

# SECTION : 9F

## AUDIO SYSTEMS

**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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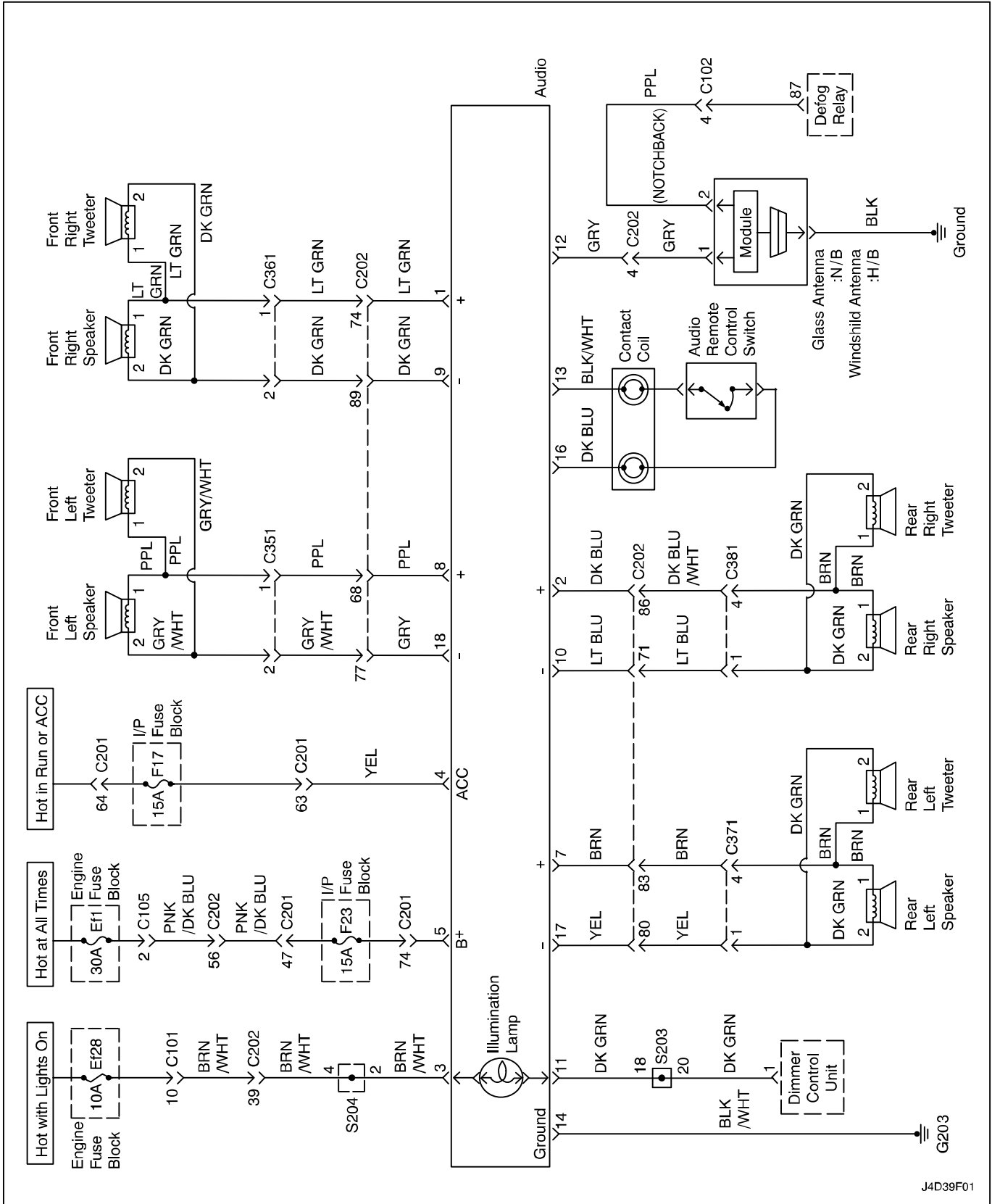
## SPECIFICATIONS

