

ACCESSORIES & EQUIPMENT

Theft Deterrent - Escalade, Suburban, Tahoe, Yukon

SCHEMATIC WIRING DIAGRAMS

THEFT DETERRENT SYSTEM WIRING SCHEMATICS

Content Theft Deterrent

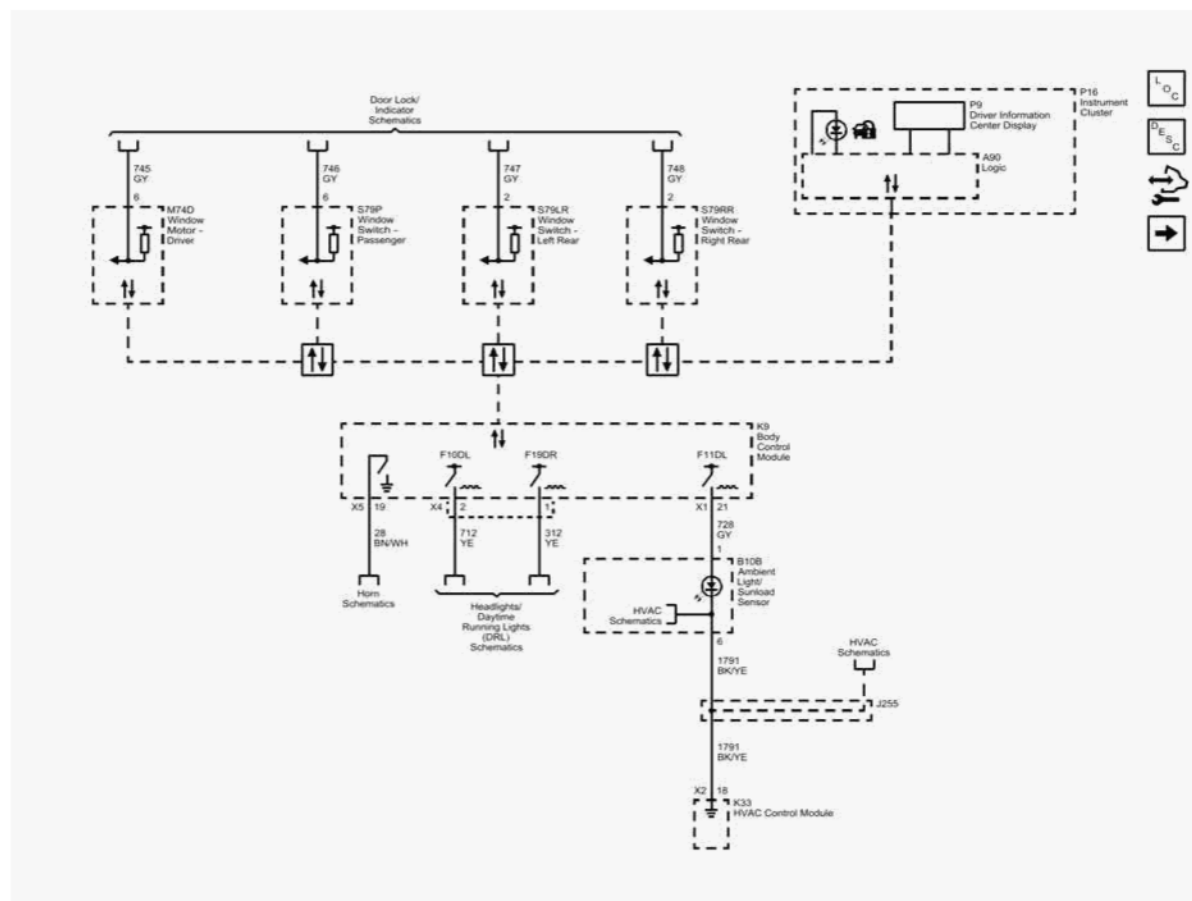


Fig. 1: Content Theft Deterrent

Courtesy of GENERAL MOTORS COMPANY

