Theft Deterrent

Specifications

Scan Tool Data List

Module Information

Ignition Switch in the RUN position/Vehicle in PARK/Headlamps in AUTO Position		
Scan Tool Parameter	**Units Displayed**	**Typical Data Value**
Manufacturers Enable Counter	0–255	0
Module Part Number	NUMERIC	16XXXXXX (Varies with Vehicle)
Security Calibration Number	NUMERIC	16XXXXXX (Varies with Vehicle)
Security Suffix	Two Letters	AA–ZZ (Varies with Vehicle)

Data

Ignition Switch in the RUN position/Vehicle in PARK/Headlamps in AUTO position		
Scan Tool Parameter	**Units Displayed**	**Typical Data Value**
Auto Learn Timer	SECONDS	0-600 Seconds
Battery Voltage	Volts	9.0-16.0 Volts (Varies)
Ignition 1	ACTIVE/INACTIVE	ACTIVE
Ignition 3	ACTIVE/INACTIVE	ACTIVE
Passlock™ Code	Open/Short/Tamper/Numeric	Valid Code XX
Passlock™ Data Voltage	Volts	0.86-4.28 Volts - Typical
Passlock™ Power	ACTIVE/INACTIVE	ACTIVE
Passlock™ State	Ignition OFF/Tamper/Fail Enable/Fail Enable Dec/Seedkey Lrn Pend/Seedkey Learn/Auto Learn Pend/Learn Passlock™/Monitor Passlock™/Normal Decision	Monitor Passlock™
Security Lamp State	ON/OFF/FLASHING	OFF
Tamper Timer	SECONDS	0-600 Seconds
VCM/PCM Fail Enable	YES/NO	NO
VCM/PCM Fuel Continue	YES/NO	YES
VCM/PCM Learn Timer	ACTIVE/INACTIVE	INACTIVE
VTD Fuel Disable	ACTIVE/INACTIVE	INACTIVE
VTD Fuel Disable Until Ign OFF	YES/NO	NO
VTD Password Learn Mode	ACTIVE/INACTIVE	INACTIVE

Scan Tool Data Definitions

The scan tool readings of the Passlock™ system assist in diagnosing a problem.

The typical scan tool data definitions represent general information displayed on the scan tool regarding the following information:

- Passlock™ system functions
- Ignition inputs
- Basic Passlock™ operating conditions

The following data messages and the menu headings are displayed on the scan tool.

Module Information

Security Calibration Number – Displays: 16XXXXXX: This information refers to the security calibration part number in the body control module (BCM).

Security Suffix – Range: AA–ZZ: This information refers to the security calibration identification number in the BCM.

Module Part Number – Range: 16XXXXXX: This information refers to the part number assigned to the BCM currently in the vehicle.

Manufacturers Enable Counter – Range: 0–255: This information refers to the actual value for the Manufacturer's Enable Counter (MEC) in the BCM. This information is for assembly plant use only.

Data

Ignition 1 – Range: ACTIVE/INACTIVE: The BCM uses this data in order to determine the position of the ignition switch. When the ignition switch is in the RUN or CRANK position, ACTIVE is displayed. When the ignition switch is not in the RUN or CRANK position, INACTIVE is displayed.

Ignition 3 – Range: ACTIVE/INACTIVE: The BCM uses this data in order to determine the position of the ignition switch. When the ignition switch is in the RUN position, ACTIVE is displayed. When the switch is not in the RUN position, INACTIVE is displayed.

Battery Voltage – Range: 9.0–16.0 Volts: The voltage value displayed refers to the battery system voltage measured by the BCM on CKT 1140.

Passlock™ Power – Range: ACTIVE/INACTIVE: The BCM supplies 12 volts and a ground for the Passlock™. The Passlock™ power is active whenever the BCM is awake. After the ignition switch is turned to the OFF position, the BCM may require up to 20 minutes in order to power down. When the ignition switch is turned to the OFF position, a momentary loss of voltage may occur at the Passlock™ sensor. This occurrence is normal due to the BCM internal self test when the ignition switch is turned to the OFF position.