### FASTENER TIGHTENING SPECIFICATIONS

Application	N•m	Lb-Ft	Lb-In
Door Speaker Screws	2	–	18
Rear Speaker Screws	2	–	18
Glass Antenna Screws	2	–	18

# SCHEMATIC AND ROUTING DIAGRAMS

## AUDIO SYSTEM CIRCUIT



# DIAGNOSIS

## STEREO CASSETTE AM/FM RADIO

### CD Player Inoperative, AM/FM Functions OK

Step	Action	Value(s)	Yes	No
1	Using a good-quality CD, determine if the CD player performs poorly or is inoperative. Does the CD player function correctly?	–	Go to <i>Step 2</i>	Go to <i>Step 3</i>
2	Inform the customer that the problem is with the CD, not the CD player. Has the customer been informed?	–	System OK	–
3	Check the CD player for obstructions behind the tape door. Is an obstruction found?	–	Go to <i>Step 4</i>	Go to <i>Step 6</i>
4	Check to see if the obstruction can be removed. Can the obstruction be removed?	–	Go to <i>Step 5</i>	Go to <i>Step 6</i>
5	Remove the obstruction. Is the repair complete?	–	System OK	–
6	Replace the CD player. Is the repair complete?	–	System OK	–

### AM/FM Cassette Radio Inoperative

Step	Action	Value(s)	Yes	No
1	Check fuses F23 and F17. Are fuses F23 and F17 blown?	–	Go to <i>Step 2</i>	Go to <i>Step 3</i>
2	1. Check for a short circuit and repair it, if necessary. 2. Replace the blown fuses. Is the repair complete?	–	System OK	–
3	1. Use a voltmeter to test for battery voltage at fuse F23. 2. Turn the ignition ON and test for battery voltage at fuse F17. Does the battery voltage match the specified value at fuses F23 and F17?	11–14 v	Go to <i>Step 5</i>	Go to <i>Step 4</i>
4	Repair the power supply circuit to the fuses. Is the repair complete?	–	System OK	–
5	1. Remove the cassette radio. 2. Turn the ignition ON. 3. Use a voltmeter to test for battery voltage at the audio system connector terminals 4 and 5. Does the battery voltage match the specified value at both terminals?	11–14 v	Go to <i>Step 7</i>	Go to <i>Step 6</i>
6	Repair the open circuit between the audio system connector and the fuse. Is the repair complete?	–	System OK	–
7	Use an ohmmeter to test the ground circuit at the audio system connector terminal 14. Does the resistance match the specified value?	$\approx 0 \Omega$	Go to <i>Step 9</i>	Go to <i>Step 8</i>

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Step	Action	Value(s)	Yes	No
8	Repair the open ground circuit between the audio system connector and ground G204. Is the repair complete?	–	System OK	–
9	Replace the cassette radio. Is the repair complete?	–	System OK	–

### Cassette Player Inoperative, AM/FM Functions OK

Step	Action	Value(s)	Yes	No
1	Verify the customer complaint. Does the cassette player destroy tapes?	–	Go to <i>Step 5</i>	Go to <i>Step 2</i>
2	Using a good-quality tape, determine whether the cassette player performs poorly or is inoperative. Does the cassette player perform poorly?	–	Go to <i>Step 5</i>	Go to <i>Step 3</i>
3	Check the cassette player for obstructions behind the tape door. Is an obstruction found?	–	Go to <i>Step 4</i>	Go to <i>Step 8</i>
4	Check to see if the obstruction can be removed using gentle force. Is the obstruction removed?	–	Go to <i>Step 5</i>	Go to <i>Step 6</i>
5	Clean the cassette player head, the capstan, and the drive system. Does the tape play properly?	–	Go to <i>Step 7</i>	Go to <i>Step 6</i>
6	Replace the cassette radio. Is the repair complete?	–	System OK	–
7	Check the cassette player for normal operation. Is the repair complete?	–	System OK	–
8	Advise the owner of a defective or worn tape. Is the repair complete?	–	System OK	–

