

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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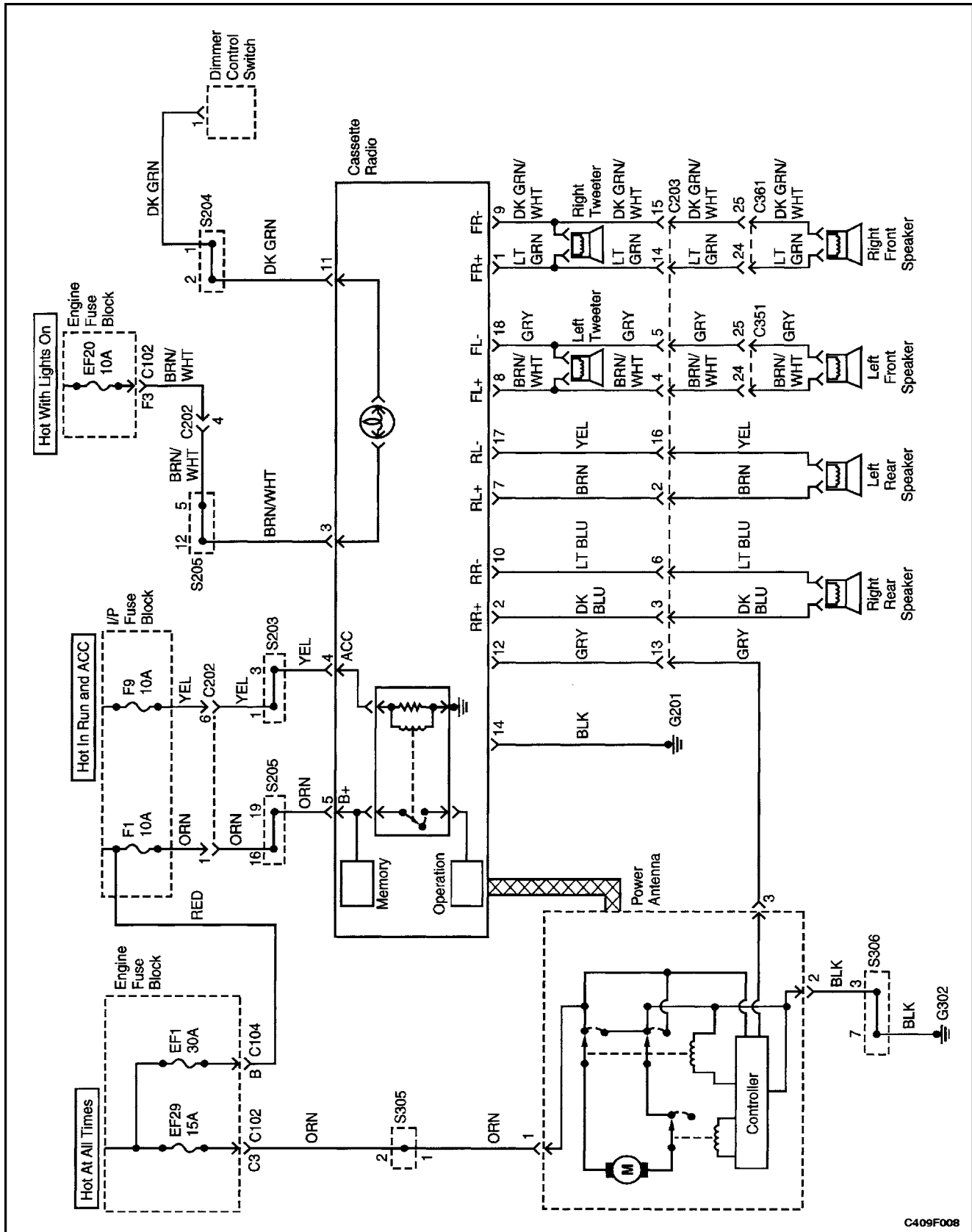
SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Application	N•m	Lb-Ft	Lb-In
Antenna Cap Nut	2.5	–	22
Antenna Motor Nuts	4	–	35
Audio System Screws	4	–	35
Front Door Speaker Screws	4	–	35
Rear Speaker Screws	2	–	18

