

SECTION : 9T

REMOTE KEYLESS ENTRY AND ANTI-THEFT SYSTEM

CAUTION : *Disconnect the negative battery cable before removing or installing any electrical unit or when a tool or equipment could easily come in contact with exposed electrical terminals. Disconnecting this cable will help prevent personal injury and damage to the vehicle. The ignition must also be in LOCK unless otherwise noted.*

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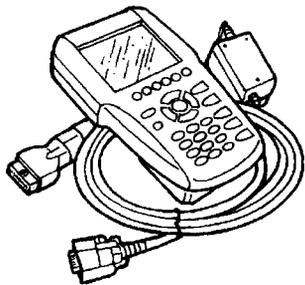
SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Application	N•m	Lb-Ft	Lb-In
Hood Open Switch Mounting Bolt	4	–	35
Siren Bracket Mounting Bolt	11	–	97
Siren Mounting Screws	3	–	27

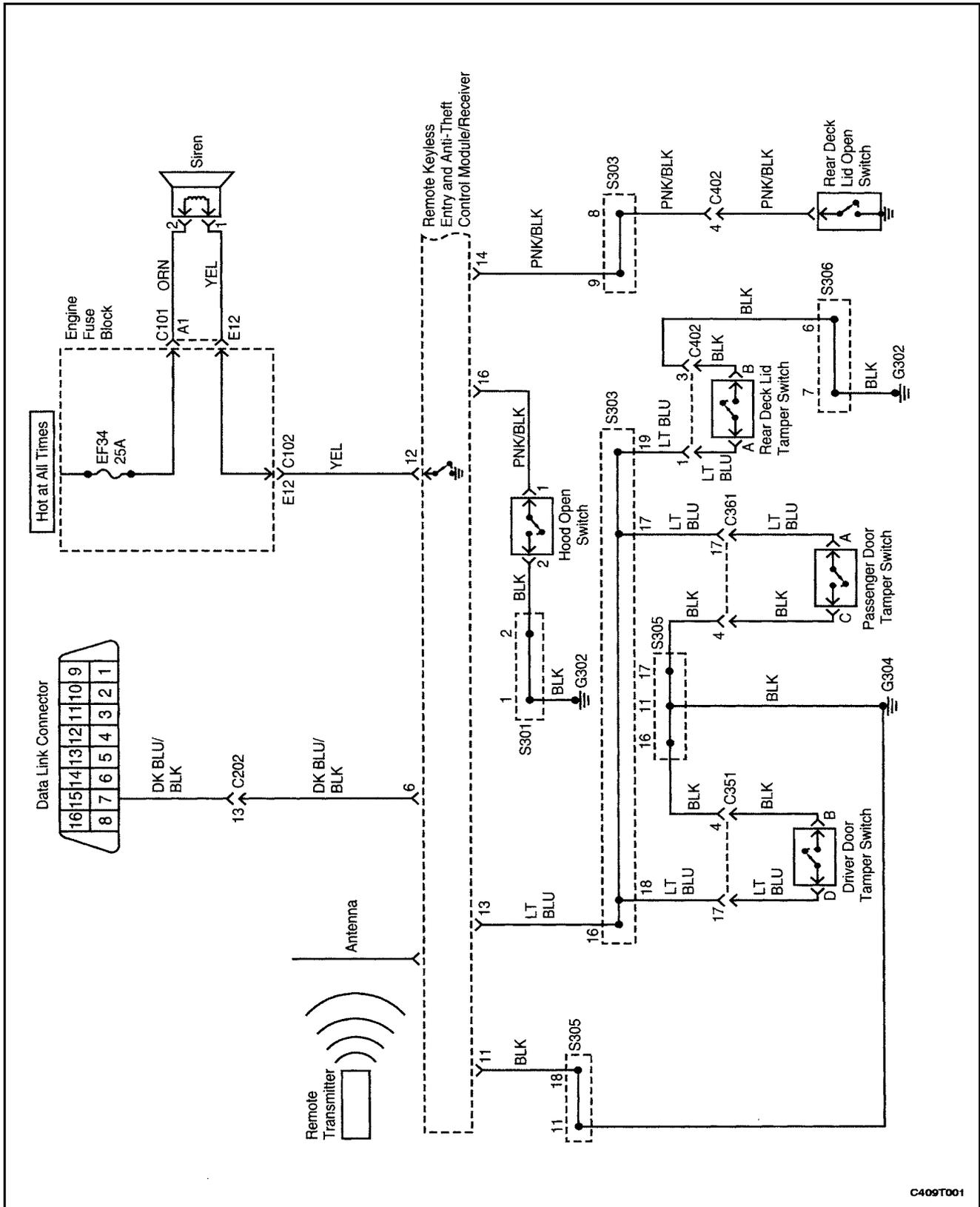
SPECIAL TOOLS

SPECIAL TOOLS TABLE

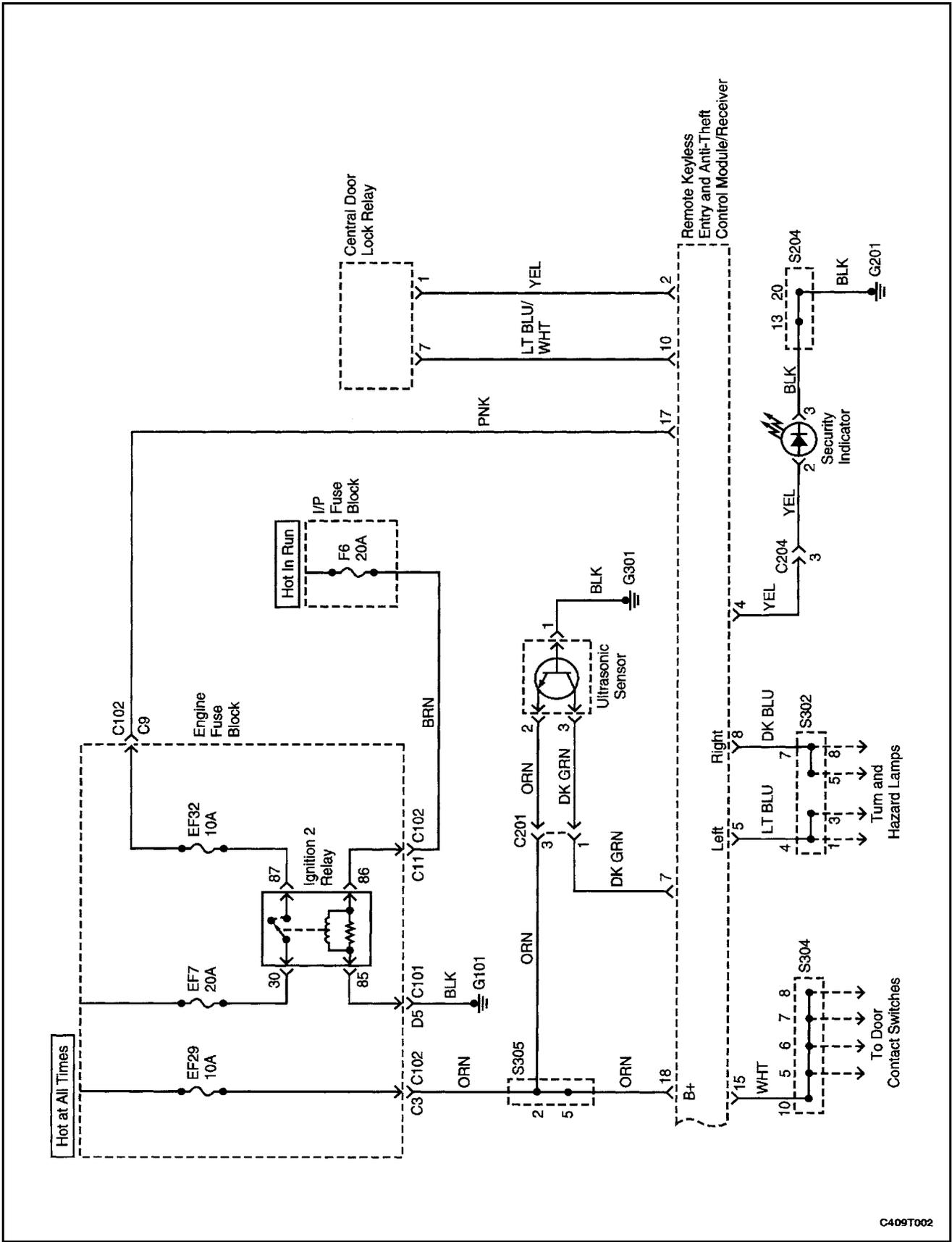
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SCHEMATIC AND ROUTING DIAGRAMS