### AM Does Not Work, FM and Cassette OK

Step	Action	Value(s)	Yes	No
1	Check the audio system for normal operation. Is AM inoperative and the rest of the system operating properly?	–	Go to <i>Step 2</i>	System OK
2	Replace the radio. Is the repair complete?	–	System OK	–

**FM Radio Does Not Work, AM and Cassette OK**

Step	Action	Value(s)	Yes	No
1	1. Unplug the antenna cable from the antenna. 2. Connect the test antenna to the antenna cable. 3. Check the FM radio reception. Is the FM radio operating properly?	–	Go to <i>Step 2</i>	Go to <i>Step 3</i>
2	Replace the antenna. Is the repair complete?	–	System OK	–
3	1. Remove the cassette radio from the instrument panel. 2. Unplug the antenna cable from the audio system. 3. Plug the test cable into the audio system. 4. Check the FM radio reception. Is the FM radio operating properly?	–	Go to <i>Step 4</i>	Go to <i>Step 5</i>
4	Replace the antenna cable between the audio system and the antenna. Is the repair complete?	–	System OK	–
5	Replace the cassette radio. Is the repair complete?	–	System OK	–

**SPEAKERS****Front Speakers Distorted or Inoperative, Rest of Audio System OK**

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition and the radio ON. 2. Check for distorted or inoperative front speakers using the fader and the balance controls with all of the sources (AM, FM, tape, CD). Are the front speakers distorted?	–	Go to <i>Step 2</i>	Go to <i>Step 4</i>
2	Check the speaker and the door area for damage, rattles, or vibration. Is there anything loose or in the way of the speaker causing the distortion?	–	Go to <i>Step 3</i>	Go to <i>Step 4</i>
3	Make the necessary repairs to secure the component causing the distortion. Is the repair complete?	–	System OK	–
4	1. Remove the front speakers and disconnect the speaker connector. 2. Using an ohmmeter, test the speaker wires for a short to ground. Does the ohmmeter show the specified value?	$\infty$	Go to <i>Step 6</i>	Go to <i>Step 5</i>
5	Repair the short circuit between the front speaker connector and the radio connector. Is the repair complete?	–	System OK	–
6	Substitute a known good speaker for the speaker causing the distortion. Is the distortion eliminated?	–	Go to <i>Step 7</i>	Go to <i>Step 8</i>

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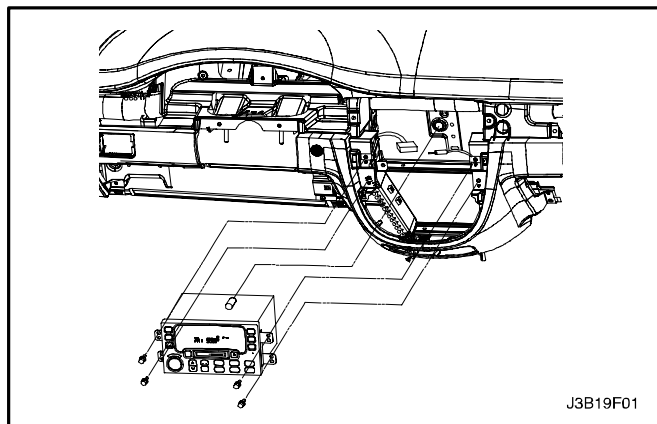
Step	Action	Value(s)	Yes	No
7	Replace the speaker. Is the repair complete?	–	System OK	–
8	Replace the cassette radio. Is the repair complete?	–	System OK	–