SCHEMATIC AND ROUTING DIAGRAMS

AUDIO SYSTEM CIRCUIT



DIAGNOSIS

STEREO CASSETTE AM/FM RADIO

AM/FM Cassette Radio Inoperative

Step	Action	Value(s)	Yes	No
1	Check fuses EF1, F1, and F9. Are fuses EF1, F1, and F9 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 fuses EF1 and F1. 2. Turn the ignition ON and test for battery voltage at fuse F9. Is the voltage equal to the specified value at fuses EF1, F1, and F9?	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. Is the battery voltage equal to 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 resistance between ground and terminal 14 of the audio system connector. Is the resistance equal to the specified value?	0 Ω	Go to <i>Step 9</i>	Go to <i>Step 8</i>
8	Repair the open ground circuit between the audio system connector and ground. Is the repair complete?		System OK	
9	Replace the audio system. Is the repair complete?		System OK	

Cassette Player Inoperative, AM/FM Functions OK

Step	Action	Value(s)	Yes	No
1	Verify the customer's 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>

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Step	Action	Value(s)	Yes	No
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 audio system. 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	

FM Does Not Work, AM and Cassette OK

Step	Action	Value(s)	Yes	No
1	Check the audio system for normal operation. Is FM 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	

AM Radio Does Not Work, FM 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 AM radio reception. Is the AM 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 audio system from the instrument panel. 2. Unplug the antenna cable from the audio system. 3. Plug the test antenna into the audio system. 4. Check the AM radio reception. Is the AM 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 audio system. 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 the distortion caused by anything loose or in the way of the speaker?		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?		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>
7	Replace the speaker. Is the repair complete?		System OK	
8	Replace the audio system. 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 the distortion caused by anything loose or in the way of the speaker?		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 short to ground. Does the ohmmeter show the specified value?		Go to <i>Step 6</i>	Go to <i>Step 5</i>

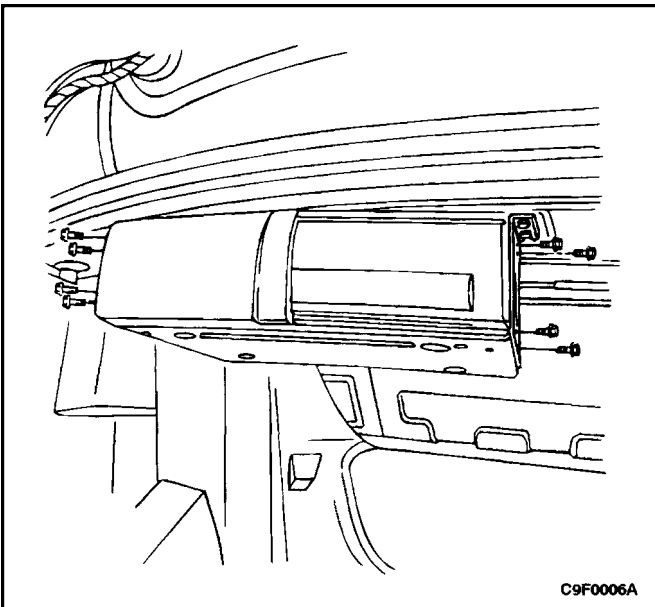
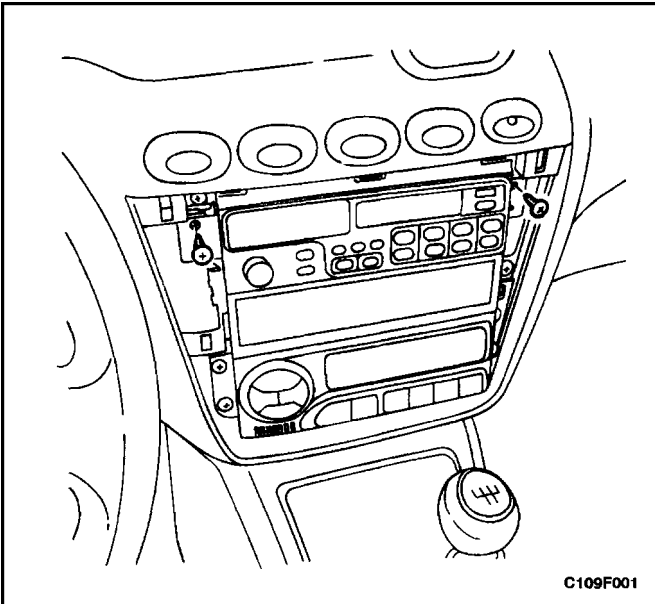
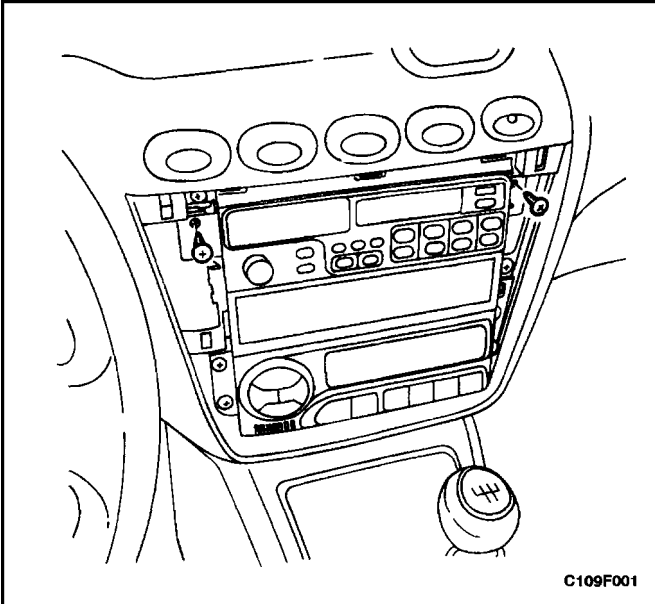
Step	Action	Value(s)	Yes	No
5	Repair the short circuit between the rear speaker connector and the radio connector. Is the repair complete?		System OK	
6	Substitute a known good speaker for the speaker causing the distortion. Is the distortion eliminated?		Go to <i>Step 7</i>	Go to <i>Step 8</i>
7	Replace the speaker. Is the repair complete?		System OK	
8	Replace the audio system. Is the repair complete?		System OK	