Glass Breakage Sensors (UTV) and Theft Deterrent Indicator

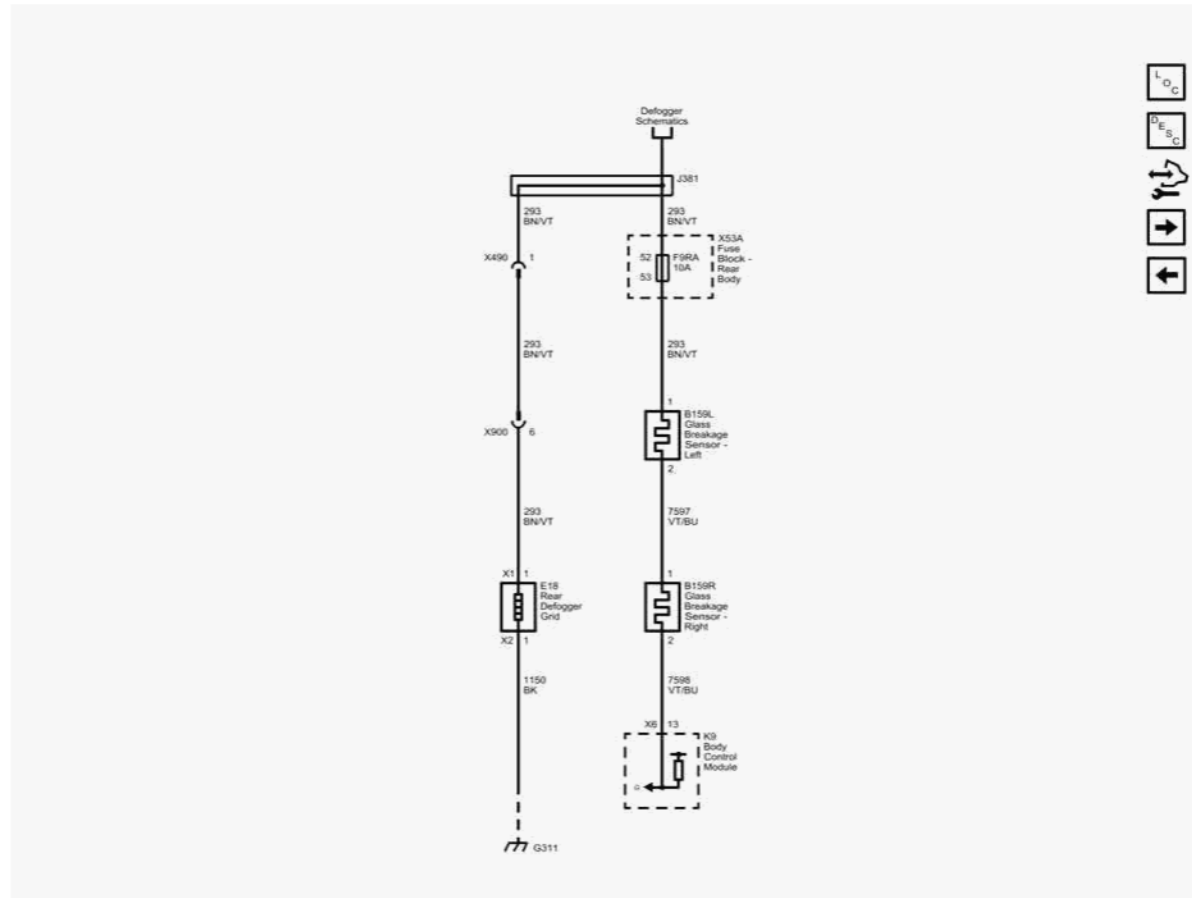


Fig. 2: Glass Breakage Sensors (UTV) and Theft Deterrent Indicator

Courtesy of GENERAL MOTORS COMPANY

Inclination and Intrusion Sensing and Alarm (UTR, UTU and UTV)