Passlock™ Data Voltage – Range: 0–5 Volts: The Passlock™ data voltage displayed indicates the return voltage from the Passlock™ sensor to the BCM. The BCM also determines if the voltage received is a valid voltage window or an invalid voltage window. The BCM has 10 valid voltage windows, an OPEN voltage window, a TAMPER voltage window, and a SHORTENED voltage window. The value displayed on the scan tool will be within 0.0–5.0 volts. The BCM converts this analog voltage to a class 2 serial data password. The password is then sent to the PCM/VCM. The PCM/VCM must receive the same password that was learned in the last learn procedure. If the PCM/VCM does not receive a valid password from the BCM, the PCM/VCM will not enable the fuel injection system. Refer to *PASSLOCK Reprogramming Seed and Key* (10 minutes), or *PASSLOCK Reprogramming Auto Learn* (30 minutes).

Passlock™ State – Displays: IGNITION OFF/TAMPER/FAIL ENABLE/FAIL ENABLE DEC/SEEDKEY LRN PEND/SEEDKEY LEARN/AUTO LEARN PEND/LEARN PASSLOCK/MONITOR PASSLOCK/NORMAL DECISION/AUTO LEARN: The display refers to the state of the Passlock™ system.

Passlock™ Code – Range: OPEN/SHORTED/TAMPER/NUMERIC: The Passlock™ code displayed indicates the internal Passlock™ sensor resistance value. The BCM determines if the Passlock™ code received is a valid Passlock™ code or an invalid Passlock™ code. The BCM has 10 valid Passlock™ codes, an OPEN Passlock™ code, a TAMPER Passlock™ code, and a SHORTED Passlock™ code. The scan tool will display any valid Passlock™ code as a numeric value. The value displayed on the scan tool should be within 1–10 (i.e. valid code 7), SHORTED, TAMPER or OPEN.

Tamper Timer – Range: 0–600 Seconds: Use the tamper timer as part of the interactive procedure in order to allow the BCM to display the time remaining when in the tamper mode. The tamper timer starts when the ignition switch is turned to the RUN position and the BCM receives a Passlock™ data voltage that is different from the last learned Passlock™ data voltage. The tamper timer has a lockout timer of approximately 10 minutes. The vehicle must remain in the tamper mode even if the ignition switch is turned from the RUN position to the OFF position during the 10 minute period.

Auto Learn Timer – Range: 0–600 Seconds: Use the auto learn timer as part of the interactive procedure in order to allow the BCM to learn valid Passlock™ data from the Passlock™ sensor. The learn procedure consists of 3 consecutive lockout cycles of approximately 30 minutes. The auto learn timer does not display the time in which the PCM/VCM is in the lockout mode.

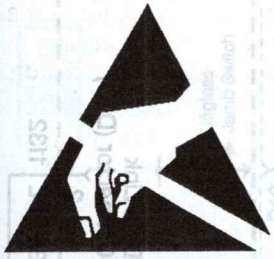
Security Lamp State – Displays: ON/OFF/FLASHING: The security lamp will turn ON steady for 3 seconds and then turn OFF when the ignition switch is turned from the OFF position to the RUN position. The security telltale should have 3 states: OFF, ON STEADY and FLASHING. If the IPC is unable to communicate with the BCM, the security telltale will stay ON STEADY (after the bulb check). The Passlock™ system will function while the IPC is not communicating, as long as class 2 communication is possible. If the vehicle is in the lockout cycle, the security telltale flashes momentarily and then turns ON STEADY for approximately 10 minutes. The Passlock™ system requires 3 consecutive lockout cycles in order to complete the 30 minute Auto Learn procedure for a changed component, refer to *PASSLOCK Reprogramming Auto Learn*. A 10 minute Seed and Key learn procedure is also available, refer to *PASSLOCK Reprogramming Seed and Key*.

