

AUDIO SYSTEMS

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GENERAL INFORMATION

INTRODUCTION

For operation of the factory installed standard and optional radios with cassette or compact disc player, refer to the Sound Systems Operating Instructions in the Owners Manual supplied with the vehicle.

The vehicles are shipped with fuse 13 removed from the junction block. The fuse replaces the ignition-off draw (IOD) connector. Fuse 13 is a ten amp fuse. When removed, it prevents the battery from discharging during storage. For specific wiring and location, refer to Group 8W, Wiring Diagrams.

There are four different system combinations available on the LH models. They are a Base, Midline, Infinity I, and Infinity II system.

BASE SYSTEM

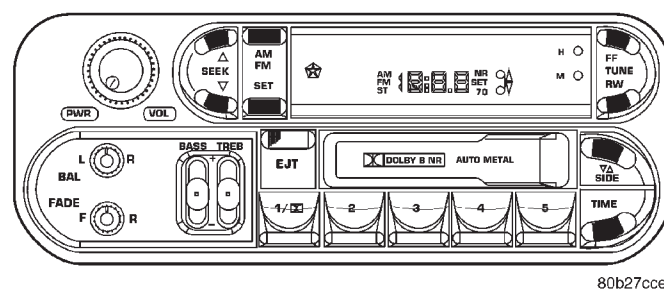
The Base system includes:

- AM-FM stereo radio with cassette player (Fig. 1).
- Two 6.5 inch round, full-range speakers in the front doors.
- Two 6 x 9-inch, full-range speakers mounted in the rear shelf panel.
- Two 2.5 inch, round single-cone speakers in the lower front corners of the front door windows.

MIDLINE SYSTEM

The Midline system includes:

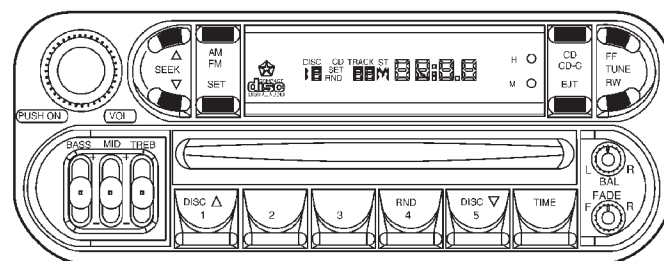
- AM-FM radio with cassette player.
- AM-FM stereo radio with CD player and remote CD changer controls (optional) (Fig. 2).
- A compact 120 watt power amplifier with four output channels.



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Fig. 1 Base Radio

- Two 2.5 inch, round single-cone speakers in the lower front corners of the front door windows.
- Two 6.5 inch, round single-cone speakers in the front doors.
- Two 6 x 9-inch, coaxial speakers mounted in the rear shelf panel.



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Fig. 2 AM/FM Stereo/CD with Remote CD Changer Controls

INFINITY I SYSTEM

The Infinity I system includes:

- AM-FM stereo radio with cassette player and remote CD changer controls (Fig. 3).
- AM-FM stereo radio with CD player and remote CD changer controls (optional).

GENERAL INFORMATION (Continued)

- AM-FM stereo radio with CD and cassette player (optional).
- A 240 watt Infinity power amplifier with six output channels.
- One 2.5 inch, round single-cone, spatial imaging speaker in the center of the instrument panel.
- Two 2.5 inch, coaxial speakers in the lower corners of the front door windows.
- Two 6.5 inch, round single-cone speakers in the front doors.
- Two 6 x 9-inch, single-cone speakers mounted in the rear shelf panel.

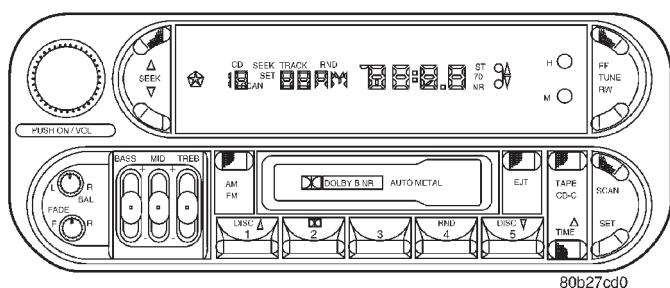


Fig. 3 AM/FM Stereo/Cassette with Remote CD Changer Controls

INFINITY II

The Infinity II system includes:

- AM-FM radio with CD and cassette (Fig. 4).
- A 320 watt power amplifier with nine output channels, one for each speaker location.
- One 2.5 inch, round single-cone, spatial imaging speaker in the center of the instrument panel.
- Two 2.5 inch, coaxial speakers in the lower corners of the front door windows.
- Two 6.5 inch, round single-cone speakers in the front doors.
- Two 6 x 9-inch, single-cone speakers mounted in the rear shelf panel.
- Two 2.5 inch, round speakers mounted in the rear doors.

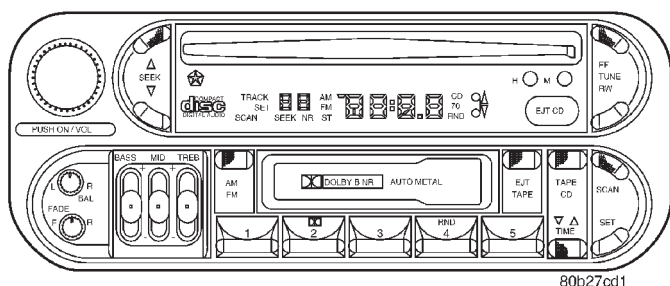


Fig. 4 AM/FM Stereo CD/Cassette Radio

DESCRIPTION AND OPERATION

INTERFERENCE ELIMINATION

Some components used on the vehicles are equipped with a capacitor to suppress radio frequency interference/static.