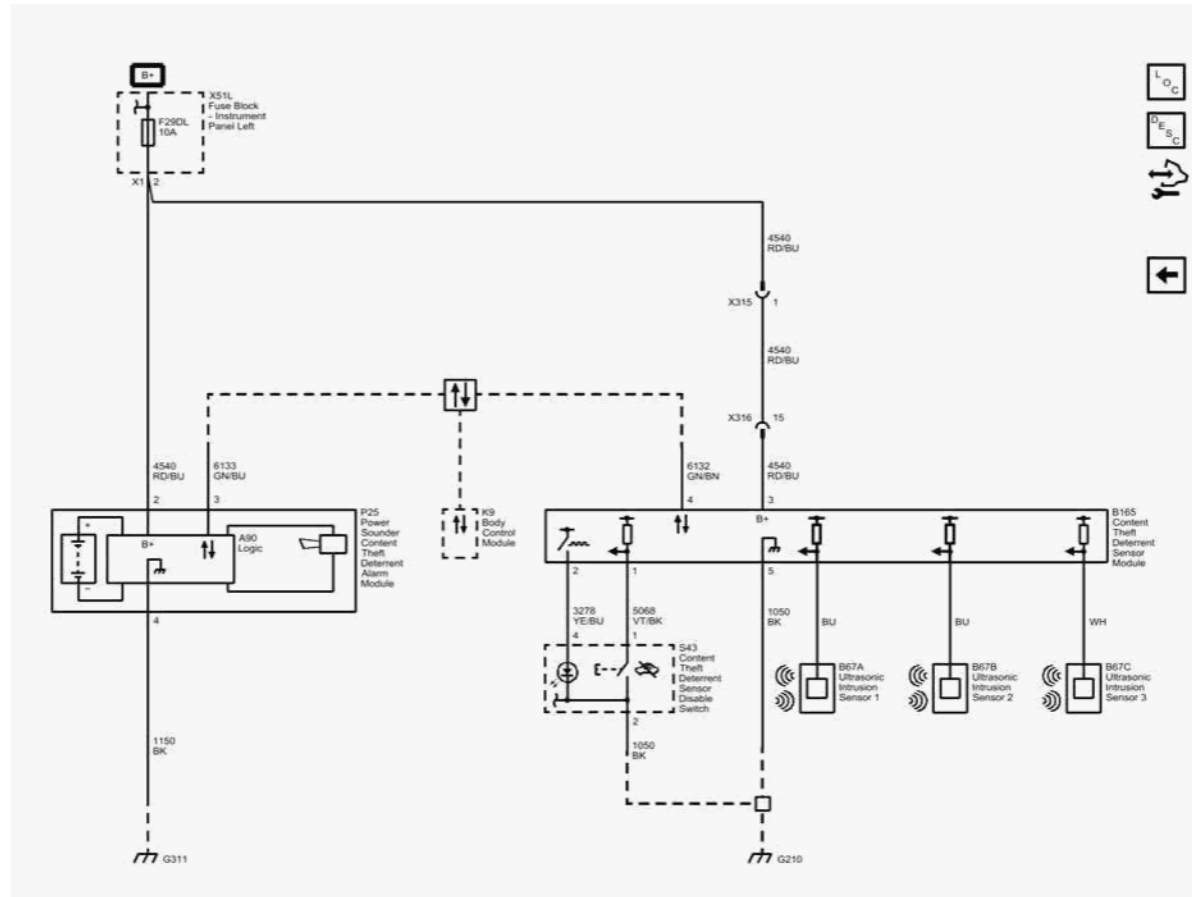


Fig. 3: Inclination and Intrusion Sensing and Alarm (UTR, UTU and UTV)

Courtesy of GENERAL MOTORS COMPANY

DIAGNOSTIC INFORMATION AND PROCEDURES

DTC B291A: CONTENT THEFT DETERRENT ASSEMBLY

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

DTC Descriptor

DTC B291A

Content Theft Deterrent Assembly

For symptom byte information, refer to [Symptom Byte List](#) .

Circuit/System Description

The body control module performs various internal fault detection test to determine if a software or hardware concern exists within the power sounder content theft deterrent alarm module. No external circuits are involved.

Conditions for Running the DTC

- The ignition is OFF.
- The vehicle is in Park.

Conditions for Setting the DTC

The body control module has detected an internal failure within the power sounder content theft deterrent alarm module.

Action Taken When the DTC Sets

The intrusion and inclination functionality is disabled.

Conditions for Clearing the DTC

- A current DTC is cleared when the conditions for setting the DTC are no longer present.
- A history DTC will clear after 40 malfunction free ignition cycles.

Reference Information

Schematic Reference

Theft Deterrent System Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Theft Systems Description and Operation

Electrical Information Reference

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

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Testing

1. Ignition ON.
2. Verify DTC B291A is not set.
 - **If the DTC is set**

Test or replace the P25 Power Sounder Content Theft Deterrent Alarm Module.

- **If the DTC is not set**
3. All OK.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

Refer to **Theft Deterrent Alarm Replacement**

DTC B291B: CONTENT THEFT DETERRENT SENSOR

Diagnostic Instructions

- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.

- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

DTC Descriptors

DTC B291B

Content Theft Deterrent Sensor

For symptom byte information, refer to [Symptom Byte List](#).

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+	B291B 3B	B291B 3B	-	-
Serial Data	U1515, B291B 3B	B291B 3B	U1515, B291B 3B	B291B 00
Ground	-	B291B 3B	-	-

Circuit/System Description

The body control module performs various communication fault detection tests to determine if a software, hardware, or communication concern exists with the ultrasonic intrusion sensor.

Conditions for Running the DTC

- The ignition is OFF.
- The vehicle is in Park.

Conditions for Setting the DTC

The body control module cannot establish communications with the ultrasonic intrusion sensor.

Action Taken When the DTC Sets

The intrusion and inclination alarm output is disabled.

Conditions for Clearing the DTC

- A current DTC is cleared when the conditions for setting the DTC are no longer present.
- A history DTC will clear after 40 malfunction-free ignition cycles.

Reference Information

Schematic Reference

Theft Deterrent System Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Theft Systems Description and Operation

Electrical Information Reference

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

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Testing

1. Ignition OFF and vehicle systems OFF, disconnect the harness connector at the B165 Content Theft Deterrent Sensor Module. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 5 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF.
 2. Test for less than 2 Ω in the ground circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , repair the open/high resistance in the ground connection.

- **If less than 10 Ω**

3. Ignition ON.

4. Verify a test lamp illuminates between the B+ circuit terminal 3 and ground.

- **If the test lamp does not illuminate and the circuit fuse is good**

1. Ignition OFF.

2. Test for less than 2 Ω in the B+ circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , verify the fuse is OK and there is voltage at the fuse.

- **If the test lamp does not illuminate and the circuit fuse is open**

1. Ignition OFF.

2. Test for infinite resistance between the B+ circuit and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the B165 Content Theft Deterrent Sensor Module.

- **If the test lamp illuminates**

5. Ignition OFF, arm the content theft deterrent system.

6. Test for greater than 4.5 V between the serial data circuit terminal 4 and ground.

- **If 4.5 V or less**

1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.

2. Test for infinite resistance between the serial data circuit and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance

3. Test for less than 2 Ω in the serial data circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , replace the K9 Body Control Module.

- **If greater than 4.5 V**

7. Ignition OFF, disconnect the harness connector at the K9 Body Control Module and any other components or control modules sharing the serial data circuit with the B165 Content Theft Deterrent Sensor Module, ignition ON.

8. Test for less than 1 V between the B165 Content Theft Deterrent Sensor Module serial data circuit terminal 4 and ground.

- **If 1 V or greater**

Repair the short to voltage on the circuit.

