

SECTION : 9T1

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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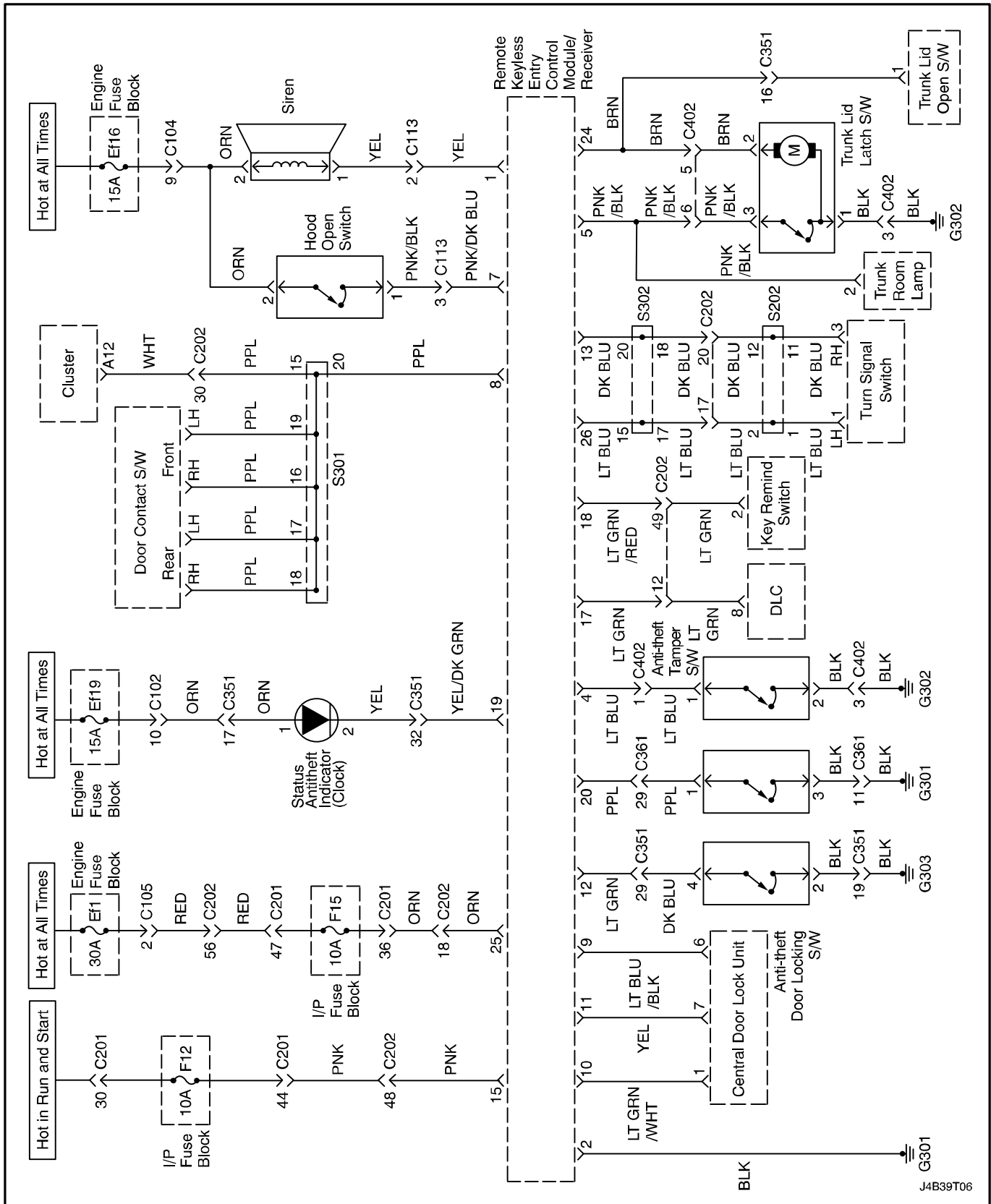
SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