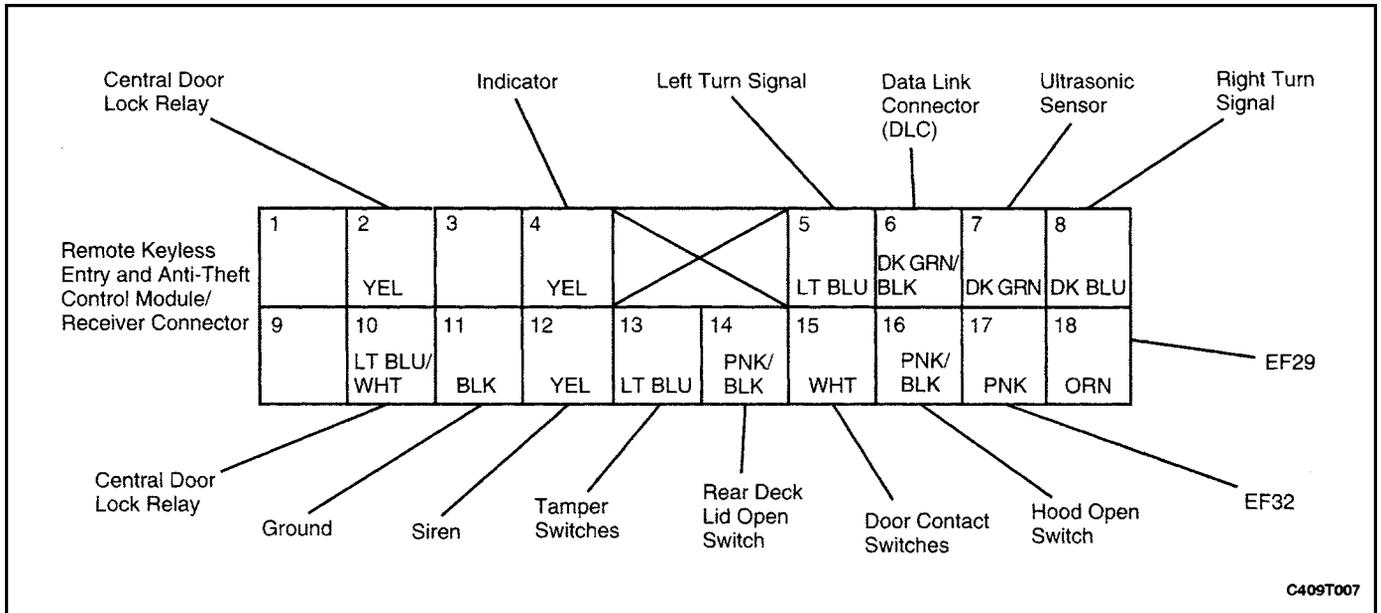
REMOTE KEYLESS ENTRY AND ANTI-THEFT SYSTEM (1 OF 2)



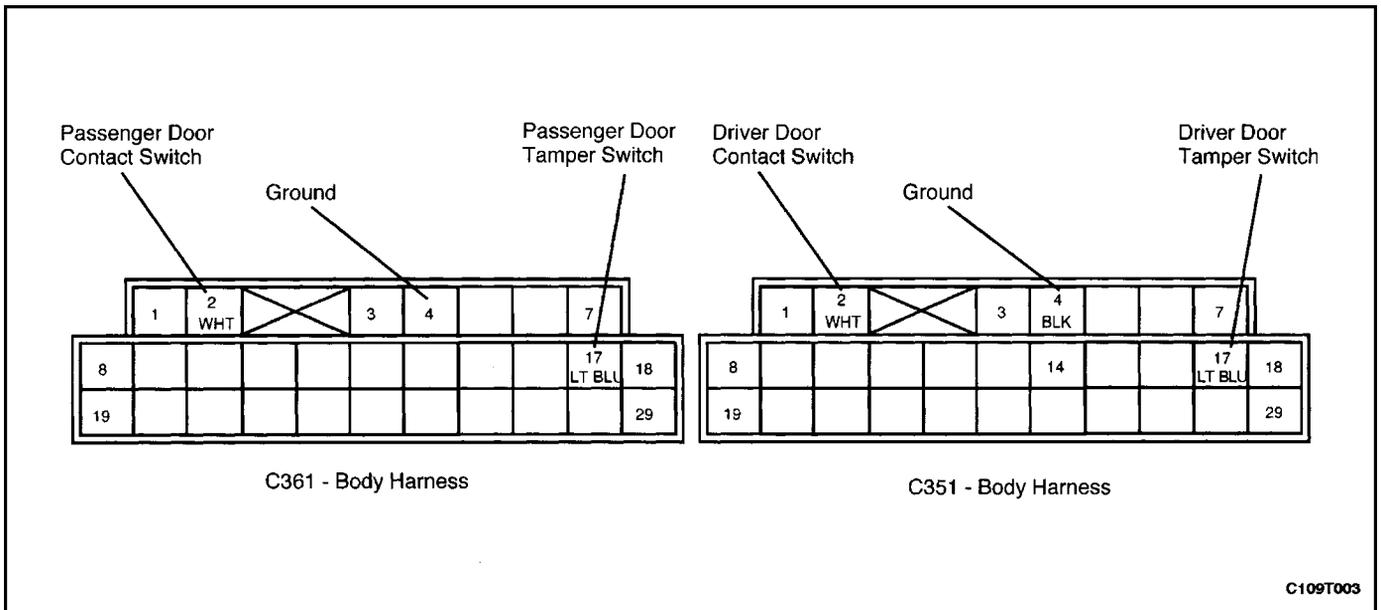
REMOTE KEYLESS ENTRY AND ANTI-THEFT SYSTEM (2 OF 2)