Schematic and Routing Diagrams

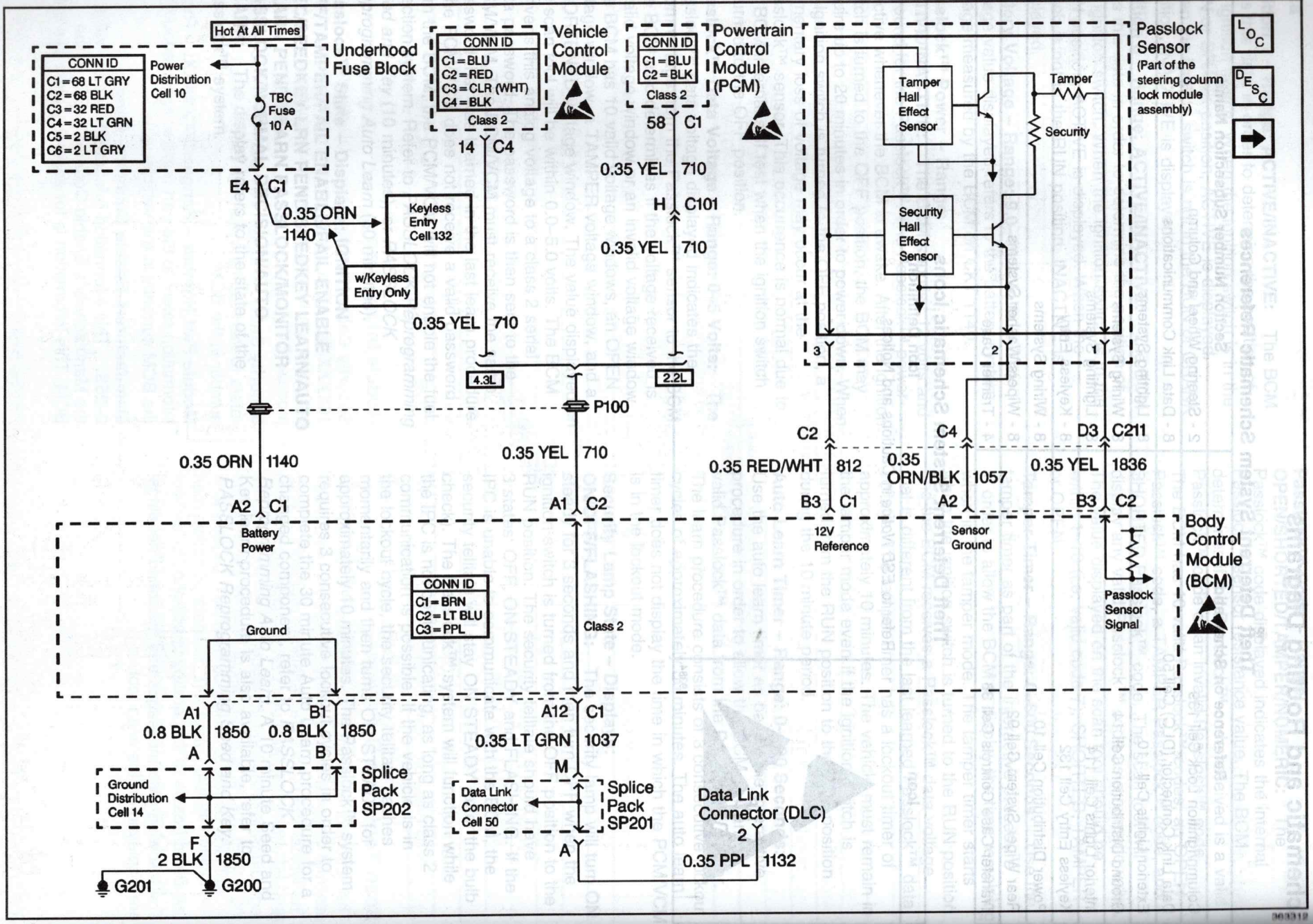
Theft Deterrent System Schematic References