- **If less than 1 V**

9. Test or replace the B165 Content Theft Deterrent Sensor Module.

10. Fully arm then disarm the content theft deterrent system and verify no DTCs are set.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the repair.

- Refer to **Control Module References** for replacement, programming, and setup.

SYMPTOMS - THEFT DETERRENT

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

1. Perform **Diagnostic System Check - Vehicle** in order to verify that all of the following are true:
 - There are no DTCs set.
 - The control modules can communicate via the serial data link.
2. Review the system operation in order to familiarize yourself with the system functions. Refer to the following **Theft Systems Description and Operation**.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the Theft Deterrent System. Refer to **Checking Aftermarket Accessories**.
- 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 Conditions and Poor Connections**.

Symptom List

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

- [**Content Theft Deterrent Malfunction**](#)
- [**Security Indicator Malfunction**](#)

CONTENT THEFT DETERRENT MALFUNCTION

Diagnostic Instructions

- Perform the [**Diagnostic System Check - Vehicle**](#) prior to using this diagnostic procedure.
- Review [**Strategy Based Diagnosis**](#) for an overview of the diagnostic approach.
- Refer to [**Diagnostic Procedure Instructions**](#) to provide an overview of each diagnostic category.

Circuit/System Description

The content theft deterrent (CTD) system is a software based system in which the body control module (BCM) actively monitors certain inputs to determine if unauthorized vehicle access is being attempted. Based on inputs such as the door ajar switches, the rear compartment ajar switch, and the hood ajar switch, the BCM determines whether a CTD alarm is warranted. If unauthorized access is being detected, the BCM will pulse the vehicle horn and flash the turn signals as a means of theft deterrence.

Reference Information

Schematic Reference

Theft Deterrent System Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Theft Systems Description and Operation

Electrical Information Reference

- [**Circuit Testing**](#)
- [**Connector Repairs**](#)

- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)

Scan Tool Reference

[Control Module References](#) for scan tool information

[Circuit/System Verification](#)

1. Ignition ON, vehicle in gear, individually open and close each vehicle door while observing the door ajar indicator/message. The indicator/message should accurately transition between the door ajar and door closed state when each door is opened and closed.
 - If the door ajar indicator/message does not properly transition when each door is opened and closed, refer to [Door Ajar Indicator Malfunction](#).
2. Ignition ON, vehicle in PARK, open and close the liftgate while observing the rear access indicator/message. The indicator/message should accurately transition between the rear access open and rear access closed state when the liftgate is opened and closed.
 - If the indicator/message does not properly transition when the liftgate is opened and closed, refer to [Liftgate/Liftgate Window Ajar Indicator Malfunction \(Without TB5\)](#) [Liftgate/Liftgate Window Ajar Indicator Malfunction \(With TB5\)](#).
3. Completely lower the driver door window and close all vehicle doors.
4. Without disarming the system, reach in through the open driver window, unlock and open the driver door. Verify the scan tool CTD Status parameter displays Alarm Active.
 - If the parameter does not equal the specified value, replace the BCM.
5. With the door open, verify the vehicle horn is pulsing and the exterior lamps are flashing.
 - If the horn is not pulsing, refer to [Horns Malfunction](#).
 - If the exterior lights are not flashing, refer to [Turn Signal Lamps and/or Indicators Malfunction](#).

[Circuit/System Testing](#)

1. Ignition OFF and vehicle systems OFF, disconnect the harness connector at the B165 Content Theft Deterrent Sensor Module. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 5 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF.
 2. Test for less than 2 Ω in the ground circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , repair the open/high resistance in the ground connection.

- **If less than 10 Ω**

3. Ignition ON.

4. Verify a test lamp illuminates between the B+ circuit terminal 3 and ground.

- **If the test lamp does not illuminate and the circuit fuse is good**

1. Ignition OFF.

2. Test for less than 2 Ω in the B+ circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , verify the fuse is OK and there is voltage at the fuse.

- **If the test lamp does not illuminate and the circuit fuse is open**

1. Ignition OFF.

2. Test for infinite resistance between the B+ circuit and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the B165 Content Theft Deterrent Sensor Module.

- **If the test lamp illuminates**

5. Ignition OFF, arm the content theft deterrent system.

6. Test for greater than 4.5 V between the serial data circuit terminal 4 and ground.

- **If 4.5 V or less**

1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.

2. Test for infinite resistance between the serial data circuit and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance

3. Test for less than 2 Ω in the serial data circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , replace the K9 Body Control Module.

- **If greater than 4.5 V**

7. Ignition OFF, disconnect the harness connector at the K9 Body Control Module and any other components or control modules sharing the serial data circuit with the B165 Content Theft Deterrent Sensor Module, ignition ON.

8. Test for less than 1 V between the B165 Content Theft Deterrent Sensor Module serial data circuit terminal 4 and ground.

- **If 1 V or greater**

Repair the short to voltage on the circuit.

- **If less than 1 V**

9. Test or replace the B165 Content Theft Deterrent Sensor Module.

10. Fully arm then disarm the content theft deterrent system and verify no DTCs are set.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

Refer to [Control Module References](#) for BCM replacement, setup and programming

INCLINATION SENSOR MALFUNCTION

Diagnostic Fault Information

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+	1	1	-	-
Inclination Sensor Signal	1	1	1	-
Ground	-	1	-	-
1. Inclination Sensor Malfunction				

Circuit/System Description

The inclination sensor detects changes in the parked angle of the vehicle. If a change greater than 3 degrees for a 7 second period is detected, the vehicles content theft alarm is sounded. The sensor recalibrates itself each time the vehicle is parked, which allows it to account for parking on steep grades without unintentional activation.