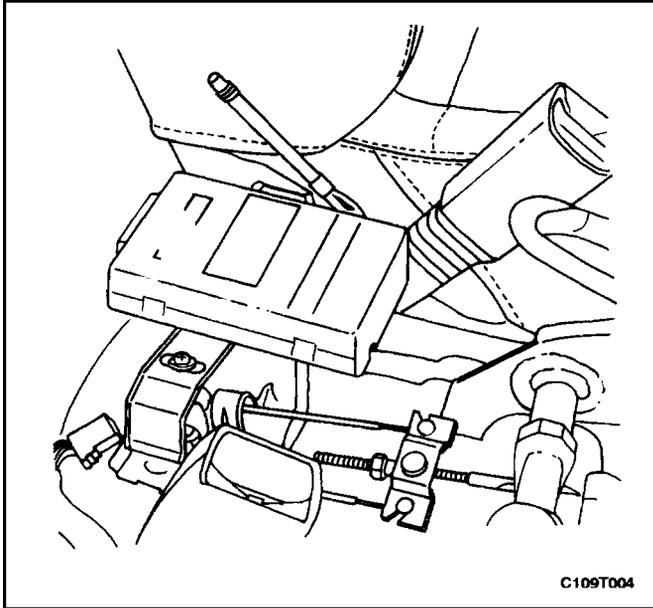


MODULE/RECEIVER CONNECTOR



WIRING HARNESS CONNECTORS





MAINTENANCE AND REPAIR

ON-VEHICLE SERVICE

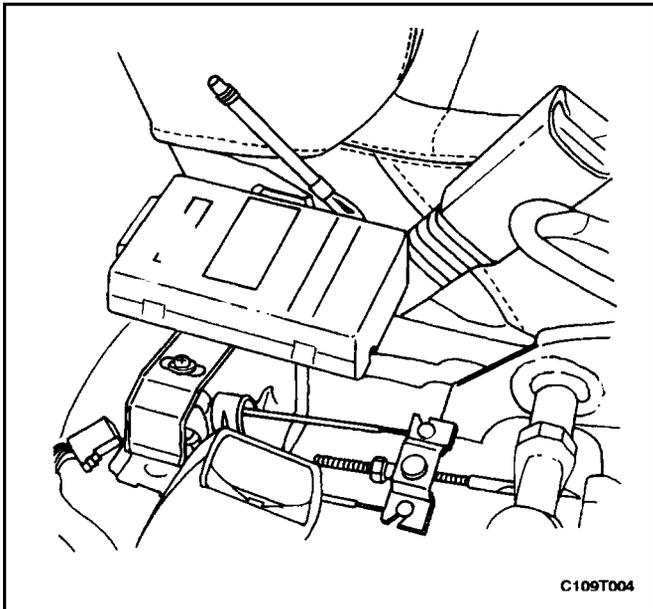
MODULE/RECEIVER

Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the floor console. Refer to *Section 9G, Interior Trim*.
3. Disconnect the module/receiver electrical connector.
4. Remove the module/receiver by sliding it toward the front of the vehicle until it disengages from its mounting bracket.

Installation Procedure

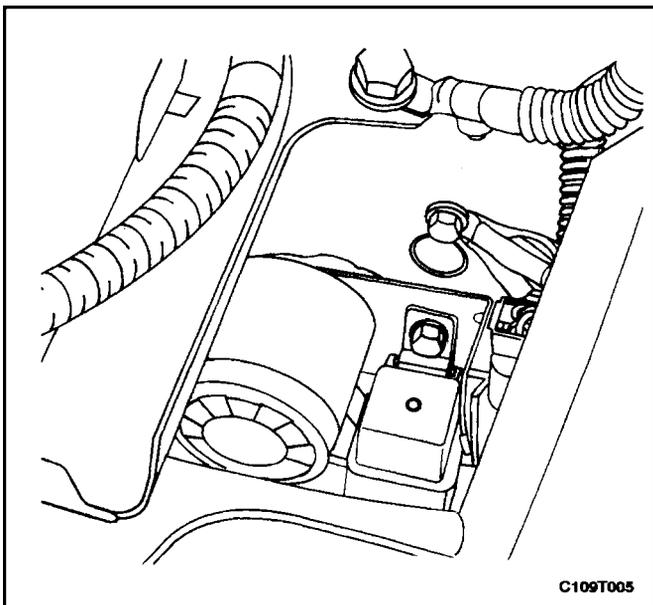
1. Install the module/receiver by sliding it onto its mounting bracket and pushing it toward the rear of the vehicle until it is secure.
2. Connect the module/receiver electrical connector.
3. Install the floor console. Refer to *Section 9G, Interior Trim*.
4. Connect the negative battery cable.

