp and Parking Lamps Flash)

Available on vehicles equipped with Universal Theft Deterrent (UTD) system, this feature provides horn chirps and/or parking lamp illumination to indicate when the UTD system has been armed. It is programmed separately from the remote lock control verification list above.

1. Enter the programming mode.
2. Press the lock switch on the remote transmitter.
Listen to the number of chimes to determine current setting.
The factory setting below is listed in CAPITAL print.
3. Press the lock switch on the remote transmitter to increment desired setting below.
4. Continue customizing other features or exit the programming mode.

Number of Chimes	Arming with Key Fob	Arming With Door Lock Switch	Passive Arming
1	Off	Off	Off
2	Horns and Lamps	Horns and Lamps	Horns and Lamps
3	HORNS AND LAMPS	LAMPS	LAMPS
4	Lamps	Lamps	Lamps

Theft Deterrent Operation (Driver's Door Delay and Shock Sensor Enable)

Available on vehicles equipped with Universal Theft deterrent (UTD) system, this feature provides a driver's door delay that can be set at zero or 8 seconds from the time the driver's door is opened until the alarm sounds. The shock sensor feature, that detects sharp blows to the vehicle, can also be enabled or disabled using this chart. Refer to *Content Theft Deterrent (CTD) Description* for a description of the two sensitivity levels. Refer to Shock Sensor under *Content Theft Deterrent (CTD) Operation* for adjustment procedures.

1. Enter the programming mode.
2. Turn the parking lamps ON and OFF.
Listen to the number of chimes to determine current setting.
The factory setting below is listed in CAPITAL print.
3. Turn the parking lamps ON and OFF to increment desired setting below.
4. Continue customizing other features or exit programming mode.

Number of Chimes	Drivers Door Delay	Shock Sensor Enable
1	Zero	Disabled
2	8 seconds	Disabled
3	Zero	Enabled
4	8 SECONDS	ENABLED

Description and Operation

Content Theft Deterrent (CTD) Description

The Universal Theft Deterrent (UTD) option RPO UA6, combined with the remote control door lock option RPO AU0, is available for the vehicle.

The universal theft deterrent operates separately from the Personal Automotive Security System (PASS-Key[®]), which is standard on the vehicle. The universal theft deterrent system is comprised of the following components:

- The remote transmitters
- The red security indicator lamp on the instrument panel upper trim panel
- A shock sensor
- A controller with fuel and starter disable
- Horn outputs
- Parking lamp outputs
- Door jamb release switches
- Rear lid release switches

The following actions occur for 2 minutes if a break in is attempted:

- The system sounds the horn.
- The parking lamps flash.

Two levels of alarm are available through the shock sensor:

- Two horn blasts and parking lamps flash for non-threatening blows to the vehicle
- A two-minute alarm for harder blows to the vehicle

The red lamp at the shock sensor illuminate at shock levels that would cause the full 2 minute alarm to sound.

Many of the features of the system, including the following features, can be set to the customer's preference:

- Horn chirps
- The method of arming the system
- The delay times

The alarm system can be turned off. Refer to *Feature Customization*.

Content Theft Deterrent (CTD) Operation

The following steps describe the arming procedure:

1. Close all of the windows.
2. Place the shift control in PARK, if equipped with an automatic transmission.
3. Turn the ignition switch to the LOCK position.
4. Remove the ignition key.
5. Open any door.
6. Lock the doors with the power lock switch or with the remote transmitter.
7. Close the doors.

The vehicle alarm is now armed.

Activation of any of the following components will sound the alarm:

- Door lock switches
- Rear compartment lid release switch
- Shock sensor

The system will also sound if the wrong key resistance is detected. The armed system will briefly flash the red lamp every two seconds.

The system can also be armed with the windows open. The system will be disarmed only when the unlock button on the remote transmitter is pushed or the ignition key is ON.

Important: Locking the doors with the lock control slide knob will not arm the system.