ANTENNA

Power Antenna Does Not Work

Step	Action	Value(s)	Yes	No
1	Check fuse EF29. Is fuse EF29 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 fuse. Is the repair complete?		System OK	
3	Use a voltmeter to test for battery voltage at fuse EF29. Is the battery voltage equal to the specified value?	11–14 v	Go to <i>Step 5</i>	Go to <i>Step 4</i>
4	Repair the open power supply circuit to fuse EF29. Is the repair complete?		System OK	
5	Use a voltmeter to test for battery voltage at power antenna connector terminal 1. Is the battery voltage equal to the specified value?	11–14 v	Go to <i>Step 7</i>	Go to <i>Step 6</i>
6	Repair the open circuit between the power antenna connector terminal 1 and fuse EF29. Is the repair complete?		System OK	
7	Use an ohmmeter to test the resistance between ground and the power antenna connector terminal 2. Is the resistance equal to the specified value?	$\approx 0 \Omega$	Go to <i>Step 9</i>	Go to <i>Step 6</i>
8	Repair the open ground circuit between the power antenna connector terminal 2 and ground. Is the repair complete?		System OK	
9	1. Turn the ignition ON. 2. Turn the radio ON. 3. Use a voltmeter to test for battery voltage at the power antenna connector terminal 3. Is the voltage equal to the specified value?	11–14 v	Go to <i>Step 10</i>	Go to <i>Step 11</i>
10	Replace the power antenna. Is the repair complete?		System OK	
11	1. Turn the ignition ON. 2. Turn the radio ON. 3. Backprobe with a voltmeter to test for battery voltage at terminal 12 of the radio connector. Is the battery voltage equal to the specified value?	11–14 v	Go to <i>Step 12</i>	Go to <i>Step 13</i>

Step	Action	Value(s)	Yes	No
12	Repair the open circuit between the radio connector and the power antenna connector terminal 3. Is the repair complete?		System OK	
13	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. Disconnect the negative battery cable.
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

