SCHEMATIC AND ROUTING DIAGRAMS

THEFT DETERRENT SYSTEM SCHEMATICS

Refer to System Wiring Diagrams .

COMPONENT LOCATOR

THEFT DETERRENT SYSTEM COMPONENT VIEWS

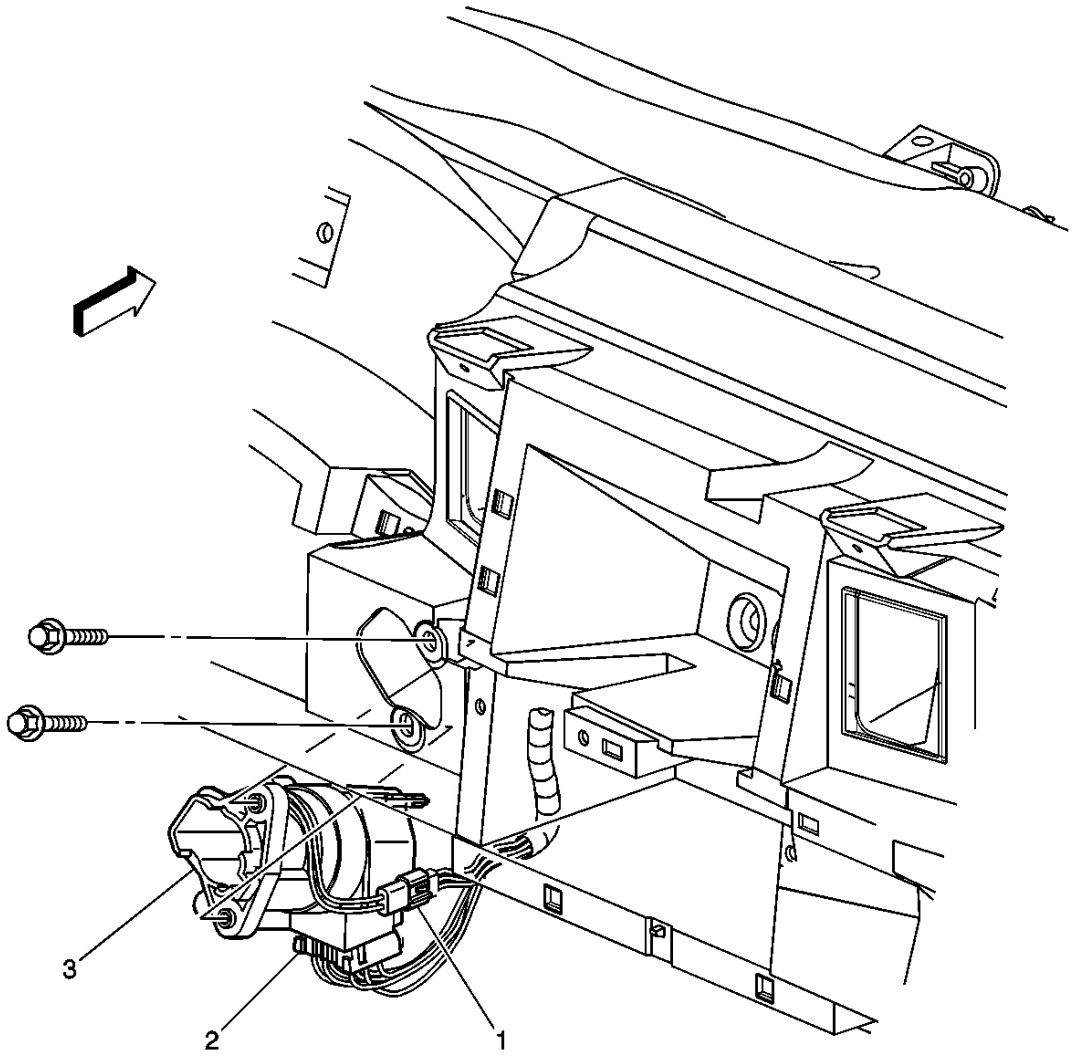


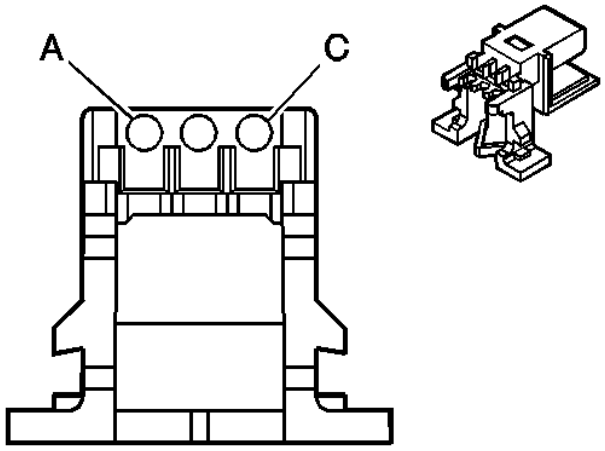
Fig. 1: Passlock(tm) Sensor Connector, Left Center of Instrument Panel
Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 1

Callout	Component Name
1	Passlock(tm) Sensor Connector
2	Ignition Switch Connectors
3	Ignition Switch

THEFT DETERRENT SYSTEM CONNECTOR END VIEWS

Passlock Sensor Terminal Identification



Connector Part Information		• 15405485 • 3-Way F Micro-Pack 064 Series (BLK)	
Pin	**Wire Color**	**Circuit No.**	**Function**
A	YEL	1836	Security System Sensor Signal
B	BLK	1835	Security System Sensor Low Reference
C	WHT	1459	Security System Sensor Supply Voltage

DIAGNOSTIC STARTING POINT - THEFT DETERRENT

Begin the system diagnosis with **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 ability of the control module(s) to communicate through the serial data circuit.
- The identification of any stored diagnostic trouble codes (DTCs) and their status.

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

DIAGNOSTIC SYSTEM CHECK - THEFT DETERRENT

Test Description

The number(s) below refer to the step number(s) on the diagnostic table.