Diagnostic Aids

The inclination sensor is a dealer installed accessory. Not all vehicles are equipped with an inclination sensor. To determine if a particular vehicle is equipped with an inclination sensor, visually inspect the installation location for the sensor based on the information contain in the installation instructions.

Reference Information

Schematic Reference

Theft Deterrent System Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Theft Systems Description and Operation

Electrical Information Reference

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

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Testing

Without Accessory Shock Sensor

1. Ignition OFF, disconnect the harness connector at the inclination sensor.
2. Ignition ON, verify a test lamp illuminates between the B+ circuit terminal 1 and ground.
 - If the test lamp does not illuminate, test the B+ circuit for a short to ground or an open/high resistance.

3. Test for B+ between the signal circuit terminal 3 and ground.
 - If not the specified value, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
4. Ignition OFF, connect the harness connector at the inclination sensor. Disconnect the X7 harness connector at the BCM.
5. Ignition ON, test for B+ between the signal circuit terminal 15 and ground.
 - If not the specified value, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the inclination sensor.
6. If all circuits test normal, test or replace the inclination sensor.

With Accessory Shock Sensor

1. Ignition OFF, disconnect the harness connector at the inclination sensor and the harness connector at the shock sensor.
2. Ignition ON, verify a test lamp illuminates between the inclination sensor B+ circuit terminal 1 and ground.
 - If the test lamp does not illuminate, test the B+ circuit for a short to ground or an open/high resistance.
3. Test for B+ between the signal circuit terminal 3 and ground.
 - If not the specified value, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
4. Ignition OFF, connect the harness connector at the inclination sensor. Disconnect the X7 harness connector at the BCM.
5. Ignition ON, test for B+ between the BCM signal circuit terminal 15 and ground.
 - If not the specified value, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, test or replace the inclination sensor.
6. Ignition OFF, connect the harness connector at the shock sensor.
7. Ignition ON, test for B+ between the BCM signal circuit terminal 15 and ground.
 - If not the specified value, test or replace the shock sensor.
8. If all circuits test normal, test or replace the inclination sensor.

Repair Instructions

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

Refer to **Control Module References** for BCM replacement, setup, and programming

SECURITY INDICATOR MALFUNCTION

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) provide an overview of each diagnostic category.

Circuit/System Description

The security indicator acts as a status indicator for the content theft deterrent (CTD) system when the ignition is OFF and as a fault indicator for the immobilizer system when the ignition is ON. When either the body control module (BCM) or theft deterrent module (DTM) requires the security indicator to be illuminated, a serial data message is sent to the instrument panel cluster (IPC), which will illuminate the indicator.

Reference Information

Schematic Reference

Theft Deterrent System Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Theft Systems Description and Operation

Electrical Information Reference

- [Circuit Testing](#)
- [Connector Repairs](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)

Scan Tool Reference

[Control Module References](#) for scan tool information

Circuit/System Verification

Ignition ON, verify the security indicator illuminates when performing the scan tool IPC Lamp Test.

- If the security indicator does not illuminate, replace the IPC.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

Refer to [Control Module References](#) for IPC replacement, setup, and programming

SHOCK SENSOR MALFUNCTION

Diagnostic Fault Information

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+	1	1	-	-
Shock Sensor Signal	1	1	1	-
Ground	-	1	-	-
1. Shock Sensor Malfunction				

Circuit/System Description

The shock sensor is a component of the content theft deterrent (CTD) system which monitors the vehicle for shock impacts. The shock sensor provides an alarm signal to the body control module (BCM) in the event that the vehicle is being tampered with. The sensor ground is controlled through a switched ground from the BCM. By providing ground from the BCM the sensor is powered-up and activated.

Diagnostic Aids

The shock sensor is a dealer installed accessory. Not all vehicles are equipped with an inclination sensor. To determine if a particular vehicle is equipped with an inclination sensor, visually inspect the installation location for the sensor based on the information contain in the installation instructions.

Reference Information

Schematic Reference

Theft Deterrent System Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Theft Systems Description and Operation

Electrical Information Reference

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

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Testing

Without Accessory Inclination Sensor

1. Ignition OFF, disconnect the harness connector at the shock sensor.
2. Ignition ON, verify a test lamp illuminates between the B+ circuit terminal A and ground.
 - If the test lamp does not illuminate, test the B+ circuit for a short to ground or an open/high resistance.
3. Test for B+ between the signal circuit terminal B and ground.
 - If not the specified value, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
4. Ignition OFF, connect the harness connector at the shock sensor. Disconnect the X7 harness connector at the BCM.

5. Ignition ON, test for B+ between the signal circuit terminal 15 and ground.

- If not the specified value, test the signal circuit for a short to ground or and open/high resistance. If the circuit tests normal, replace the shock sensor.