### Rear Speakers Distorted or Inoperative, Rest of Audio System OK

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition and the radio on. 2. Check for distorted or inoperative rear speakers using the fader and the balance controls with all the of the sources (AM, FM, tape, CD). Are the rear speakers distorted?	–	Go to <i>Step 2</i>	Go to <i>Step 4</i>
2	Check the speakers, the rear deck, and the trunk area for damage, rattles, or vibration. Is there anything loose or in the way of the speaker causing the distortion?	–	Go to <i>Step 3</i>	Go to <i>Step 4</i>
3	Make the necessary repairs to secure the component causing the distortion. Is the repair complete?	–	System OK	–
4	1. Disconnect the rear speakers. 2. Using an ohmmeter, test the speaker wires for a short to ground. Does the ohmmeter show the specified value?	$\infty$	Go to <i>Step 6</i>	Go to <i>Step 5</i>
5	Repair the short circuit between the rear speaker connector and the radio connector. Is the repair complete?	–	System OK	–
6	Substitute a known good speaker for the speaker causing the distortion. Is the distortion eliminated?	–	Go to <i>Step 7</i>	Go to <i>Step 8</i>
7	Replace the speaker. Is the repair complete?	–	System OK	–
8	Replace the audio system. Is the repair complete?	–	System OK	–

# MAINTENANCE AND REPAIR

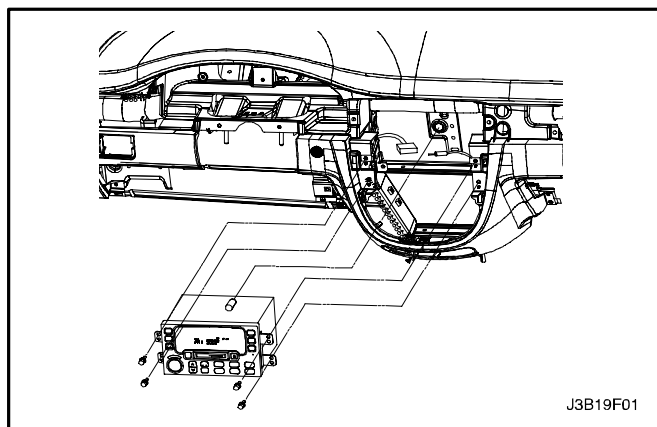
## ON-VEHICLE SERVICE



### STEREO CASSETTE AM/FM RADIO

#### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the center molding. Refer to *Section 9E, Instrumentation/Drive Information*.
3. Remove the screws and the audio system.
4. Disconnect the audio system electrical connectors.



#### Installation Procedure

1. Connect the audio system electrical connectors.

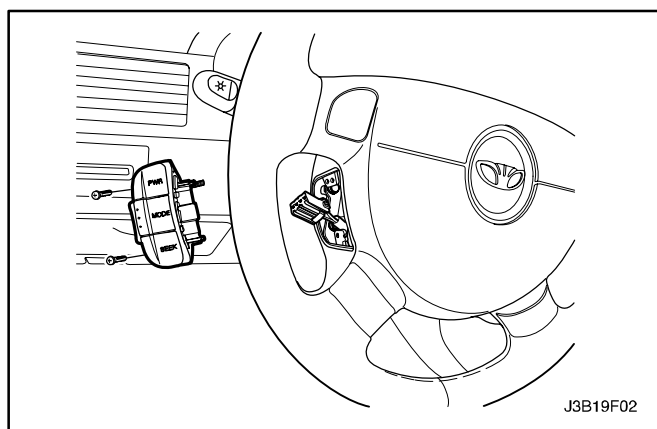
**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

2. Install the audio system with the screws.

#### Tighten

Tighten the audio system screws to 4 N•m (35 lb-in).