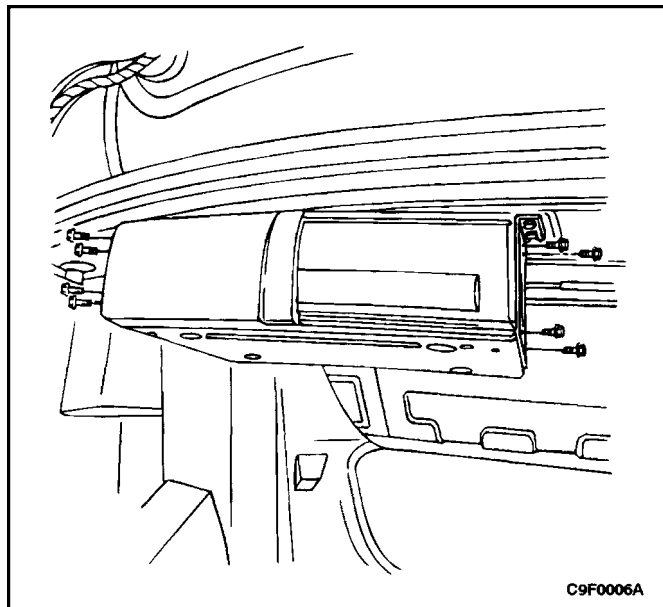
Tighten the audio system screws to 4 N•m (35 lb-in).

3. Install the audio system trim plate.
4. Connect the negative battery cable.

CD CHANGER

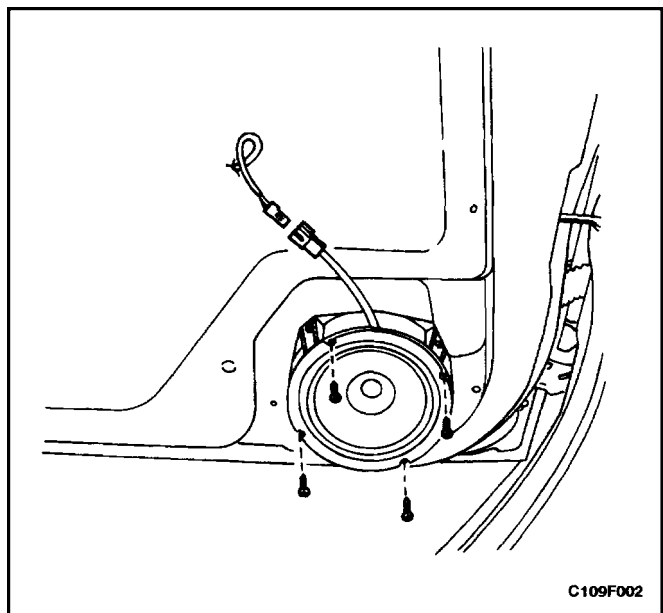
Removal Procedure

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



Installation Procedure

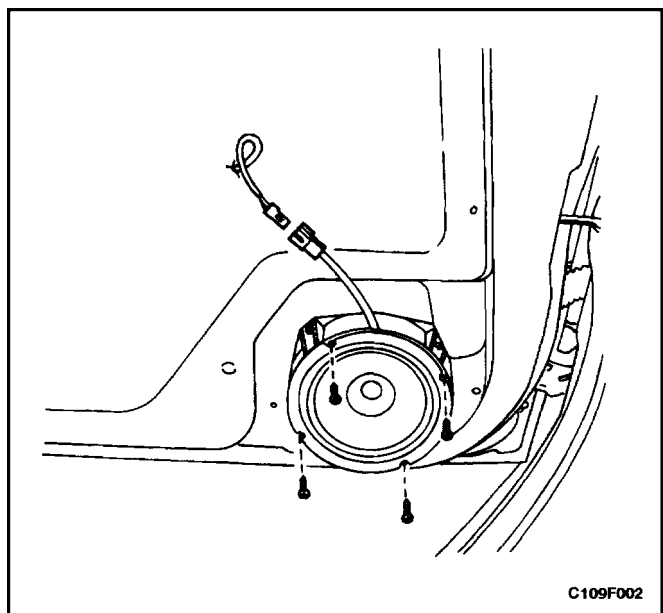
1. Install the CD changer with the bolts.
2. Connect the CD changer electrical connector.
3. Connect the negative battery cable.