6. If all circuits test normal, test or replace the shock sensor.

With Accessory Inclination Sensor

1. Ignition OFF, disconnect the harness connector at the shock sensor and the harness connector at the inclination sensor.

2. Ignition ON, verify a test lamp illuminates between the shock sensor B+ circuit terminal A and ground.

- If the test lamp does not illuminate, test the B+ circuit for a short to ground or an open/high resistance.

3. Test for B+ between the signal circuit terminal B and ground.

- If not the specified value, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.

4. Ignition OFF, connect the harness connector at the shock sensor. Disconnect the X7 harness connector at the BCM.

5. Ignition ON, test for B+ between the BCM signal circuit terminal 15 and ground.

- If not the specified value, test the signal circuit for a short to ground or and open/high resistance. If the circuit tests normal, test or replace the shock sensor.

6. Ignition OFF, connect the harness connector at the inclination sensor.

7. Ignition ON, test for B+ between the BCM signal circuit terminal 15 and ground.

- If not the specified value, test or replace the inclination sensor.

8. If all circuits test normal, test or replace the shock sensor.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

Refer to [Control Module References](#) for BCM replacement, setup, and programming

REPAIR INSTRUCTIONS

THEFT DETERRENT ALARM CUTOFF SWITCH REPLACEMENT

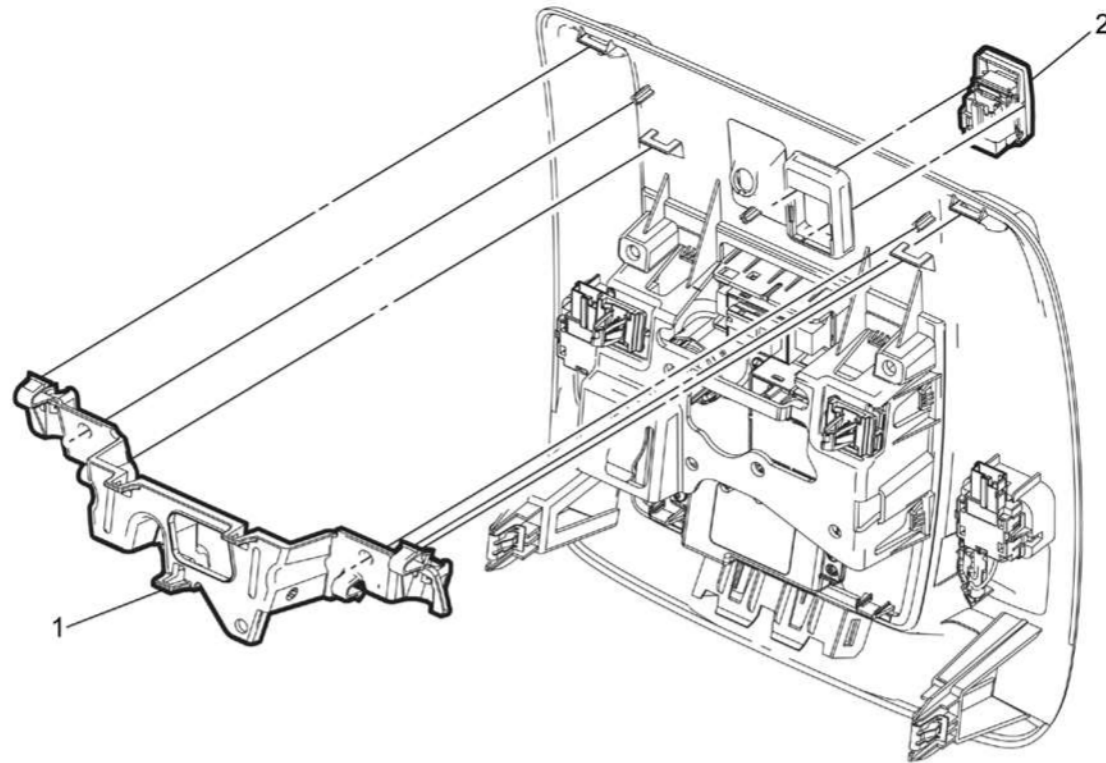


Fig. 4: Theft Deterrent Alarm Cutoff Switch

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the roof console. Refer to Roof Console Replacement .	
1	Theft Deterrent Bracket Procedure Using the appropriate tool gently disengage the bracket tabs to gain access to the switch.
2	Theft Deterrent Alarm Cutoff Switch Procedure Release the tabs on the switch and remove forward of the roof console assembly.