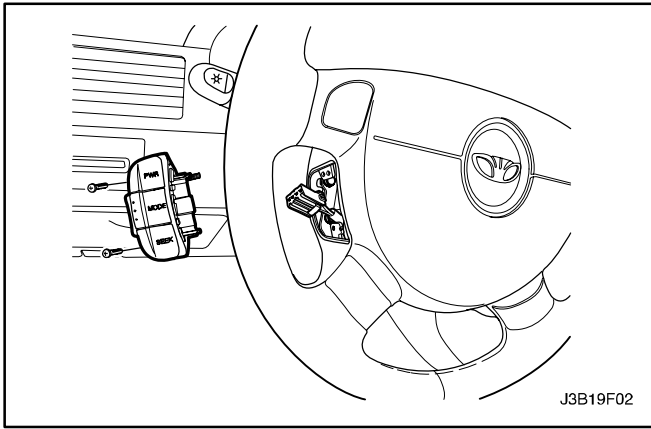
3. Install the center molding. Refer to *Section 9E, Instrumentation/Drive Information*.
4. Connect the negative battery cable.



### AUDIO REMOTE CONTROLLER

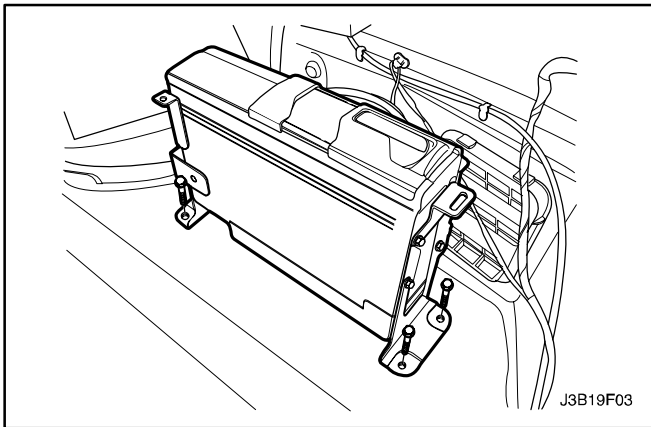
#### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the screws and the audio remote controller.



### Installation Procedure

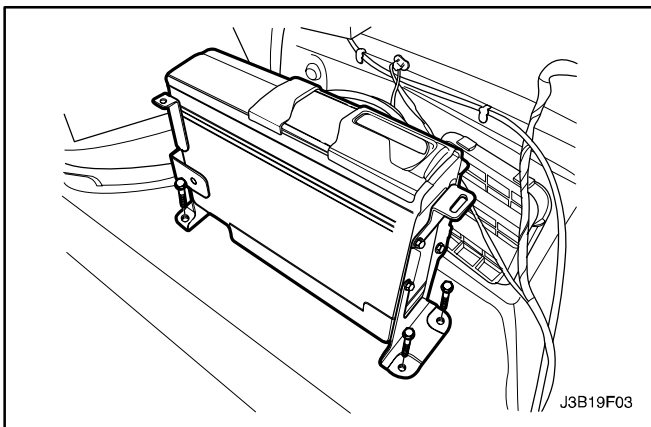
1. Install the audio remote controller with the screws.
2. Connect the negative battery cable.



### NOTCHBACK CD CHANGER

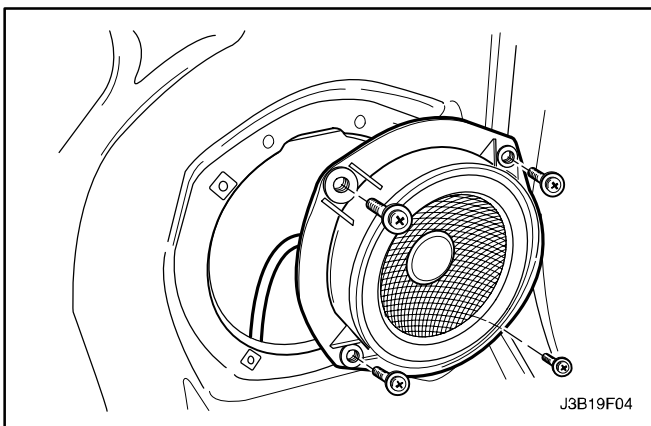
#### Removal Procedure

1. Disconnect the negative battery cable.
2. Disconnect the CD changer electrical connector.
3. Remove the bolts and the CD changer.