When any door is opened during the arming procedure, the system goes into an armed wait mode.

The following actions will occur if the remote transmitter is used in order to arm the system:

- Closing the doors will arm the system.
- The horns chirp twice.
- The parking lamps flash.

If the door switch was used to arm the system, only the parking lamps will flash. If the rear compartment lift window panel is open or ajar during arming procedure, the horn will only chirp once.

Passive Arming

If the ignition is turned off and a door is opened, the system will automatically arm 8 seconds after all doors are closed regardless if the doors are locked or not. In all other cases, the system will wait 30 seconds after all doors are closed before automatically arming. The parking lamps will flash when the system arms. The vehicle is set to active arming mode from the factory. Passive arming can be enabled. Refer to *Feature Customization*.

Locking without Arming

In order to lock the vehicle without arming the system, manually lock the doors with the inside lock knobs or front door lock key and close the doors.

Disarming the System

When the system is disarmed, the red lamp is off. The rear compartment lift window panel button on the remote transmitter will disarm the rear compartment lift window panel and the shock sensor, in order to allow access to the rear compartment. The doors will remain armed. When the window panel is closed, in 5 seconds the rear compartment lift window panel will be armed again. In order to disarm the entire system, use either of the following two steps:

- Press the UNLOCK button on the remote transmitter.
- Turn the ignition ON with the proper key.

Driver's Door Delay

Unlocking the door or the rear compartment lift window panel with the use of a key will not disarm the system. The Body Control Module (BCM) is factory set with a driver's door delay. The driver's door delay gives the driver 8 seconds to turn the ignition key ON after the driver's door is unlocked with a key. The driver's door delay can be set for no delay time if the customer prefers disarming the alarm with the transmitter. If the driver's door delay is set for no delay time, any entry without the transmitter will activate the alarm. Refer to *Feature Customization*.

Deactivating the Alarm

To deactivate the alarm when activated and functioning, use the following procedure:

- If the alarm is activated by pressing the panic mode button on the remote transmitter, press the panic mode button again. Pressing the panic button a second time will deactivate the alarm.
- If the alarm is activated by the shock sensor, door or rear lid release switch, the alarm is deactivated by any of the following actions:
 - Turn the ignition ON. Use the proper key.
 - Press any button on the remote transmitter.
 - Press UNLOCK in order to complete the following actions:
 - Silence the alarm
 - Unlock the driver door
 - Disarm the system
 - Press LOCK in order to complete the following actions:
 - Silence the alarm
 - Keep the doors locked
 - Keep alarm system activated
 - Press the rear compartment lift window panel button in order to complete the following actions:
 - Silence the alarm
 - Unlock the lift window panel
 - Disarm the lift window panel
 - Press the panic button in order to complete the following actions:
 - Silence the alarm
 - Keep the doors locked
 - Keep the alarm system activated
- The alarm will deactivate after 2 minutes.
- If the alarm is activated by an improper ignition key, press any button on the remote transmitter in order to deactivate the alarm.

System Components

Remote Control Door Lock Transmitter

The remote transmitter is the primary device to disarm the theft deterrent system. If the vehicle has universal theft deterrent, the remote transmitter has a panic button. Press this button to sound the car alarm; press it again to turn the alarm off. As with the other functions, operation of this feature is subject to the range of the transmitter.

Shock Sensor

The chock sensor is located near the spare tire in the rear of the vehicle. Its sensitivity has been set to comply with various local regulations requiring vehicle contact to set off the alarm. It can be adjusted if more or less sensitivity is desired. If sensitivity is increased too much, it may give false alarms caused by gusts of wind or other natural events that may shake the vehicle. To adjust, remove the label covering the adjustment knob and adjust as desired. Turn clockwise to increase sensitivity. Turn counterclockwise to decrease sensitivity. The red lamp on the shock sensor illuminates at shock levels that would cause the full (2 minute) alarm to sound. Different levels of shock are required on the various body panels and windows to activate the sensor, depending on the material (plastic, steel or glass) and distance from the shock sensor. Two levels of alarms are available through the shock sensor.