THEFT DETERRENT ALARM REPLACEMENT

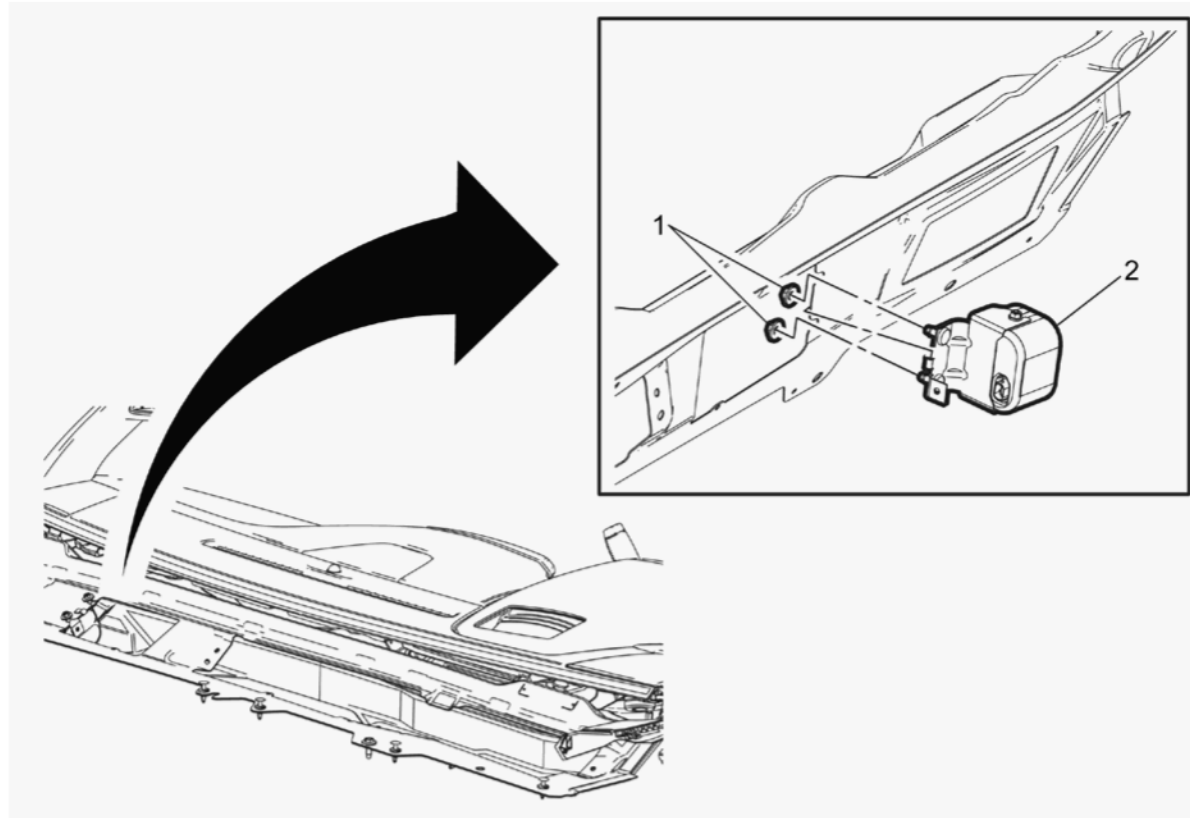


Fig. 5: Theft Deterrent Alarm

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the air inlet grille panel. Refer to Air Inlet Grille Panel Replacement (Chevrolet/GMC) Air Inlet Grille Panel Replacement (Cadillac) .	
1	Theft Deterrent Alarm Bracket Fasteners (Qty: 2) CAUTION: Refer to Fastener Caution .

Callout	Component Name
	Tighten 9 N.m (80 lb in)
2	Theft Deterrent Alarm Procedure 1. Reposition the theft deterrent alarm assembly to access the electrical connector. 2. Disconnect the electrical connector. 3. Remove the theft deterrent alarm from bracket.

THEFT DETERRENT SENSOR REPLACEMENT

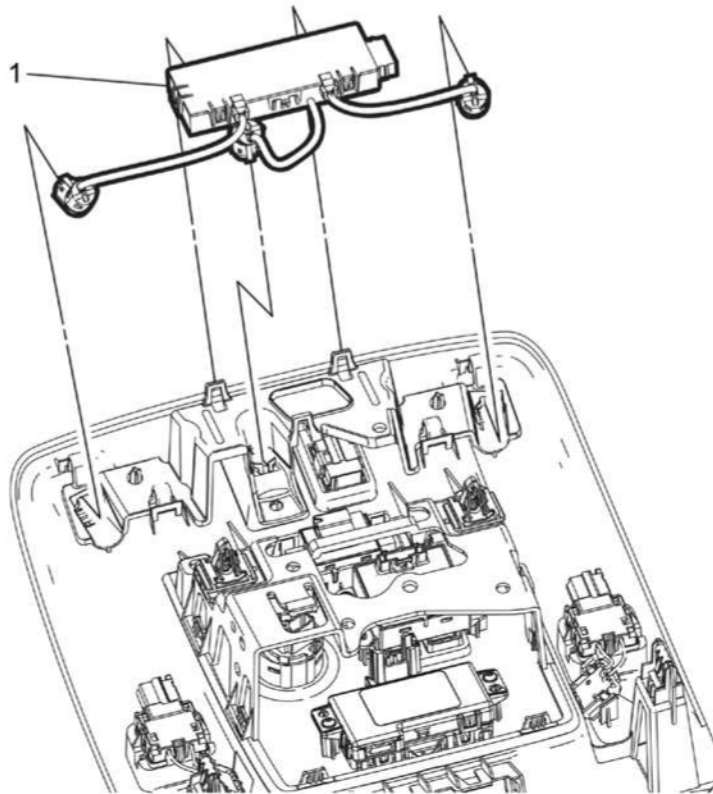


Fig. 6: Theft Deterrent Sensor

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the roof console. Refer to Roof Console Replacement .	
1	Theft Deterrent Sensor Procedure Release the tabs and disconnect the three sensors to remove the theft deterrent sensor assembly.