#### Installation Procedure

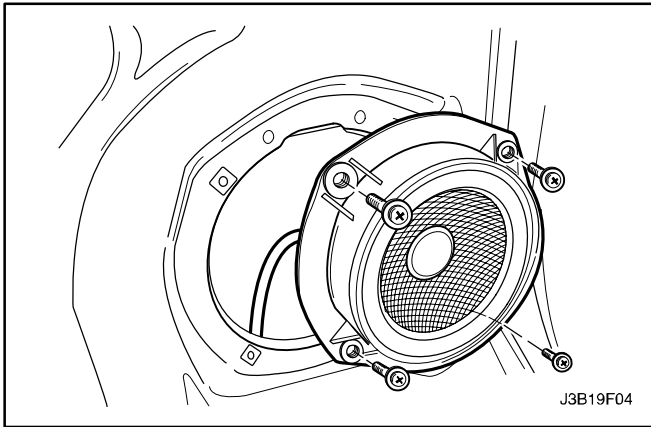
1. Install the CD changer with the bolts.
2. Connect the CD changer electrical connector.
3. Connect the negative battery cable.



### DOOR SPEAKERS

#### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the door trim panel. Refer to *Section 9G, Interior Trim*.
3. Disconnect the electrical connector.
4. Remove the screws and the door speaker.



## Installation Procedure

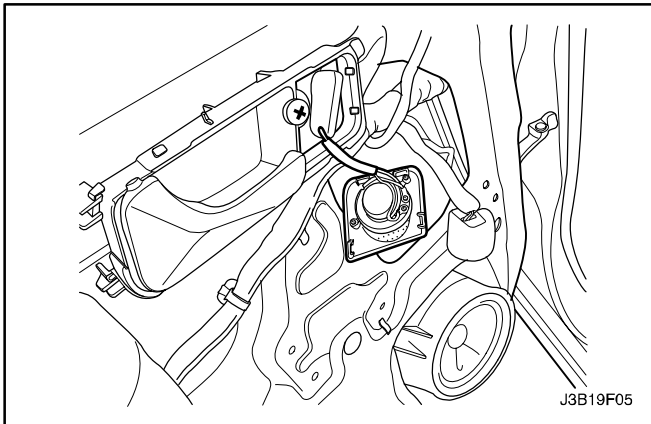
**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

1. Install the door speaker with the screws.

### Tighten

Tighten the door speaker screws to 2 N•m (18 lb-in).

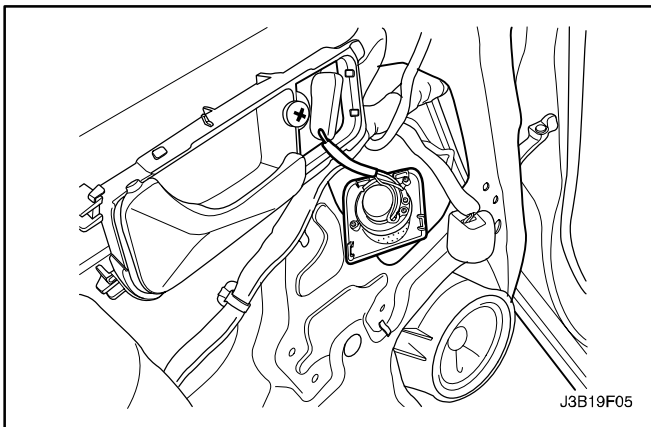
2. Connect the electrical connector.
3. Install the door trim panel. Refer to *Section 9G, Interior Trim*.
4. Connect the negative battery cable.