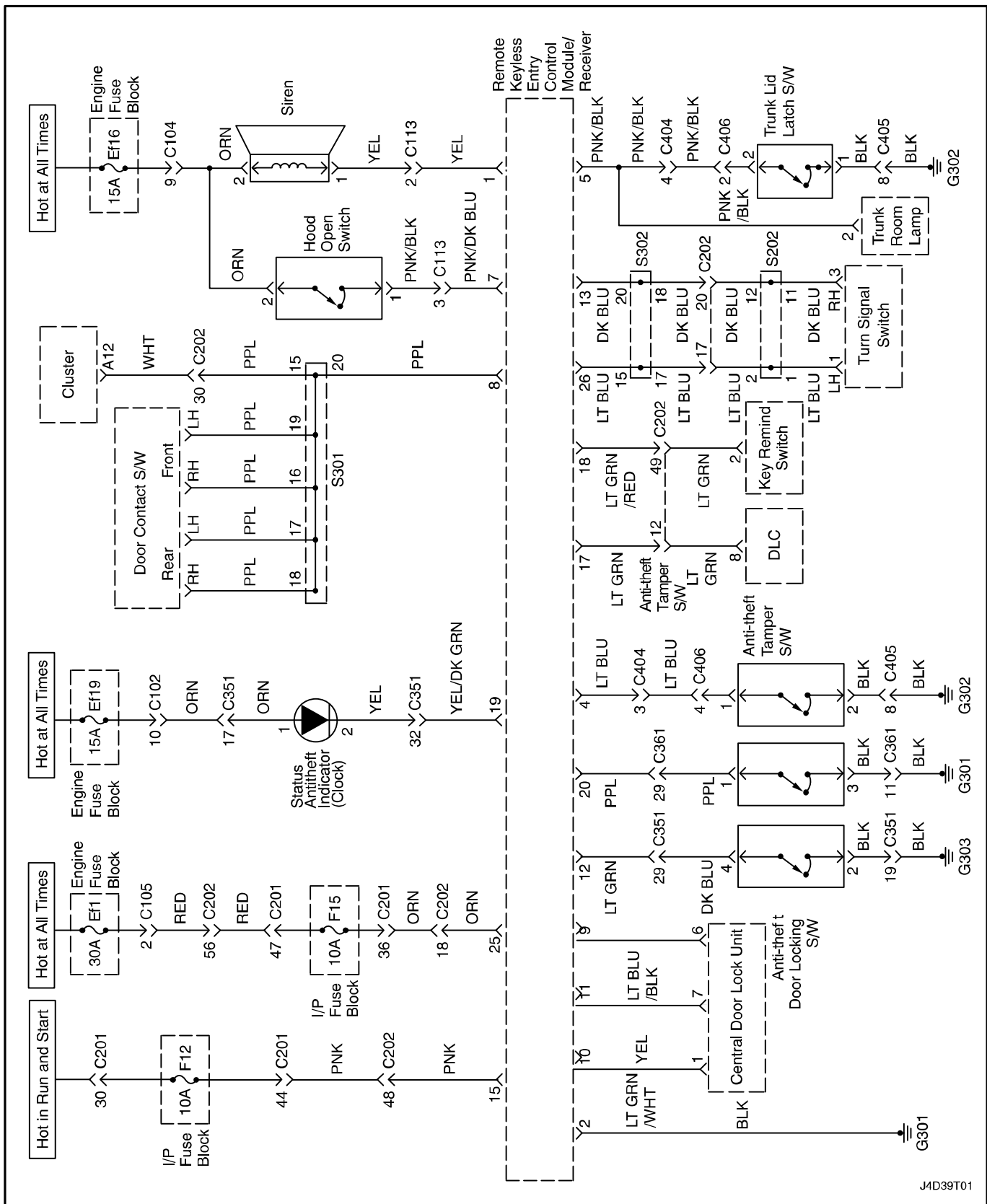
Application	N•m	Lb-Ft	Lb-In
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SCHEMATIC AND ROUTING DIAGRAMS