- Two horn blasts and lamp flashes for non-threatening blow to the vehicle.
- A full 2 minute alarm for harder blows to the vehicle.

The shock sensor is ignored by the system during ignition ON, when the rear compartment lift window panel is open, when the alarm is disarmed, 5 seconds after the horn sounds, or when customized to be ignored.

Theft Deterrent Relay

The theft deterrent relay controls the park lamps. The Body Control Module (BCM) provides a ground path for the relay when the theft deterrent is activated.

Content Theft Deterrent (CTD) Circuit Description

Circuit Operation

The Content Theft Deterrent (CTD) system is contained in the body control module (BCM). The CTD system allows a variable entry time into the vehicle before sounding the alarm. The CTD system is disabled when the ignition key is inserted into the ignition key lock cylinder and turned to the ON position. The CTD system consists of the following components:

- The body control module (BCM)
- The remote control door lock transmitter
- The security indicator LED
- The theft deterrent shock sensor

The use of the transmitter is the primary method of arming the CTD system. The transmitter has four push buttons which perform the following functions:

- Lock the vehicle doors and arm the CTD system
- Unlock the vehicle doors and disarm the CTD system
- Open the rear compartment.
- Initiate the Panic mode during which the horns sound and the park lamps flash

The side door lock switches can also be used to arm and disarm the CTD system. The security indicator LED flashes to confirm that the system is armed.

The LED is visible on top of the instrument panel to provide the system status and as a warning to intruders. The status of the CTD system can be determined by the output of the LED as described below:

1. The LED flashes once per second with a door open and the CTD system unarmed.
2. The LED is on steady when the CTD system is waiting for the doors to close before arming.
3. The LED flashes briefly every two seconds when the CTD system is armed.
4. The LED flashes twice every two seconds when the CTD system has sounded the alarm due to an impact to the vehicle.
5. The LED flashes three times every two seconds when the CTD system has sounded the alarm due to the opening of a door or the rear compartment.
6. The LED is off when the CTD system is off, disarmed, or the vehicle doors are open for longer than ten minutes.

The theft deterrent shock sensor detects impacts to the vehicle. The shock sensor determines the level of the impact to the vehicle and signals the BCM to sound one of the following alarm cycles:

- For low level impacts to the vehicle, the BCM sounds the horn and flashes the park lamps twice.
- For high level impacts to the vehicle, the BCM repeatedly sounds the horn and flashes the park lamps.

The shock sensor is ignored by the BCM under any of the following conditions:

- The ignition switch is in the ON position.
- The rear compartment lid is open.
- The CTD system is armed for up to five minutes.
- Feature customization is used to disable the CTD system.

When armed, the CTD system will monitor the following components to determine when to sound an alarm:

- The ignition key lock cylinder
- The theft deterrent shock sensor
- The front side door locks
- The rear compartment lid ajar indication switch

The CTD system provides vehicle security along with the PASS-Key® II Vehicle Theft Deterrent (VTD) system by controlling the following:

- Fuel enable
- Starter enable
- Audible alarm (horns)
- Visual alarm (park lamps)

Vehicle Theft Deterrent (VTD) Description

The personal automotive security system (PASS-Key®) is standard equipment on the vehicle. The system is designed to prevent vehicle theft by disabling the engine unless an ignition key with a specific electrical resistance is used in the ignition cylinder. The PASS-Key® system and the universal theft deterrent operate separately. The universal theft deterrent system is optional. The PASS-Key® system includes the following components:

- Ignition key
- Ignition cylinder
- Body control module (BCM)
- Starter relay
- Powertrain control module (PCM)

Vehicle Theft Deterrent (VTD) Operation

The personal automotive security system (PASS-Key®) system is designed to prevent the engine from starting if the proper resistance is not sensed from the ignition key. Of the 15 different key codes or resistance values available, only one will work with each body control module (BCM). Once the key code is programmed into the BCM, the resistance value is stored in a non-volatile memory.