FRONT DOOR SPEAKERS

Removal Procedure

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



Installation Procedure

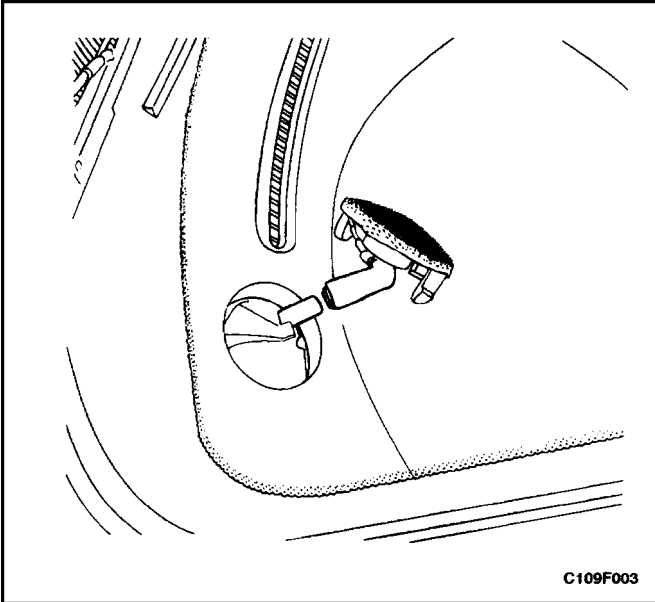
Notice : Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

1. Install the front door speaker with the screws.

Tighten

Tighten the front door speaker screws to 4 N•m (35 lb-in).

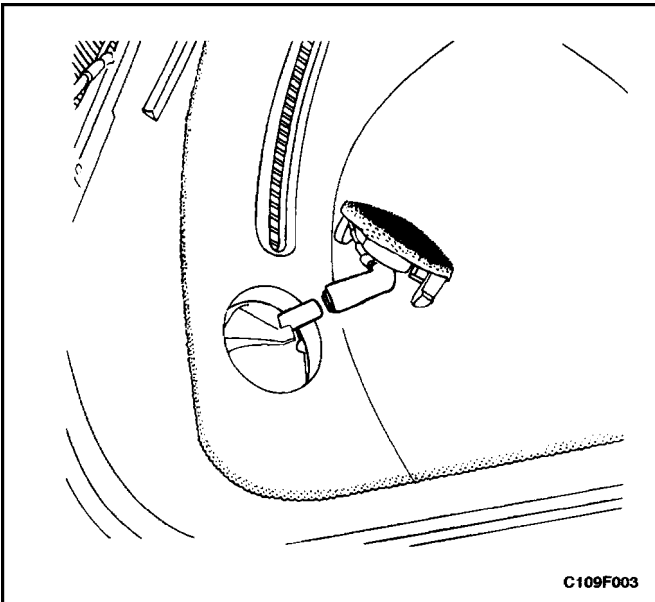
2. Connect the electrical connector.
3. Install the front door trim panel. Refer to *Section 9G, Interior Trim*.
4. Connect the negative battery cable.