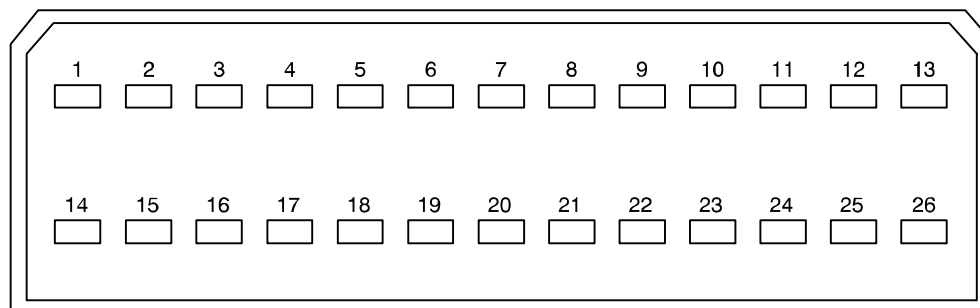
NOTCHBACK REMOTE KEYLESS ENTRY AND ANTI-THEFT SYSTEM



HATCHBACK REMOTE KEYLESS ENTRY AND ANTI-THEFT SYSTEM



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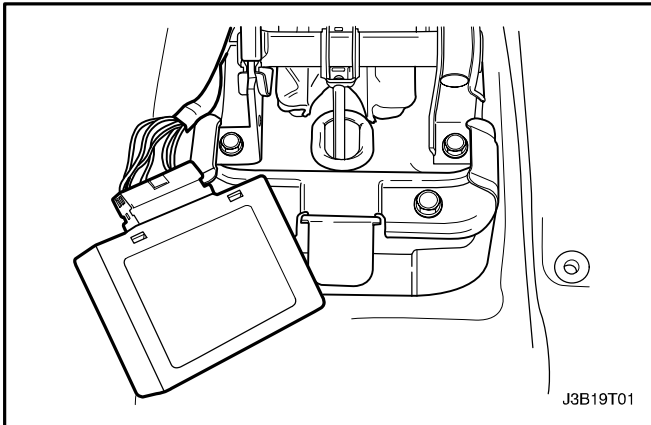
CONTROL MODULE/RECEIVER CONNECTOR

T3B19T02

Terminal	Color	Description
1	YEL	Siren
2	BLK	Ground
3	–	–
4	LT BLU	Door and Trunk Tamper Switch
5	PNK/BLK	Trunk Open Switch
6	–	–
7	PNK/DKBLU	Hood Open Switch
8	PPL	Door contact Switch
9	LT BLU/BLK	Unlock
10	LT GRN/WHT	Lock
11	YEL	Unlock
12	LT GRN	Anti-Theft Door Locking Switch
13	DK BLU	Right Turn Signal Bulb
14	–	–
15	PNK	Ignition+
16	–	–
17	LT GRN	Diagnostic Communication
18	LT GRN/RED	Key Reminder Switch
19	YEL/DK GRN	Security Indicator
20	PPL	Anti-Theft Door Locking Switch
21	–	–
22	–	–
23	–	–
24	BRN	Trunk Open Switch
25	ORN	Battery+
26	LT BLU	Left Turn Signal Bulb

MAINTENANCE AND REPAIR

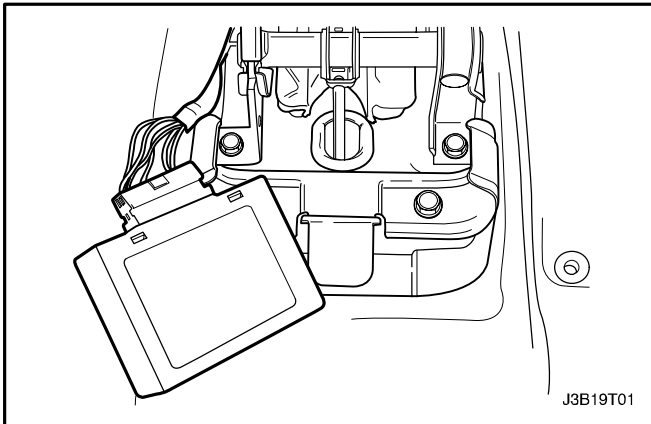
ON-VEHICLE SERVICE



CONTROL MODULE/RECEIVER

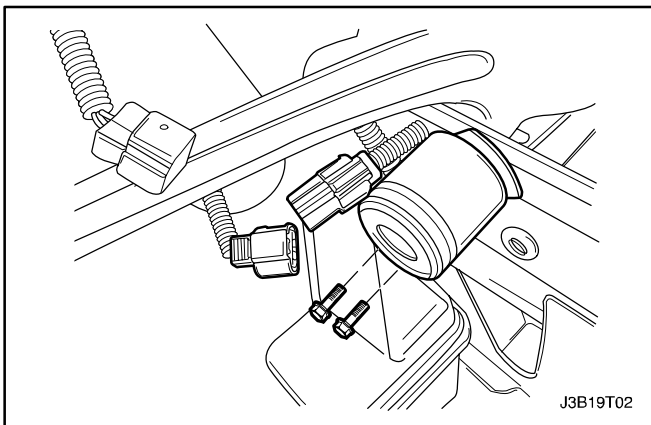
Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the floor console. Refer to *Section 9G, Interior Trim*.
3. Disconnect the control module/receiver electrical connector.
4. Slide the control module/receiver away from its mounting bracket.