The PASS-Key® system prevents the engine from starting by controlling the starter relay and the powertrain control module (PCM) fuel enable input. If the PCM does not sense the proper frequency signal on the fuel enable input, fuel will not be provided to the engine.

If the wrong resistance value is sensed when the ignition switch is in the RUN position, the BCM will not ground the starter enable circuit and will not output the fuel enable signal for approximately three minutes. The engine is prevented from starting and discourages a thief from trying key codes or resistance values at random.

If the correct resistance value is sensed when the ignition switch is in the RUN position, the BCM will ground the starter enable circuit and output the fuel enable signal. The engine will start normally.

If the PASS-Key® system detects an open or short to ground when the ignition switch is in the RUN position, the BCM will default to fail enable. Fail enable occurs when the proper key resistance is sensed before the open short to ground occurs. This has to occur for 1 minute before the fail enable is engaged. Fail enable will illuminate the security indicator lamp and allow the operator to stop and start the vehicle until the problem is corrected.

Ignition Key

The ignition key for vehicles with the personal automotive security system (PASS-Key®) system is a typical square ignition key blank with resistor. The key blank and resistor are not serviceable separately. There are 15 different resistance values. The ignition key also has mechanical cuts similar to non-PASS-Key® ignition keys. When servicing the PASS-Key® system, obtain all ignition keys, if possible, and verify proper values using a J 35628-A.

Ignition Cylinder

The ignition cylinder contains a set of electrical contacts used to measure the resistor in the ignition key. When servicing the ignition cylinder, be certain to maintain proper wire routing. A two pin connector at the base of the steering column connects the contacts to the vehicle wiring. The connector is also used for diagnostic purposes.

Body Control Module (BCM)

The BCM contains the logic of the personal automotive security system (PASS-Key®) system. The BCM has inputs from the battery, ignition circuits, key resistor, shock sensor, door lock, jamb, and hatch switches. The BCM has outputs to the starter, and fuel enable, security lamp circuits and also the remote hatch release. The BCM also controls power locks, interior lamps, horn chirps and parking lamps flashes for locking and arming functions.

Ignition Input

The ignition input is used to turn the BCM on. When the BCM is on, it will read the resistor and control the outputs accordingly. When the BCM is off, the resistor is not read, and the starter relay and fuel enable output will not allow the engine to start. When the ignition switch is in the OFF position, the battery input to the BCM will draw about 75 milli-amps for the first ten minutes and about 2.4 milli-amps after 10 minutes of ignition off.

Key Resistor Inputs

The key resistor inputs are used to determine if the correct ignition key is being used to start the vehicle. The key resistor inputs are read when the ignition is turned on. If the resistance value of the ignition key matches the value stored in the BCM, the starter relay and fuel enable output will allow the vehicle to start.

Starter Enable Output

The starter enable circuit controls the starter relay. When the BCM sees the proper resistance at the ignition key, it grounds the starter enable circuit which allows the engine to be started. If the BCM does not sense the proper resistance at the ignition key, it will not ground the starter enable circuit.

Fuel Enable Output

The fuel enable circuit is an output from the BCM and an input to the powertrain control module (PCM). When the BCM senses the proper resistance at the ignition key, it will output a signal to the PCM. If the BCM does not see the proper resistance at the ignition key, it will not output the signal to the PCM, the engine will start momentarily, then stall.

Security Indicator Lamp Output

The SECURITY lamp circuit is an indicator lamp output. The lamp output will be grounded during a 5 second bulb test at key on, at any time that the BCM is preventing the engine from starting, during an open or short to ground, or in the BCM is not properly programmed.