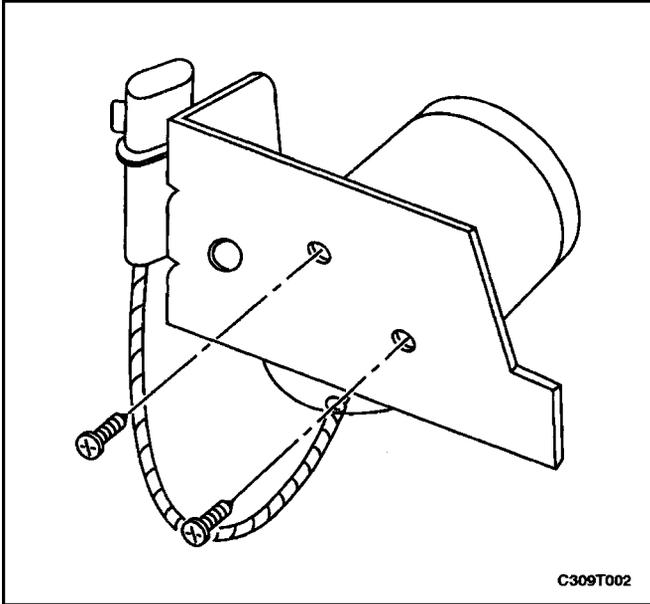


SIREN

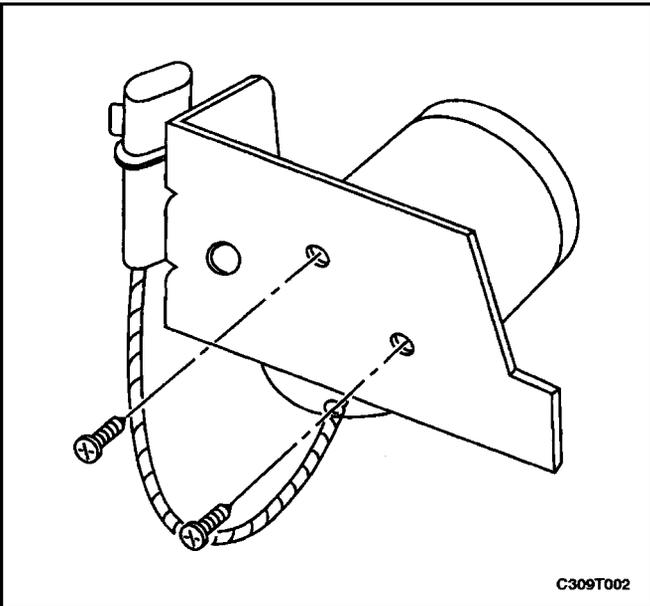
Removal Procedure

1. Disconnect the negative battery cable.
2. Disconnect the siren electrical connector.
3. Remove the siren bracket mounting bolt.





4. Remove the siren bracket.
5. Remove the siren mounting screws.
6. Remove the siren.

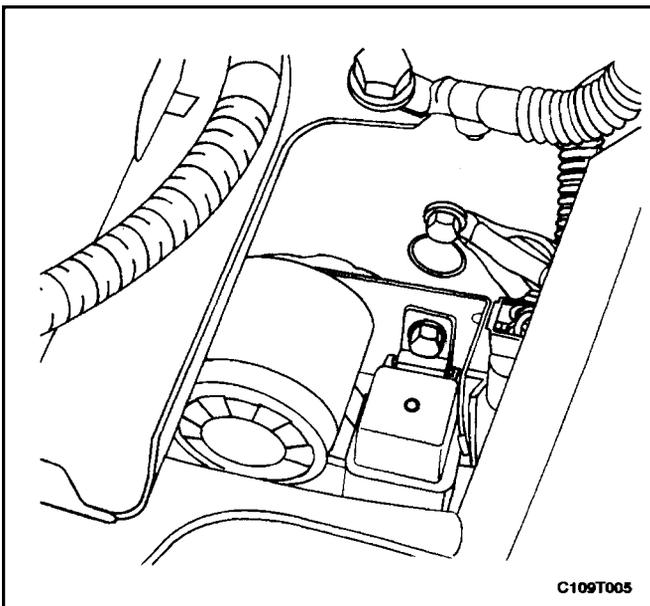


Installation Procedure

1. Install the siren on the siren bracket with the mounting screws.

Tighten

Tighten the siren mounting screws to 3 N•m (27 lb-in).



2. Install the siren bracket with the mounting bolt. Make sure that the siren bracket mounting bolt also fastens the auxiliary fan relay.

Tighten

Tighten the siren bracket mounting bolt to 11 N•m (97 lb-in).

3. Connect the siren electrical connector.
4. Connect the negative battery cable.

FRONT DOOR TAMPER AND DOOR CONTACT SWITCHES

Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the front door trim panel. Refer to *Section 9G, Interior Trim*.
3. Remove the front door lock with the integral door tamper and door contact switches. Refer to *Section 9P, Doors*.