## TWEETER SPEAKERS

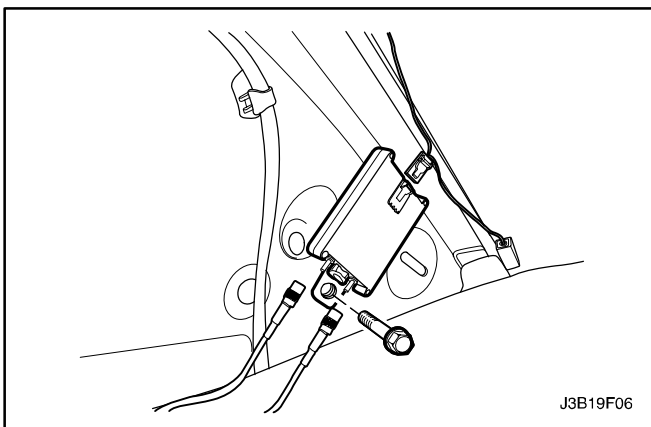
### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the tweeter speaker by prying the tweeter speaker out of the door trim panel.
3. Disconnect the electrical connector.



### Installation Procedure

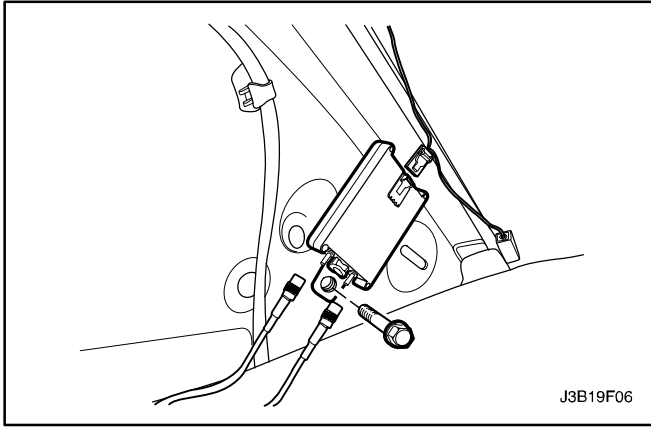
1. Connect the electrical connector.
2. Install the tweeter speaker into the door trim panel.
3. Connect the negative battery cable.



## GLASS ANTENNA MODULE

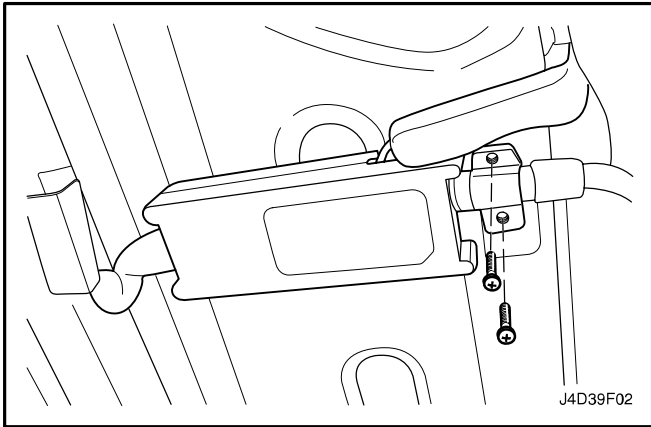
### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the C-pillar trim panel. Refer to *Section 9G, Interior Trim*.
3. Disconnect the electrical connector.
4. Remove the screws and the glass antenna module.