TWEETER SPEAKERS

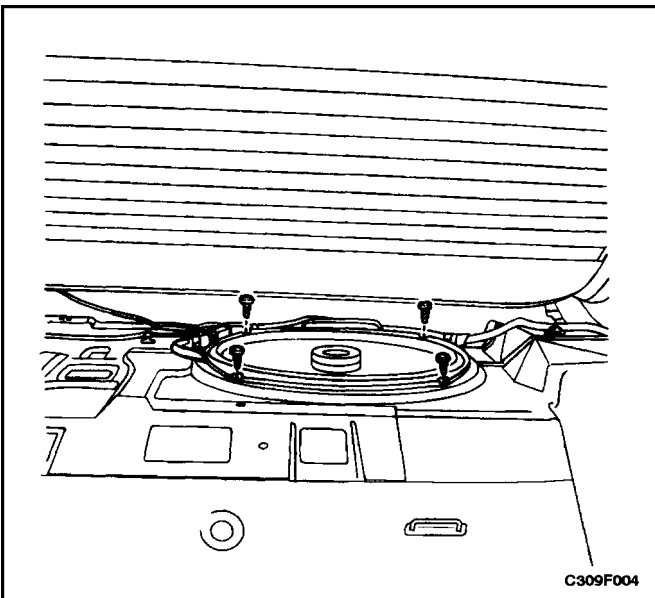
Removal Procedure

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



Installation Procedure

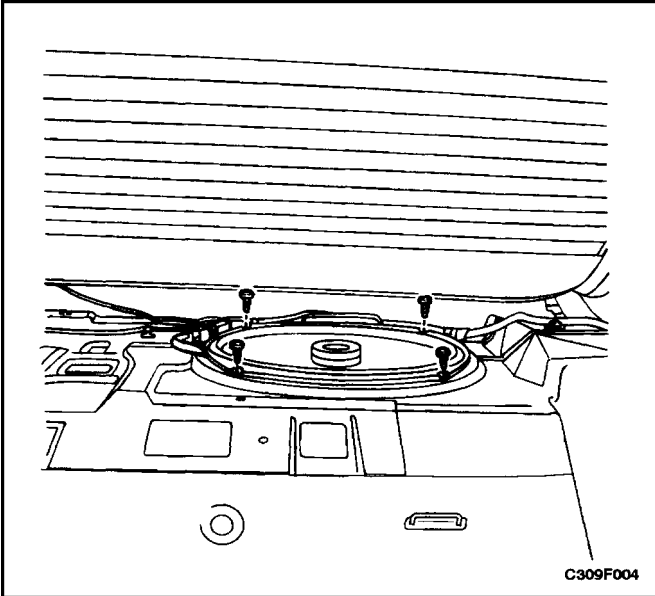
1. Connect the electrical connector.
2. Install the tweeter speaker into the instrument panel.
3. Connect the negative battery cable.



REAR SPEAKERS

Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the deck lid sill plate cover. Refer to Section 9G, Interior Trim.
3. Disconnect the electrical connector.
4. Remove the screws and the rear speakers.



Installation Procedure

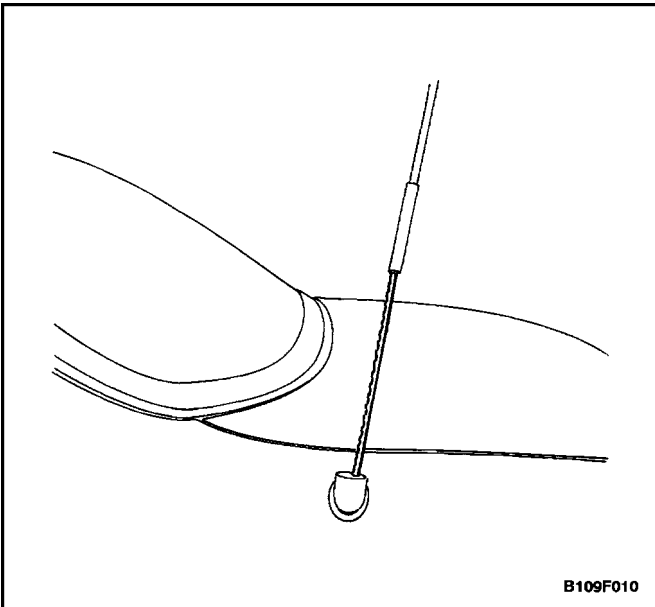
Notice : Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