2: Lack of communication may be due to a partial malfunction of the class 2 serial data circuit or due to a total malfunction of the class 2 serial data circuit. The specified procedure will determine the particular condition.

5: The presence of DTCs which begin with "U" indicate some other module is not communicating. The specified procedure will compile all the available information before tests are performed.

6: The listed DTCs are internal module malfunctions and should be corrected before attempting any other diagnostics.

7: The listed DTCs are battery voltage related malfunctions and should be corrected before attempting any other diagnostics.

Diagnostic System Check - Theft Deterrent

Step	Action	Yes	No
1	Install a scan tool. Does the scan tool power up?	Go to **Step 2**	Go to **Scan Tool Does Not Power Up** in Data Link Communications
2	1. Turn ON the ignition, with the engine OFF. 2. Attempt to establish communication with the body control module (BCM) and the powertrain control module (PCM). Does the scan tool communicate with the specified modules?	Go to **Step 3**	Go to **Scan Tool Does Not Communicate with Class 2 Device** in Data Link Communications
3	**IMPORTANT:** **Important: The engine may start during the following step. Turn OFF the engine as soon as you have observed the Crank power mode.** 1. Access the Class 2 Power Mode parameter in the Diagnostic Circuit Check menu on the scan tool. **IMPORTANT:** **Insure that all ignition switch positions are observed**		