Reference on Schematic	Section Number Subsection Name
Column/Ignition Lock Cell 139	2 - Steering Wheel and Column
Data Link Connector (DLC) Cell 50	8 - Data Link Communications
Exterior Lights Cell 110	8 - Lighting Systems
Ground Distribution Cell 14	8 - Wiring Systems
Interior Lights Cell 114	8 - Lighting Systems
Keyless Entry Cell 132	8 - Keyless Entry
Power Distribution Cell 10	8 - Wiring Systems
Rear Wiper System Cell 92	8 - Wipers/Washer Systems
Transfer Case Controls Cell 38	4 - Tranfer Case

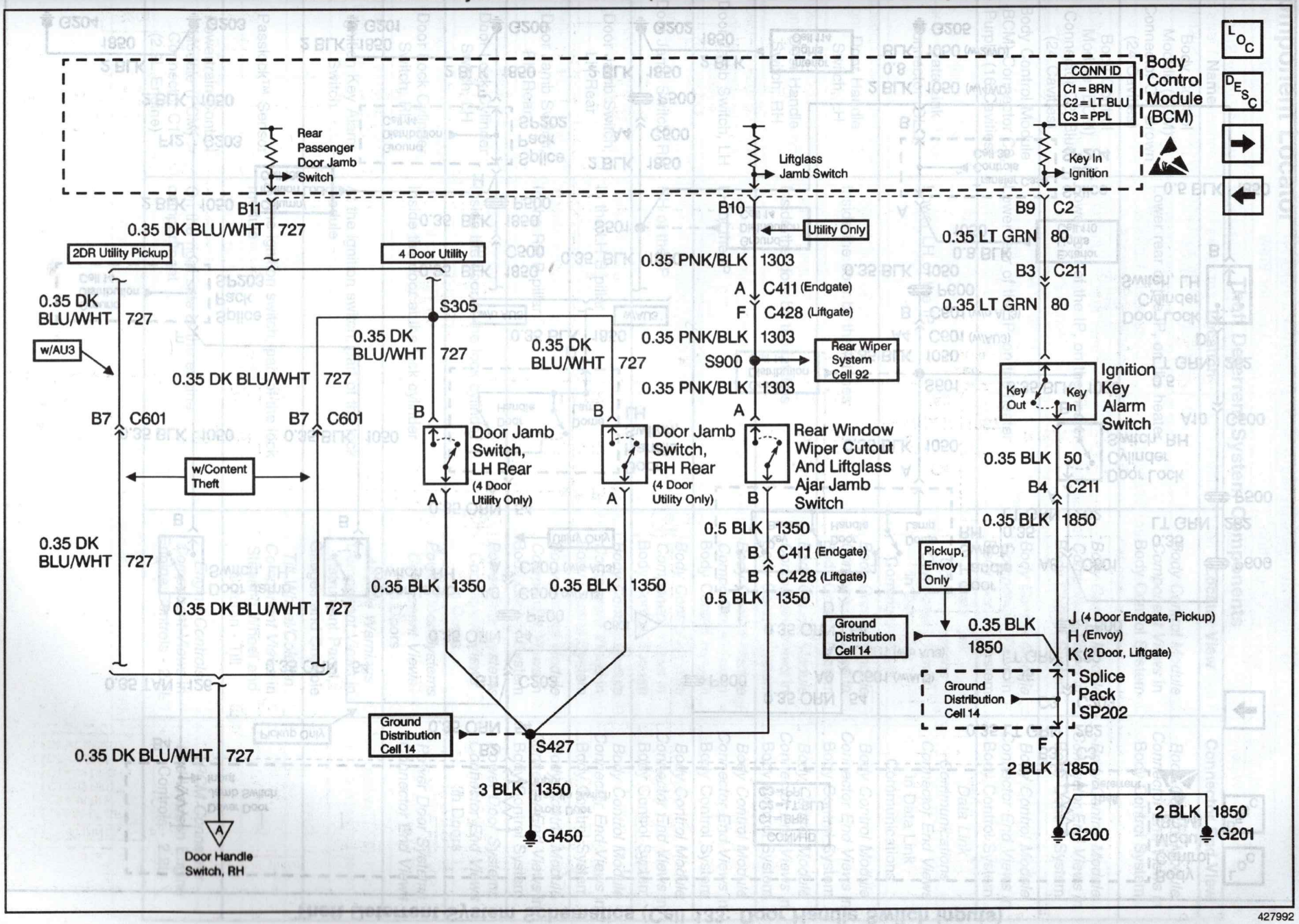
Theft Deterrent System Schematic Icons

Icon	Icon Definition
 19384	Refer to *ESD Notice* in Cautions and Notices.