Installation Procedure

1. Install the front door lock with the integral door tamper and door contact switches. Refer to *Section 9P, Doors*.
2. Install the front door trim panel. Refer to *Section 9G, Interior Trim*.
3. Connect the negative battery cable.

REAR DECK LID TAMPER SWITCH

Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the deck lid lock cylinder and integral rear deck lid tamper switch. Refer to *Section 9S, Body Rear End*.

Installation Procedure

1. Install the deck lid lock cylinder and integral rear deck lid tamper switch. Refer to *Section 9S, Body Rear End*.
2. Connect the negative battery cable.

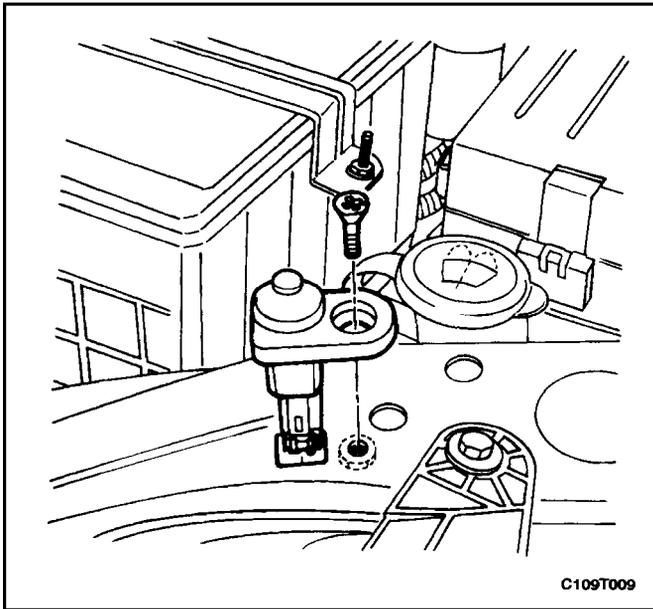
REAR DECK LID OPEN SWITCH

Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the rear deck lid lock and integral rear deck lid open switch. Refer to *Section 9S, Body Rear End*.

Installation Procedure

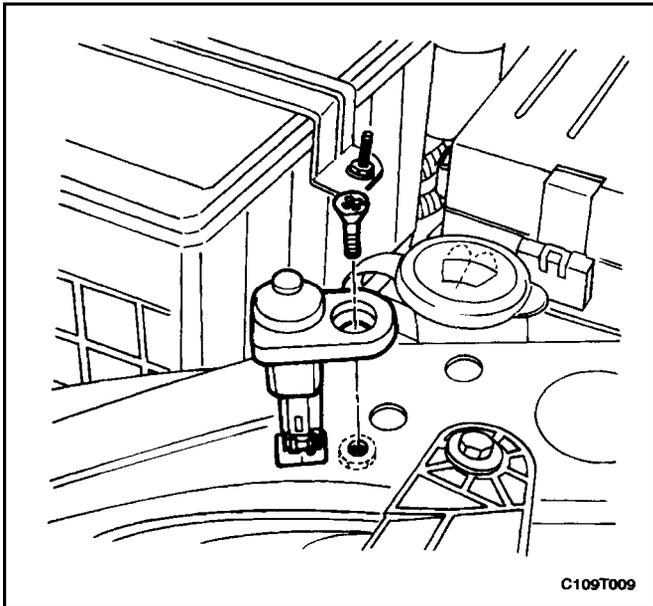
1. Install the deck lid lock and integral rear deck lid open switch. Refer to *Section 9S, Body Rear End*.
2. Connect the negative battery cable.



HOOD OPEN SWITCH

Removal Procedure

1. Disconnect the negative battery cable.
2. Reach underneath the hood open switch and hold the mounting nut while removing the hood open mounting bolt.
3. After the mounting bolt and nut are removed, push the hood open switch upward from below.
4. Disconnect the electrical connector from the hood open switch.
5. Remove the hood open switch.



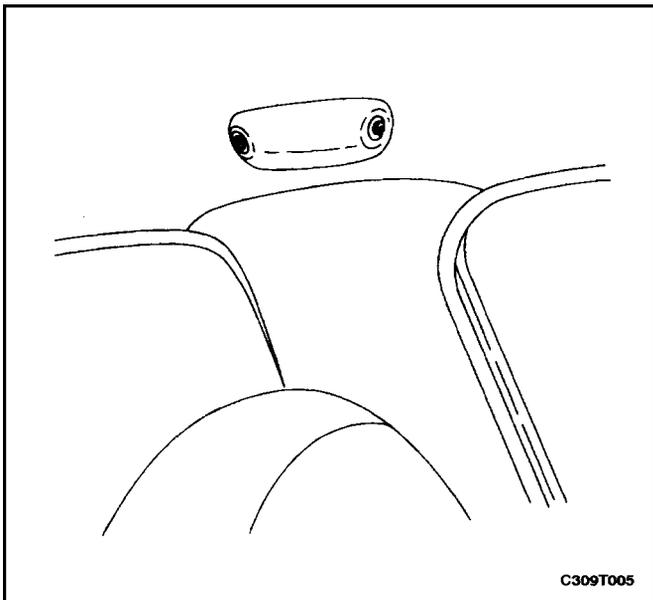
Installation Procedure

1. Install the hood open switch with the mounting bolt and nut.

Tighten

Tighten the hood open switch mounting bolt to 4 N•m (35 lb-in).