1. Install the rear speakers with the screws.

Tighten

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

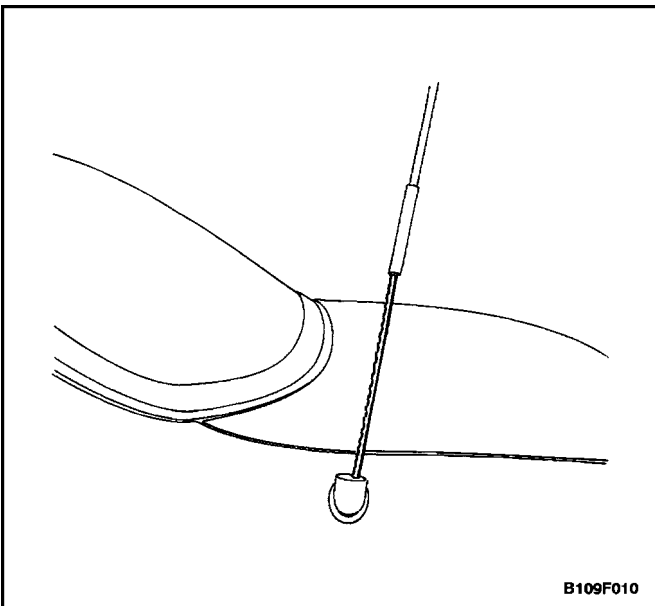
2. Connect the electrical connector.
3. Install the deck lid sill plate cover. Refer to *Section 9G, Interior Trim*.
4. Connect the negative battery cable.



POWER ANTENNA MAST

Removal Procedure

1. Remove the antenna cap nut and the rubber grommet.
2. Turn on the radio and remove the antenna mast and the cable.
3. Turn off the radio.

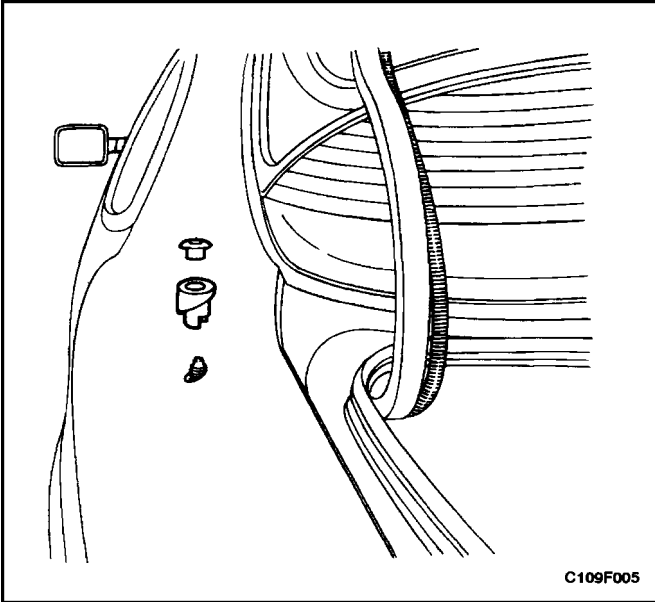


Installation Procedure

1. Install the antenna mast with the teeth of the cable facing the front of the vehicle.
2. Install the rubber grommet and the antenna cap nut.

Tighten

Tighten the antenna cap nut to 2.5 N•m (22 lb-in).

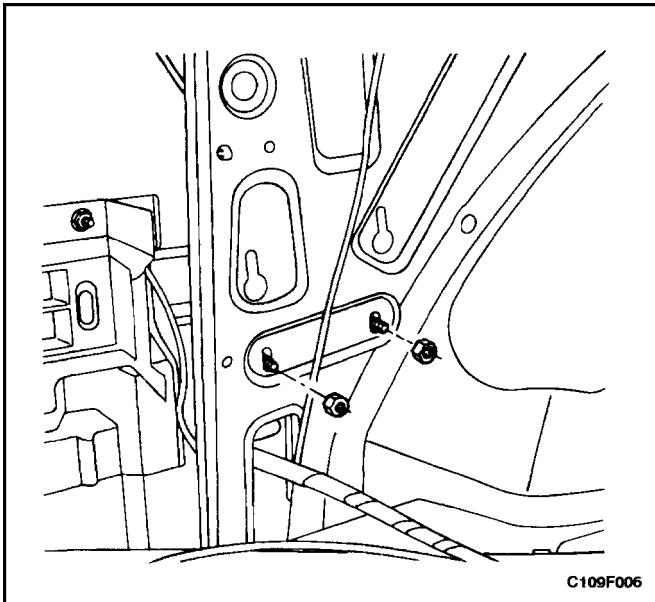


POWER ANTENNA MOTOR/MANUAL ANTENNA

(Power Antenna Shown, Manual Antenna Similar)

Removal Procedure

1. Disconnect the negative battery cable.
2. Remove the luggage compartment wheelhouse trim panel. Refer to *Section 9G, Interior Trim*.
3. Remove the antenna cap nut and the rubber grommet.
4. Disconnect the electrical connector and the drain hose from the antenna motor.
5. Remove the nuts and the antenna motor, (if equipped).