Theft Deterrent System Schematics (Cell 133: Power, Ground and Passlock Sensor)



Theft Deterrent System Schematics (Cell 133: Door Jamb Switch Inputs)



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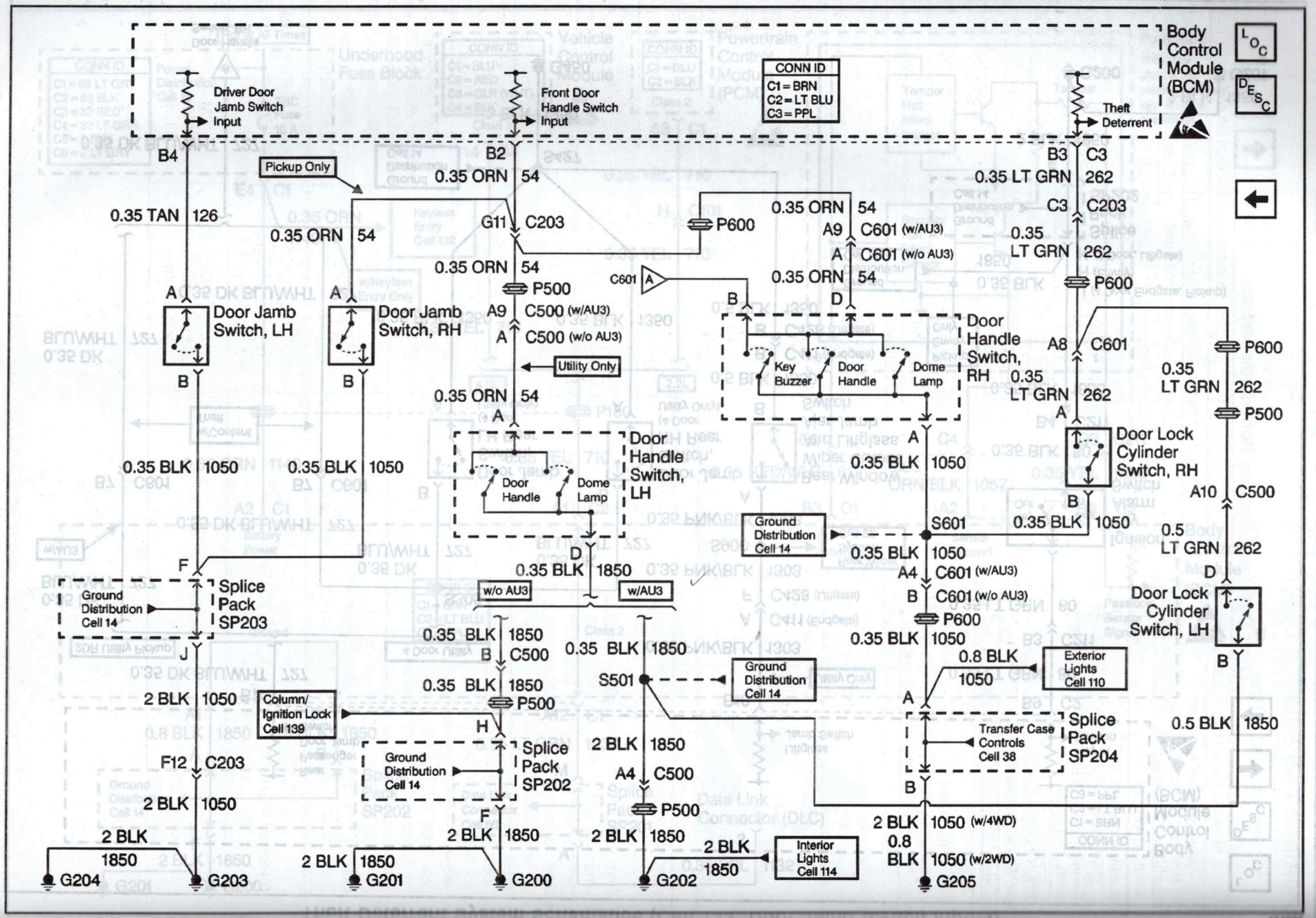
Theft Deterrent System Schematics (Cell 133: Door Handle Switch Inputs)