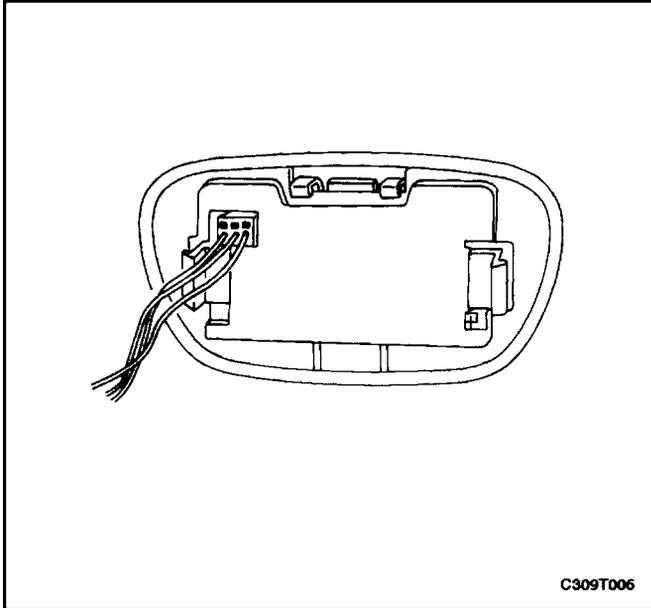
2. Connect the electrical connector to the hood open switch.
3. Connect the negative battery cable.



ULTRASONIC SENSOR

Removal Procedure

1. Slide the ultrasonic sensor in a sideways direction to loosen the retaining clip while simultaneously pulling the sensor away from the B-pillar.
2. Disconnect the electrical connector from the ultrasonic sensor.



Installation Procedure

1. Connect the electrical connector to the ultrasonic sensor.
2. Install the ultrasonic sensor by pushing it into the opening in the B-pillar until the retaining clips lock into place.

PASSWORD PROGRAMMING

If a transmitter is lost or damaged, the module/receiver must be reprogrammed to communicate with a new transmitter. The passwords recorded in the module/receiver should not be deleted when power is off in the module/receiver.

Each module/receiver should be able to record five passwords. The following method is used to record new passwords in the module/receiver.

1. Connect the scan tool to the data link connector (DLC).
2. Turn the ignition ON.
3. Send the programming mode message to the module/receiver.
4. Press any button on the transmitter to generate a data code including a password which will be recorded by the module/receiver. The module/receiver sends a response message to the scan tool to indicate that the first password has been recorded.
5. Repeat the action of pressing any button on the transmitter until the module/receiver has responded that the second, third, fourth, and fifth passwords have been recorded.
6. Turn the ignition OFF.
7. Disconnect the scan tool.

The module/receiver will exit the programming mode and switch to the normal operating mode when either of the following conditions occurs:

- The scan tool is disconnected from the DLC.
- Five passwords have been recorded in the module/receiver.

GENERAL DESCRIPTION AND SYSTEM OPERATION

REMOTE KEYLESS ENTRY AND ANTI-THEFT SYSTEM

The remote keyless entry and anti-theft system can perform the following functions:

- Remotely lock and unlock the vehicle doors by means of a hand-held, high-frequency transmitter.
- Sense intrusion into the vehicle through the doors, the trunk, or the hood.
- Activate a warning if an intrusion is detected.
- Automatically relock the doors if the door or the trunk is not opened within 30 seconds after the vehicle has been unlocked by remote keyless entry.
- Help the driver find the vehicle in a parking area.
- Communicate serial data to a scan tool to help diag-nose system faults.
- Sense movement inside the vehicle if it is equipped with the optional ultrasonic motion detector.

The remote keyless entry/anti-theft system consists of the following components:

- Keyless entry and anti-theft module/receiver.
- Hand-held transmitter.
- SECURITY indicator.
- Rear deck lid open switch.
- Rear deck lid tamper switch.
- Front door tamper switch.
- Door contact switch.
- Central locking unit.
- Turn signals.
- Siren.
- Hood open switch.
- Ultrasonic sensor (optional).

REMOTE LOCKING AND UNLOCKING

The hand-held transmitter locks and unlocks the vehicle doors by sending radio waves to the module/receiver in the vehicle. The effective range of the transmitter varies between 5 and 10 meters (approximately 16 to 32 feet), depending on whether objects such as other vehicles block the path of the radio waves.