Installation Procedure

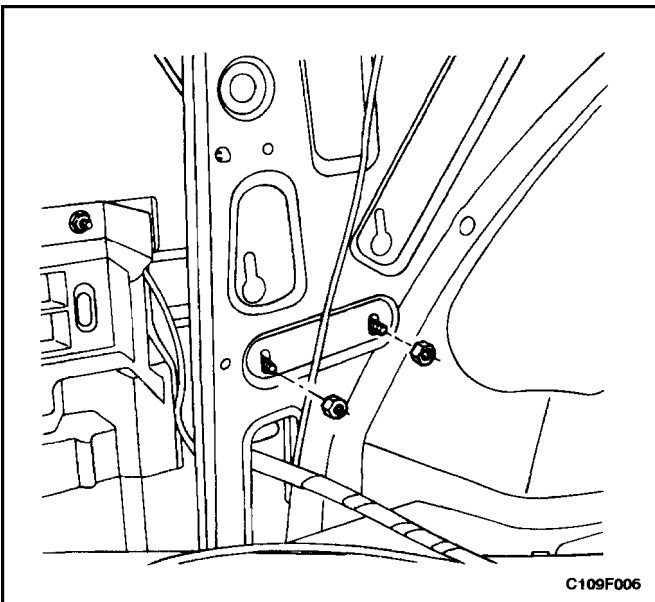
1. Connect the electrical connector and the drain hose to the antenna motor, (if equipped).

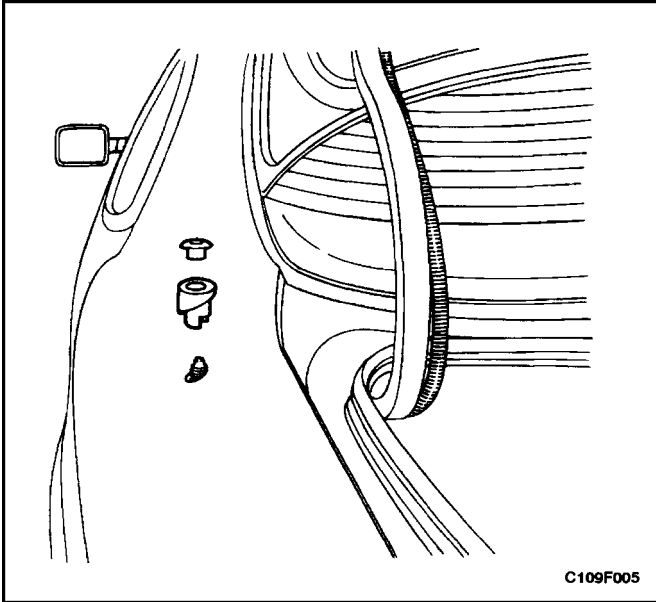
Notice : Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

2. Install the antenna motor with the nuts.

Tighten

Tighten the antenna motor nuts to 4 N•m (35 lb-in).





3. Install the rubber grommet and the antenna cap nut.

Tighten

Tighten the antenna cap nut to 2.5 N•m (22 lb-in).

4. Install the luggage compartment wheelhouse trim panel. Refer to *Section 9G, Interior Trim*.
5. 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 six speakers: two speakers mounted in the front doors, two speakers mounted in the rear deck lid sill plate and two tweeter speakers mounted on the top side of the instrument panel.

MANUAL ANTENNA

The manual antenna is designed to withstand most car washes without damage. The antenna can be adjusted up or down by hand. If the mast becomes slightly bent, it can be straightened by hand. The manual antenna can be replaced if it is severely bent. Manual antennas must be kept clean for good performance.

POWER ANTENNA

The power antenna is controlled by the radio. When the radio is turned on, the antenna is extended. When the radio is turned off, either by turning the power off or by turning the ignition off, the antenna is retracted.

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.