Installation Procedure

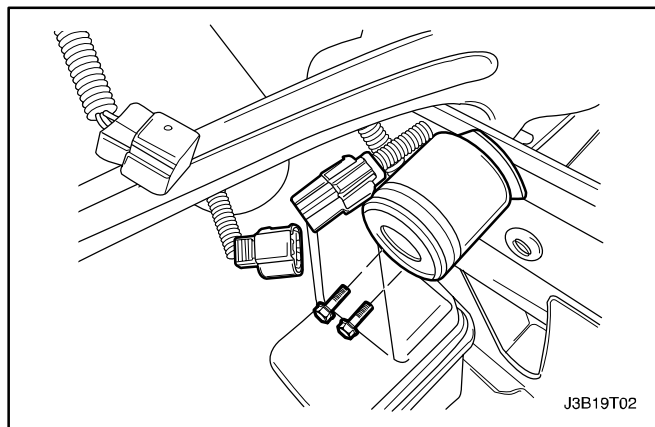
1. Install the control module/receiver on its mounting bracket.
2. Connect the control module/receiver electrical connector.
3. Install the floor console. Refer to *Section 9G, Interior Trim*.
4. Connect the negative battery cable.



SIREN (GENERAL ONLY)

Removal Procedure

1. Remove the siren electrical connector.
2. Remove the siren bracket mounting bolts and siren.



Installation Procedure

1. Install the siren with the mounting bolts.

Tighten

Tighten the siren bracket mounting bolts to 8 N•m (71 lb-in).

2. Connect the siren electrical connector.

REMOTE KEYLESS ENTRY TRANSMITTER PROGRAMMING

The Remote Keyless Entry System allows for the use of as many as four(4) transmitters for each vehicle. Replacement Remote Keyless Entry System Transmitters must first be programmed to specific vehicle using the Scan100 Secan tool.

This process is completed using serial data communication between the Scan 100 Scan tool and the Remote Keyless Entry Control Unit and is the only method available for programming Transmitters.

Notice : All Transmitters for a specific vehicle must be programmed at same time.

Notice : Once the programming function of the Remote Keyless Entry System is activated, any Transmitter(existing or new) that is not programmed(or reprogrammed) during the programming procedure will no longer operate the Remote Keyless Entry System of that vehicle.

Notice : Ensure that the doors, hood and trunk/rear hatch are closed prior to starting the programming procedure.

1. Connect the Scan 100 Scan Tool to the Data Link Connector(DLC)
2. Turn the Scan 100 Scan Tool "ON" by pressing the "Power" Button, then wait for the MAIN MENU screen to be displayed.
3. From the MAIN MENU screen, select "Diagnostics" by pressing #1 on the Key Pad.
4. From the MODEL YEAR screen, select the appropriate model year of the specific vehicle by either scrolling down to the year and pressing "ENTER", or by pressing the respective item number on the Key Pad.
5. From the VEHICLE TYPE screen, select the specific vehicle model by either scrolling down to the model name and pressing "ENTER", or by pressing the respective item number on the Key Pad.
6. From the SYSTEM SELECTION MENU screen, select "Body" by pressing #2 on the Key Pad.
7. From the BODY SELECTION MENU screen, select "Coding" by pressing #2 on the Key Pad.

8. From the CODY SELECTION MENU screen, select "Coding" by pressing #1 on the Key Pad.
9. From the SECRET NUMBER OF CODINGS screen, enter for(4) zero's (0-0-0-0) in the for(4) boxes labeled "1-2-3-4-".
10. From the CODING SYSTEM SELECT screen, select "Keyless Entry" by pressing #2 on the Key Pad.

Notice : A slight delay may occur and "PLEASE WAIT" may be displayed before the next screen appears.

11. From the KEYLESS ENTRY CODING SYSTEM screen, select "Coding Transmitter" by pressing #1 on the Key Pad.
12. When directed by the Scan 100 Scan Tool, press any Button on the first Transmitter to be programmed.

CAUTION : *Ensure that Transmitters from other vehicles in the immediate area are not activated during this procedure.*

13. Continue programming Transmitters when directed by the Scan 100 Scan Tool until all Transmitters have been programmed.