Component Locator

Theft Deterrent System Components

Name	Location	Locator View	Connector End View
Body Control Module (BCM) Connector C1, Brown (24 Cavities)	Lower rear of the IP, on the heater	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Body Control Module (BCM) Connector C2, Blue (24 Cavities)	Lower rear of the IP, on the heater	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Body Control Module (BCM) Connector C3, Purple (16 Cavities)	Lower rear of the IP, on the heater	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Data Link Connector (DLC)	Lower LH of the IP	*Data Link Communications Component Views* in Data Link Communications	*Data Link Communications Connector End Views* in Data Link Communications
Door Handle Switch, LH	Inside the door by the latches	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Door Handle Switch, RH	Inside the door by the latches	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Door Jamb Switch, LH	LH of the IP	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Door Jamb Switch, RH	RH of the IP	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Door Jamb Switch, LH Rear	In the LH B pillar	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Door Jamb Switch, RH Rear	In the RH B pillar	*Body Control Module Component Views* in Body Control System	*Body Control Module Connector End Views* in Body Control System
Door Lock Cylinder Switch, LH	Inside the door at the lock cylinder	*Power Door Systems Component Views* in Doors	*Power Door Systems Connector End Views* in Doors
Door Lock Cylinder Switch, RH	Inside the door at the lock cylinder	*Power Door Systems Component Views* in Doors	*Power Door Systems Connector End Views*
Ignition Key Alarm Switch	At the ignition switch, part of the lock module	*Audible Warnings Component Views* in Instrument Panel, Gauges and Console	—
Passlock™ Sensor	At the ignition switch, part of the lock module	*Tilt Wheel/Column Component Views* in Steering Wheel and Column - Tilt	—
Powertrain Control Module (PCM) Connector C1 (2.2L Engine)	On the right side of the engine compartment	*Engine Controls Component Views* in Engine Controls - 2.2L	*PCM Connector End Views* in Engine Controls - 2.2L

Theft Deterrent System Components (cont'd)