Starter Relay

The starter relay is used to stop the engine from cranking if the correct resistance is not sensed at the ignition key. It prevents the engine from cranking by opening the circuit to the starter solenoid switch.

Powertrain Control Module (PCM)

The PCM reads the fuel enable circuit to determine if fuel injection should be allowed. If the fuel enable signal is not present, the PCM will not allow fuel injection and normal engine operation.

Vehicle Theft Deterrent (VTD) Circuit Description

Circuit Operation

PASS-Key® II Vehicle Theft Deterrent (VTD) allows the vehicle to start only when the resistance pellet of the ignition key is recognized by the body control module (BCM). If an incorrect resistance value is seen by the BCM, the engine is prevented from starting in two ways:

- Battery voltage is disabled through the starter relay to the starter solenoid.
- The fuel injectors are disabled by the powertrain control module (PCM).

On vehicles equipped with VTD, the BCM will initiate an audible alarm cycle if an attempt is made to start the vehicle with an incorrect ignition key.

Voltage is applied to the BCM through circuit 39 when the ignition key is inserted into the ignition lock cylinder and turned to the START position. The BCM checks the pellet resistance of the ignition key through circuit 1073, through circuit 1074, and the ignition key lock cylinder. If the resistance is correct, the BCM applies ground through circuit 625 to the starter relay coil. At the same time, the BCM applies a fuel enable signal through circuit 229 to the powertrain control module (PCM). The PCM allows the vehicle to start and run and then tests circuit 229. If the fuel enable signal is present from the BCM, the engine continues to run. If the signal is not present, the PCM disables the fuel injectors, and the engine stops. If the resistor pellet has the wrong resistance value, the BCM disables vehicle starting for approximately 3 minutes. The starter relay and the fuel injectors are disabled. After the 3 minute period the vehicle can be started with the correct ignition key.

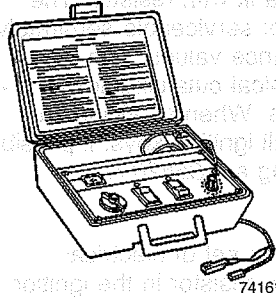
Security Indicator Operation

The BCM grounds the instrument cluster circuit 728 to illuminate the security indicator. The following describes the conditions and the modes of indicator illumination:

1. When the ignition switch is turned to the RUN position or the START position, the indicator illuminates for a 5 second bulb test.
2. When an attempt is made to start the vehicle with an incorrect ignition key, the indicator is illuminated for approximately 3 minutes. The vehicle is disabled, and the indicator remains illuminated for the entire 3 minute period, regardless of the position of the ignition switch.

3. Under any of the following conditions the indicator will flash at a rate of once per second and the vehicle will not start:
 - The resistor sensing contacts of the ignition switch are open
 - Circuit 1073 or circuit 1074 is open or shorted
4. If the ignition key resistor pellet reads infinite (open), the vehicle is disabled and the indicator flashes once per second. The vehicle will start immediately if a good key is used.
5. When an unprogrammed BCM is installed, the vehicle will start but the indicator will flash at a rate of once per second under these conditions:
 - The resistor sensing contacts of the ignition switch are open
 - Circuit 1073 or circuit 1074 is open or shorted
 - The ignition key resistor pellet reads infinite (open)
6. Circuit 1073 and circuit 1074 are continuously monitored by the BCM. The indicator illuminates if a fault is detected in either circuit 1073 or circuit 1074 for one minute. If the fault goes away after one minute, the indicator turns off and the system functions normally.
7. If any of the above faults occur while the engine is running or when the ignition switch is turned to the off position, the indicator turns on. The VTD system is disabled, and the BCM allows the vehicle to start in the Fault Enable mode. The indicator will remain on whenever the ignition switch is in the RUN position until the fault is corrected. The indicator remains illuminated for approximately one minute after the fault is corrected.

Special Tools and Equipment

Illustration	Tool Number/ Description
	J 35628-A Pass/Vats Interrogator