	including the OFF position. 2. Rotate the ignition switch through all positions while observing the Class 2 Power Mode parameter. Does the Class 2 Power Mode parameter reading match the ignition switch position for all switch positions?	Go to **Step 4**	Go to **Power Mode Mismatch** in Body Control System
4	1. Select the PCM display DTCs function on the scan tool. 2. Select the BCM display DTCs function on the scan tool. Does the scan tool display any DTCs for the modules?	Go to **Step 5**	Go to **Symptoms - Theft Deterrent**
5	Does the scan tool display any DTCs which begin with a "U"?	Go to **Scan Tool Does Not Communicate with Class 2 Device** in Data Link Communications	Go to **Step 6**
6	Does the scan tool display DTC P0601 or P0602?	Go to **Diagnostic Trouble Code (DTC) List** 3.4L or **Diagnostic Trouble Code (DTC) List** 3.8L in Engine Controls	Go to **Step 7**
7	Does the scan tool display DTC B1000, B1007 or B1009?	Go to **Diagnostic Trouble Code (DTC) List** in Body Control System	Go to **Step 8**
8	Does the scan tool display DTC B1327 or B1328?	Go to **Diagnostic Trouble Code (DTC) List** in Engine Electrical	Go to **Diagnostic Trouble Code (DTC) List**

SCAN TOOL DATA LIST

Body Control Module (BCM) Scan Tool Data List

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition in ON, Engine OFF			
Auto Learn Timer Status	Security Data	Seconds	0-2550
His. DTC Cyc. Counts	Security Data	Counts	0-255
Lockout Timer Status	Security Data	Seconds	0-2550
Passlock Data Voltage	Security Data	Volts	0-5V
Security Lamp State	Security Data	On/Off	Off

Seed & Key Timer Status	Security Data	Seconds	0-2550

Powertrain Control Module (PCM) Scan Tool Data List

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition ON, Engine OFF			
PCM/VCM in VTD Fail Enable	Engine Data 1	Yes/No	No
VTD Auto Learn Timer	Engine Data 1	Active/Inactive	Inactive
VTD Fuel Disable	Engine Data 1	Active/Inactive	Inactive
VTD Fuel Disable Until Ign. OFF	Engine Data 1	Yes/No	No

SCAN TOOL DATA DEFINITIONS

Lockout Timer Status

The duration of time the system remains in tamper mode The VTD system will disable sampling of the key code for 10 minutes when a tamper is detected.

Auto-Learn Timer Status

The duration of time the system remains in the re-learn wait mode.

Seed & Key Timer Status

The scan tool displays the time in seconds used by the BCM to learn a valid code from the passlock sensor. The learn procedure consists of 3 seperate periods.

Passlock Data Voltage

Displays the voltage data from the Passlock Sensor to the BCM. The BCM determines if the data received is valid or invalid.

Security Lamp State

Indicates the state of the SECURITY indicator either on, off or flashing.

His DTC Cyc. Counts.

Displays the number of key cycles that have occured in order to clear history DTCs.

PCM/VCM in VTD Fail Enable

The scan tool displays which state the Powertrain Control Module (PCM) is currently in for the Vehicle Theft Deterrent (VTD).

VTD Fuel Disable

The scan tool displays the state of which the fuel delivery system is in.

VTD Auto Learn Timer

The scan tool displays which state the learn timer for the VTD is currently in.

VTD Fuel Disable Until Ign. OFF

The scan tool display the state of which the fuel delivery system is in according to the ignition switch position.

DIAGNOSTIC TROUBLE CODE (DTC) LIST

Diagnostic Trouble Code (DTC) List

DTC	Diagnosic Procedure	Module
IMPORTANT: **Diagnose all Bxxxx Codes prior to diagnosing any Pxxxx codes.**		
B2947	**DTC B2947**	BCM
B2948	**DTC B2948**	BCM
B2957	**DTC B2957**	BCM
B2958	**DTC B2958**	BCM
B2960	**DTC B2960**	BCM
B3031	**DTC B3031**	BCM
B3033	**DTC B3033**	BCM
P1626	**DTC P1626**	PCM
P1630	**DTC P1630**	PCM
P1631	**DTC P1631**	PCM
Pxxxx other PCM DTCs Refer to **Diagnostic System Check - Engine Controls** in Engine Controls		PCM