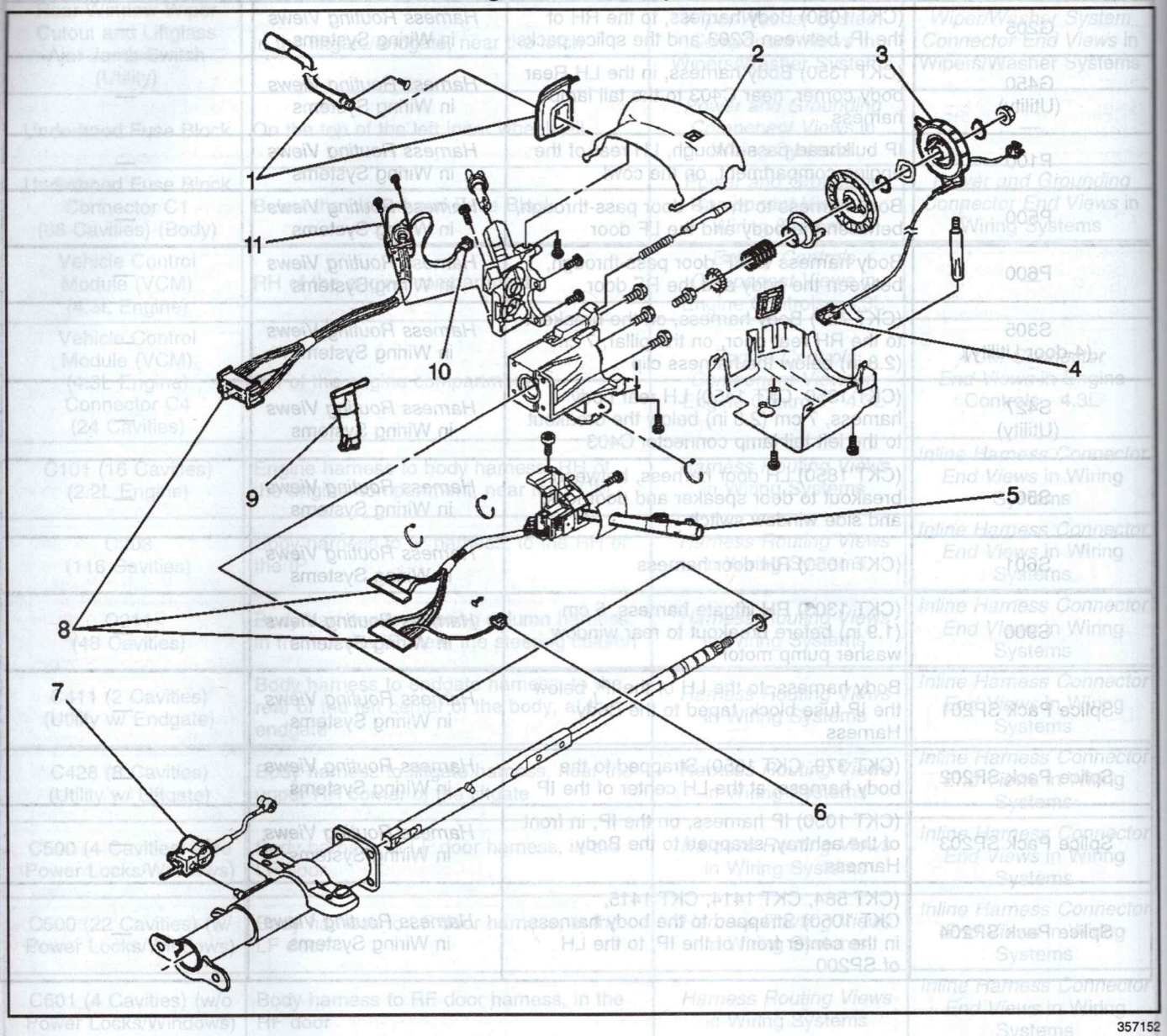
Name	Location	Locator View	Connector End View
Rear Window Wiper Cutout and Liftglass Ajar Jamb Switch (Utility)	In the liftgate/endgate, near the latch	*Wiper/Washer System Component Views* in Wipers/Washer Systems	*Wiper/Washer System Connector End Views* in Wipers/Washer Systems
Underhood Fuse Block	On the top of the left inner wheelwell	*Power and Grounding Component Views* in Wiring Systems	—
Underhood Fuse Block Connector C1 (68 Cavities) (Body)	Below the Underhood Fuse Block	*Power and Grounding Component Views* in Wiring Systems	*Power and Grounding Connector End Views* in Wiring Systems
Vehicle Control Module (VCM) (4.3L Engine)	RH of the engine compartment	*Engine Controls Component Views* in Engine Controls - 4.3L	—
Vehicle Control Module (VCM) (4.3L Engine) Connector C4 (24 Cavities)	RH of the engine compartment	*Engine Controls Component Views* in Engine Controls - 4.3L	*VCM Connector End Views* in Engine Controls - 4.3L
C101 (16 Cavities) (2.2L Engine)	Engine harness to body harness, RH of the engine compartment, near the PCM	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
C203 (116 Cavities)	Body harness to IP harness, to the RH of the IP	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
C211 (48 Cavities)	Body harness to steering column harness, in front of the IP, near the steering column	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
C411 (2 Cavities) (Utility w/ Endgate)	Body harness to endgate harness, to the rear of the left center of the body, at the endgate	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
C428 (8 Cavities) (Utility w/ Liftgate)	Body harness to liftgate harness, near the upper RH corner of the liftgate	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
C500 (4 Cavities) (w/o Power Locks/Windows)	Body harness to LF door harness, in the LF door	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
C500 (22 Cavities) (w/ Power Locks/Windows)	Body harness to LF door harness, in the LF door	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
C601 (4 Cavities) (w/o Power Locks/Windows)	Body harness to RF door harness, in the RF door	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
C601 (22 Cavities) (w/ Power Locks/Windows)	Body harness to RF door harness, in the RF door	*Harness Routing Views* in Wiring Systems	*Inline Harness Connector End Views* in Wiring Systems
G200	(CKT 1850) Body harness, to the LF of the IP, above P100	*Harness Routing Views* in Wiring Systems	—
G201	(CKT 1850) Body harness, to the LF of the IP, above P100	*Harness Routing Views* in Wiring Systems	—
G202	(CKT 1850) Body harness, to the LF of the IP, above P100	*Harness Routing Views* in Wiring Systems	—
G203	(CKT 1050) Body harness, to the RH of the IP, between C203 and the splice packs	*Harness Routing Views* in Wiring Systems	—
G204	(CKT 1050) Body harness, to the RH of the IP, between C203 and the splice packs	*Harness Routing Views* in Wiring Systems	—