DESCRIPTION AND OPERATION

THEFT SYSTEMS DESCRIPTION AND OPERATION

When armed, the content theft deterrent (CTD) system is designed to deter vehicle content theft by pulsing the horns and exterior lamps for approximately 30 seconds when an unauthorized vehicle entry is detected. However, the CTD system does not affect engine starting.

An unauthorized entry can be any of the following with the CTD system armed:

- When any door is opened without first being unlocked using the keyless entry transmitter
- After a battery reconnect, if the battery was disconnected with the CTD system armed

The components of the CTD system are:

- Body Control Module (BCM)
- Security indicator
- Door ajar switches
- Liftgate ajar switch

Arming the CTD System

Use the following procedure in order to arm the system:

1. Place the shift lever in P (park).
2. Turn OFF the ignition.
3. Open any door.

IMPORTANT: The system is not armed if the doors are locked manually; the power door lock switch or remote keyless entry transmitter must be used to arm the content theft deterrent (CTD) system.

4. Lock the doors with the LOCK button on the transmitter. The system is in standby mode and will not start the arming timer until all doors are closed.
5. The system will begin the arm sequence immediately after the last door is closed. If the keyless entry transmitter is used to arm the system after the vehicle doors are closed, the arm sequence will begin as soon as the LOCK command is received from the transmitter.

Locking the Vehicle Without Arming the CTD System

Locking the vehicle may be accomplished without arming the content theft deterrent (CTD) system. Use of the manual door locks or using the key to lock the doors will lock the vehicle, but will not arm the CTD system.

Disarming an Armed System/Silencing an Alarm

If system arming has been requested by the power door lock switch or the keyless entry transmitter, it must be disarmed.

Using the power door unlock switch or manually unlocking the doors does not disable the content theft deterrent (CTD) arm mode.

IMPORTANT: Also, disconnecting the battery or pulling fuses does not disable the arm mode, since the BCM stores the CTD mode status in memory.

- To disarm the CTD system in standby mode, perform one of the following:
 - Press the UNLOCK button on the keyless entry transmitter.
 - Insert a valid key into the ignition and switch to the ON position.
- To disarm the CTD system in the armed mode (non-event) or when activated (during an alarm event):
 - Press the UNLOCK button on the keyless entry transmitter.
 - Insert a valid key into the ignition and switch to the ON position

CTD Circuit Description

The following is a description of each component used in the content theft deterrent (CTD) system:

Body Control Module (BCM)

The CTD system is an internal function of the BCM which utilizes serial data and various switch inputs information to perform CTD functions. When the BCM detects an unauthorized entry, it activates the horns and exterior lamps. The BCM has 4 basic modes (disarmed, standby, armed, and

alarm) for operating the CTD system. The different modes are described below.

1. The BCM has the CTD system in a disarmed mode until the following conditions are detected:
 - Ignition key turned to the OFF position.
 - Doors locked by either the power door lock switch or the LOCK button on the transmitter.
2. The BCM enters the standby mode when the above conditions are detected. If a door was already opened when the arm mode was requested, the standby mode does not start the timer until the last door is closed.
3. When the last door is closed, a 15 second timer is activated. Once the timer has expired, the BCM enters the armed mode. After this delay, any forced entry activates the alarm mode.
4. When the BCM detects a forced entry, the BCM enters the alarm mode. The BCM activates the horns and exterior lamps for 30 seconds. This is followed by a three minute time-out with the horn no longer active. If no new intrusions are detected after the time-out, the horn is not active. The system must be disarmed or the intrusion condition removed after the time-out for the system to exit alarm mode.

Security Indicator

The security indicator is illuminated on the instrument panel cluster (IPC) by the BCM for CTD or the immobilizer system. The CTD system uses the security indicator to inform the driver of system status prior to arming. The security indicator on the instrument cluster is controlled by both the CTD system and the immobilizer system.

- The CTD system, integral to the BCM, commands the IPC to control the security indicator only when the ignition switch is OFF. The CTD system uses the indicator to identify system status.
- The immobilizer system commands the IPC to control the security indicator only when the ignition switch is ON as a malfunction indicator. The immobilizer system is to deter vehicle theft. Refer to [Immobilizer Description and Operation](#) for more information on the immobilizer system.

Liftgate Ajar Switch

The CTD system uses the liftgate ajar switch as a status indicator to activate the alarm. The liftgate ajar switch is monitored by the BCM via a discrete input. If the BCM receives a signal indicating a liftgate is opened when the CTD system is armed, the BCM activates the alarm.

Door Ajar Switches

The CTD system uses the door ajar switches as a status indicator to activate the alarm. The door ajar switches are monitored by the BCM via a discrete input from each door ajar switch. If the BCM receives a signal indicating a door is opened when the CTD system is armed, the BCM activates the alarm.

Inputs

The BCM monitors the following inputs for CTD:

- The door ajar switches
- The liftgate ajar switch
- The keyless entry transmitter LOCK/UNLOCK buttons
- The immobilizer status - The BCM uses the immobilizer status for disarming the system or silencing an alarm when the correct vehicle key is used to start the vehicle

Outputs

The BCM controls the following for CTD:

- The horn relay
 - The exterior lamps
-