### Installation Procedure

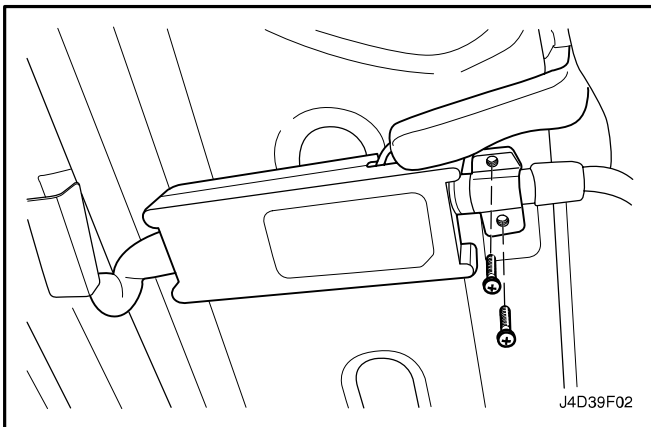
1. Install the glass antenna module with the screws.
2. Connect the electrical connectors.
3. Install the C-pillar trim panel. Refer to *Section 9G, Interior Trim*.
4. Connect the negative battery cable.



### HATCHBACK WINDSHIELD ANTENNA MODULE

#### Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the A-pillar trim panel. Refer to *Section 9G, Interior Trim*.
3. Remove the sun visors with vanity mirror. Refer to *Section 9Q, Roof*.
4. Remove the formed headliner. Refer to *Section 9Q, Roof*.
5. Disconnect the electrical connector.
6. Remove the screws and the windshield antenna module.



#### Installation Procedure

1. Install the windshield antenna module with screws.
2. Connect the electrical connector.
3. Install the formed head liner. Refer to *Section 9Q, Roof*.
4. Install the sun visors with vanity mirror. Refer to *Section 9Q, Roof*.
5. Install the A-Pillar trim panel. Refer to *Section 9G, Interior Trim*.
6. Connect the negative battery cable.

## GENERAL DESCRIPTION AND SYSTEM OPERATION

### STEREO CASSETTE AM/FM RADIO

There are three audio systems offered. The stereo digital logic cassette AM/FM radio with electronic tape ejection is offered in standard and deluxe models. Both models feature RDS (radio data system) which automatically selects the best station within the chain of RDS stations currently being listened to. A trunk mounted CD changer is also available.

### AUDIO SECURITY SYSTEM

The audio security system is activated whenever the audio system circuit is disconnected from the battery. A four-digit security code must be entered in order for the audio system to resume functioning. The security code is stamped on a card located in the vehicle (usually in the glove box). The following security code entering procedure must be used to deactivate the audio security system:

1. After connecting the audio security system to the battery, "CODE" will flash on the display.
2. Enter the proper security number into the unit, using the preset buttons No. 1 through 8.
3. For example, if the security number is "1234":
  - a. Press the preset button No. 1. "CODE" will disappear and "1 – – –" will appear on the display.
  - b. Press the preset button No. 2, and "12 – –" will appear.
  - c. Press the preset button No. 3, and "123–" will appear.
  - d. Press the preset button No. 4, and "1234" will appear and flash three times.

4. The audio system will function and will transfer to the radio.

If the incorrect security number is entered into the unit, "Err" will appear followed by "CODE" and there will be several audible beeps. If this happens, repeat the security entering procedure beginning with Step 2.

### SPEAKERS

All audio systems use eight speakers, four speakers and four tweeters mounted in each door.

### TAPE PLAYER AND CASSETTE CARE

The head and the capstan are the two parts of the tape player that should be cleaned. This service should be performed every 100 hours of cassette operation.

To clean the head and the capstan, use a cotton swab dipped in rubbing alcohol.

A cassette cleaning kit may also be used to clean the head and the capstan. Follow the cleaning kit instructions to clean the tape player.

Do not touch the tape head with magnetized tools. If the head becomes magnetized, it will degrade cassettes played in the player. No service is performed on the cassettes. The cassette manufacturer handles warranties of the cassettes. Store cassettes away from extreme heat and direct sunlight.

### COMPACT DISC CARE

Handle discs carefully. Store the discs in protective cases away from the sun, heat, and dust. If the surface is soiled, dampen a clean, soft cloth in a solution of mild neutral detergent and wipe the disc clean.