Notice : A maximum of four(4) Transmitters may be programmed to a vehicle.

14. Once all Transmitters have been programmed, press the "ESC" Button on the Key Pad. The display will confirm the number of Transmitters programmed. If the number displayed does not match the number of Transmitters programmed, repeat the procedure.
15. Turn the Scan 100 Scan Tool "OFF" by pressing the "POWER" Button, then disconnect it from the Data Link Connector.
16. Wait approximately 10 seconds, then test the operation of each programmed Transmitter to ensure it operates properly.

The control module/receiver leaves the programming mode automatically and switches to the normal operating mode when either of the following conditions occurs:

- the scan tool is disconnected from the ALDL.
- Four passwords are recorded in the control 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.
- Activate a warning in the event of an intrusion.
- Help the driver find the vehicle in a parking area.
- Automatically re-lock the doors if the door or the trunk is not opened within 30 seconds after the vehicle has been unlocked by the remote keyless entry.
- Communicate serial data to a scan tool to help diagnose system faults.

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

- Keyless entry and anti-theft control module/receiver.
- Security indicator.
- Trunk open switch (NOTCHBACK).
- Trunk tamper switch (NOTCHBACK).
- Front door tamper switches.
- Door contact switches.
- Central door lock relay.
- Turn signal bulbs.
- Siren.
- Hood open switch.

REMOTE LOCKING AND UNLOCKING

The hand-held transmitter locks and unlocks the vehicle doors by sending radio waves to the control 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 or not objects, such as other vehicles are blocking the path of the radio waves.

The transmitter has a LOCK button and an UNLOCK button which only function when the ignition is OFF. Pressing the UNLOCK button has the following effects:

- The doors are unlocked.
- The turn signal bulbs flash twice.
- The control module is disarmed.

Pressing the LOCK button has the following effects:

- The doors are locked.
- The turn signal bulbs flash once.
- The control module is armed.

The transmitter has a replaceable battery. The battery is designed to last at least two 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 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. It then flashes at that frequency until the control module/receiver is disarmed.

INTRUSION SENSING

The anti-theft function is armed if the transmitter sends the LOCK message to the control module/receiver when the ignition is OFF. When the hood, door, or trunk is opened, the hood open, door contact, or trunk open switch sends a "ground" signal to the control module/receiver. Unless the control module/receiver is disarmed, the siren will be activated when the "ground" signal is received from the trunk open, hood open, or door contact switches.

The following actions disarm the anti-theft system:

- An UNLOCK message is received from the transmitter.
- Key operation is detected by the tamper switches. (The tamper switches are operated by the lock cylinders in the front doors and trunk.)

The alarm will also be activated if the control module/receiver detects voltage from the ignition before either of the following conditions occur:

- An UNLOCK message is received from the transmitter.
- Key operation is indicated by the tamper switches.

SIREN (GENERAL ONLY)

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 occur:

- Close all the windows.
- Turn the ignition key to LOCK and remove the key.
- Have all passengers get out of the vehicle.
- Close all doors, the hood and the trunk lid.
- The control module/receiver detects ignition voltage while the system is armed.

The siren will not operate if any of the following conditions occur after the system has been armed:

- The door is opened with the key.
- The trunk is opened with the key.
- The UNLOCK or LOCK button on the remote transmitter is pressed within 2 seconds after the siren is activated.

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.

AUTOLOCKING (SAFETY LOCK)

The remote keyless entry system features an autolocking feature. If the doors are unlocked with the remote transmitter when the control module/receiver is in the armed mode, the doors are automatically re-locked after 30 seconds unless any of the following events occur:

- A door is opened.
- The ignition is ON.
- The trunk is opened.
- The hood is opened.

CONTROL MODULE/RECEIVER

The remote keyless entry control module/receiver is contained in the floor console. The module/receiver processes signals from the remote transmitter and various switches. It activates the alarm if an intrusion is detected. The control 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 control module/receiver will not communicate with transmitters from other vehicles because there are over four billion possible electronic password combinations. It

is highly unlikely that any transmitters will use the same password. The control 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 control 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 control module/receiver will signal a normal condition when the UNLOCK button is pressed. The parking lights will flash twice for 0.5 second, 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 control 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 control 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, with a 1.5 second pause between flashes.

Alarm and fault information will be erased the next time the transmitter arms the control module/receiver by transmitting a LOCK message.