Theft Deterrent System Components (cont'd)

Name	Location	Locator View	Connector End View
G205	(CKT 1050) Body harness, to the RH of the IP, between C203 and the splice packs	*Harness Routing Views* in Wiring Systems	—
G450 (Utility)	(CKT 1350) Body harness, in the LH Rear body corner, near C403 to the tail lamp harness	*Harness Routing Views* in Wiring Systems	—
P100	IP bulkhead pass-through, LH rear of the engine compartment, on the cowl	*Harness Routing Views* in Wiring Systems	—
P500	Body harness to the LF door pass-through, between the body and the LF door	*Harness Routing Views* in Wiring Systems	—
P600	Body harness to RF door pass-through, between the body and the RF door	*Harness Routing Views* in Wiring Systems	—
S305 (4-door Utility)	(CKT 727) Body harness, on the breakout to the RH rear door, on the pillar, 7 cm (2.8 in) below the harness clip	*Harness Routing Views* in Wiring Systems	—
S427 (Utility)	(CKT 1350, CKT 1450) LH rear body harness, 7 cm (2.8 in) below the breakout to the left tail lamp connector C403	*Harness Routing Views* in Wiring Systems	—
S501	(CKT 1850) LH door harness, between breakout to door speaker and door lock and side window switch	*Harness Routing Views* in Wiring Systems	—
S601	(CKT 1050) RH door harness	*Harness Routing Views* in Wiring Systems	—
S900	(CKT 1303) RH liftgate harness, 5 cm (1.9 in) before breakout to rear window washer pump motor	*Harness Routing Views* in Wiring Systems	—
Splice Pack SP201	Body harness, to the LH of the IP, below the IP fuse block, taped to the Body Harness	*Harness Routing Views* in Wiring Systems	—
Splice Pack SP202	(CKT 379, CKT 1850) Strapped to the body harness, at the LH center of the IP	*Harness Routing Views* in Wiring Systems	—
Splice Pack SP203	(CKT 1050) IP harness, on the IP, in front of the ashtray, strapped to the Body Harness	*Harness Routing Views* in Wiring Systems	—
Splice Pack SP204	(CKT 584, CKT 1414, CKT 1415, CKT 1050) Strapped to the body harness, in the center front of the IP, to the LH of SP200	*Harness Routing Views* in Wiring Systems	—

Theft Deterrent System Component Views

Steering Column Components



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Legend

(1) Shift Lever Assembly
(2) Upper Shroud
(3) Supplemental Inflatable Restraint Steering Wheel Module Coil
(4) C214
(5) Multifuction Switch
(6) Park Lock Solenoid Connector
(7) Brake Transmission Shift Interlock (BTSI) Solenoid
(8) C211
(9) Transmission Shift Lever
(10) Passlock™ Sensor Connector
(11) Ignition Switch and Ignition Key Alarm Switch