Pressing the LOCK button has the following effects:

- The doors are locked.
- The turn signals flash once.
- The module is armed.

The transmitter has a replaceable battery. The battery is designed to last at least three years before replacement is necessary.

SECURITY INDICATOR

There is a SECURITY indicator on the instrument panel. After the LOCK button of the transmitter is pressed, the module/receiver is placed in the armed mode, and the SECURITY indicator flashes. The SECURITY indicator turns ON for 0.1 second and OFF for 0.7 second, and it flashes at that frequency until the module/receiver is dis-armed.

INTRUSION SENSING

The anti-theft function is armed if the transmitter sends the LOCK message to the module/receiver when the ignition is OFF. If the hood, the door, or the rear deck lid is opened, the hood open, the door contact, or the rear deck lid open switch will change its input to the module/receiver, and the alarm will be activated unless either of the following conditions has occurred:

- An UNLOCK message was received from the transmitter.
- The front door tamper or the rear deck lid tamper switches indicate key operation.

The alarm will also be activated if the ignition input is changed to battery voltage before either of the following conditions occurs:

- An UNLOCK message was received from the transmitter.
- The front door tamper or the rear deck lid tamper switches indicate key operation.
- The alarm will also be activated if the anti-theft function has been armed and the ultrasonic sensor (optional) detects movement within the vehicle before the front door or rear deck lid tamper switches have indicated key operation.

SIREN

The remote keyless entry system is armed when the LOCK message is received from the transmitter when the ignition is OFF. When the system is armed, it will activate the siren and flash the turn signals for 28 seconds if any of the following conditions occurs:

- A door is opened without using the key before an UNLOCK signal is received from the transmitter.
- The rear deck lid is opened without using the key before an UNLOCK signal is received from the transmitter.
- The hood is opened before an UNLOCK signal is received from the transmitter and before a door or the rear deck lid is unlocked.
- The ignition switch input indicates battery voltage before either a key is used to unlock the vehicle or an UNLOCK signal is received from the transmitter.

The siren is disarmed after it begins to sound an alarm if any of the following conditions occurs:

- The door is opened with the key.
- The rear deck lid is opened with the key.

- The UNLOCK or LOCK button on the remote transmitter is pressed within 2 seconds. If the UNLOCK or LOCK button is not pressed.

VEHICLE LOCATOR

The remote keyless entry system assists the driver in locating the vehicle. When the vehicle is unlocked with the remote control, the turn signals flash twice to indicate the location of the vehicle. The duration of the flashes and the length of time between flashes is used to indicate certain vehicle conditions. Refer to "Fault or Alarm Indication" in this section.

AUTOMATIC LOCKING (SAFETY LOCK)

The remote keyless entry system has an automatic locking feature. If the doors are unlocked with the remote transmitter while the control module/receiver is armed, the doors are automatically relocked after 30 seconds unless any of the following events occurs:

- The door is opened.
- The ignition switch is turned ON.
- The rear deck lid is opened.
- The hood is opened.

MODULE/RECEIVER

The remote keyless entry module/receiver is contained in the floor console. The module/receiver processes signals from the remote transmitter and the intrusion sensors, and it activates the alarm if an invasion is detected. The module/receiver also has a self-diagnostic function which will display trouble codes. In order to display trouble codes, a scan tool must be connected to the data link connector (DLC).

The module/receiver will not communicate with transmitters from other vehicles because there are over four billion possible electronic password combinations. The module/receiver has an attached antenna to detect signals from the transmitter.

FAULT OR ALARM INDICATION

When the UNLOCK button on the remote transmitter is pressed, the module/receiver will flash the parking lights to indicate information about the remote keyless entry and anti-theft system.

Normal Condition: If there has not been an intrusion and no fault has been detected, the module/receiver will signal a normal condition when the UNLOCK button is pressed. The parking lights will flash twice for 0.5-sec-ond, with a 0.5-second pause between flashes.

Fault Indication: If there is a fault in the remote keyless entry and anti-theft system, the module/receiver will signal the fault when the UNLOCK button is pressed. The parking lights will flash twice for 1 second, with a 0.5-second pause between flashes.

Alarm Indication: If there has been an intrusion since the last time the LOCK button was pressed, the module/receiver will signal that there has been an intrusion when the UNLOCK button is pressed. The parking lights will flash twice for 0.5-second, and with a 1.5-second pause between flashes.

Alarm and fault information in the module/receiver will be erased the next time the module/receiver enters the armed condition after receiving a LOCK message from the transmitter.

PANIC BUTTON

In addition to the LOCK and UNLOCK buttons on the transmitter, there is another button which is used to activate the siren if a threatening situation occurs while the driver is approaching the vehicle. If the panic button is held down for 2 seconds, the siren will be activated for 30 seconds. The turn/hazard lamps will flash during that time.