Capacitors are mounted in various locations internal to the generator, instrument cluster and windshield wiper motor.

A ground strap is mounted from the engine to shock tower. The ground straps should be securely tightened to assure good metal to metal contact. Ground straps conduct very small high frequency electrical signals to ground and require clean large surface area contact. The radio grounds to the cross car beam through pinch brackets that grounds automatically as the radio is installed into the instrument panel.

Radio resistance type spark plug cables in the high tension circuit of the ignition system complete the interference suppression. Faulty or deteriorated spark plug wires should be replaced.

REAR WINDOW ANTENNA

The integrated rear window antenna incorporates the rear window defogger and a electronic module to receive radio signals. The module is located in the right C-pillar behind the trim panel (Fig. 5).

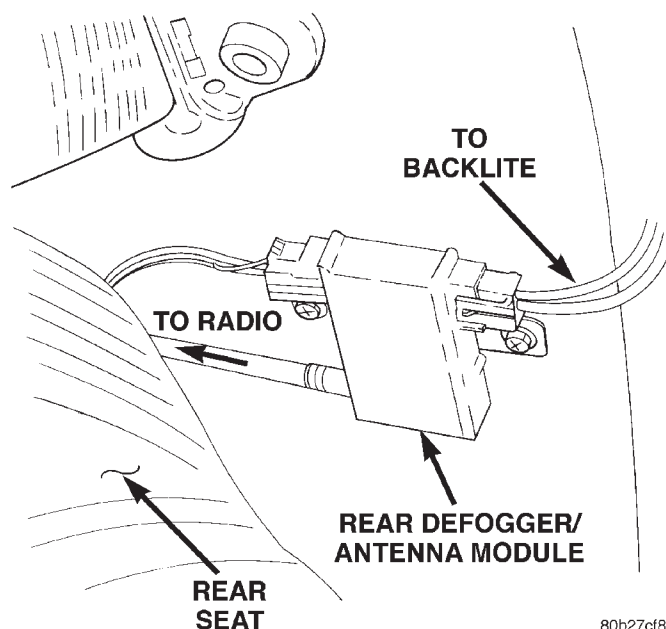


Fig. 5 Rear Defogger/Antenna Module

The FM signal is received via the heated portion of the rear window defogger grid. The AM signal is received via two isolated unheated lines along the top of the rear window.

DESCRIPTION AND OPERATION (Continued)

NOTE: If aftermarket window shading is added, it cannot be of the metallic type. Metallic type window shading can cause poor radio reception.

NOTE: If an accessory cellular phone glass mount antenna is installed, it should only be along the center of the window, not touching any conductive lines in the area indicated.

REMOTE AMPLIFIER**MIDLINE AND INFINITY I SYSTEM**

The amplifier is located in the right front cowl panel (Fig. 6).

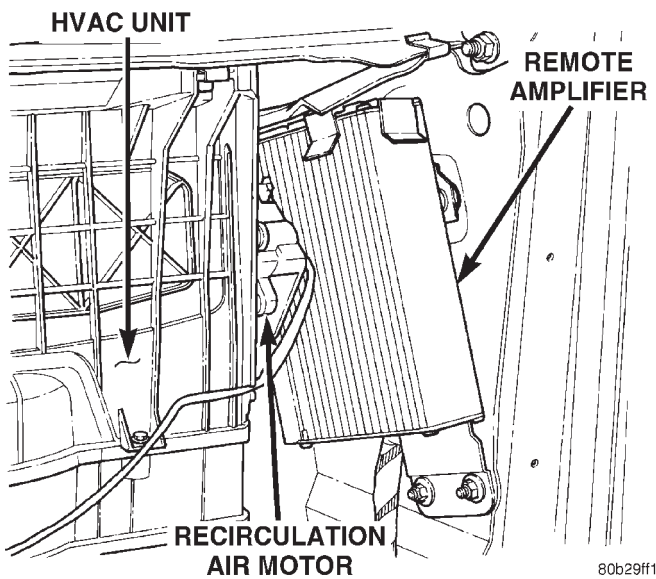


Fig. 6 Remote Amplifier Location

INFINITY II SYSTEM

The amplifier is located beneath the trunk liner covering the right quarter inner panel.

When the radio system is ON, and all or some speakers are not operating or have a noise distortion refer to the diagnostic tests. Refer to Group 8W, Wiring Diagrams for Pin numbers and location.

DIAGNOSIS AND TESTING**AUDIO DIAGNOSTIC TEST PROCEDURES**

CAUTION: The CD player will only operate between approximate temperatures of -23°C and +65°C (-10°F and +145°F).

Whenever a radio malfunction occurs;

(1) First check FUSES in the Junction Block:

- (a) Radio power
- (b) Ignition feed
- (c) Power Amplifier
- (d) Illumination
- (e) Memory feed

NOTE: The vehicles are shipped with the INTERIOR LAMP fuse disconnected.

(2) Verify, the radio wire harness is properly connected before starting normal diagnosis and repair procedures. Refer to Audio Diagnostic Tables and/or Group 8W, Wiring Diagrams.

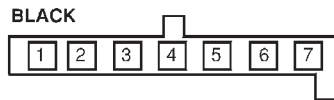
NOTE: If aftermarket accessories:

- Radar detector
- Cellular Telephone
- Other electrical devices

are present, ensure that the devices or the installation of these devices have not negatively effected the vehicle's operation.

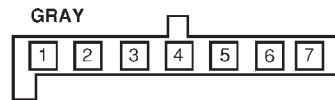
DIAGNOSIS AND TESTING (Continued)

RADIO CONNECTORS

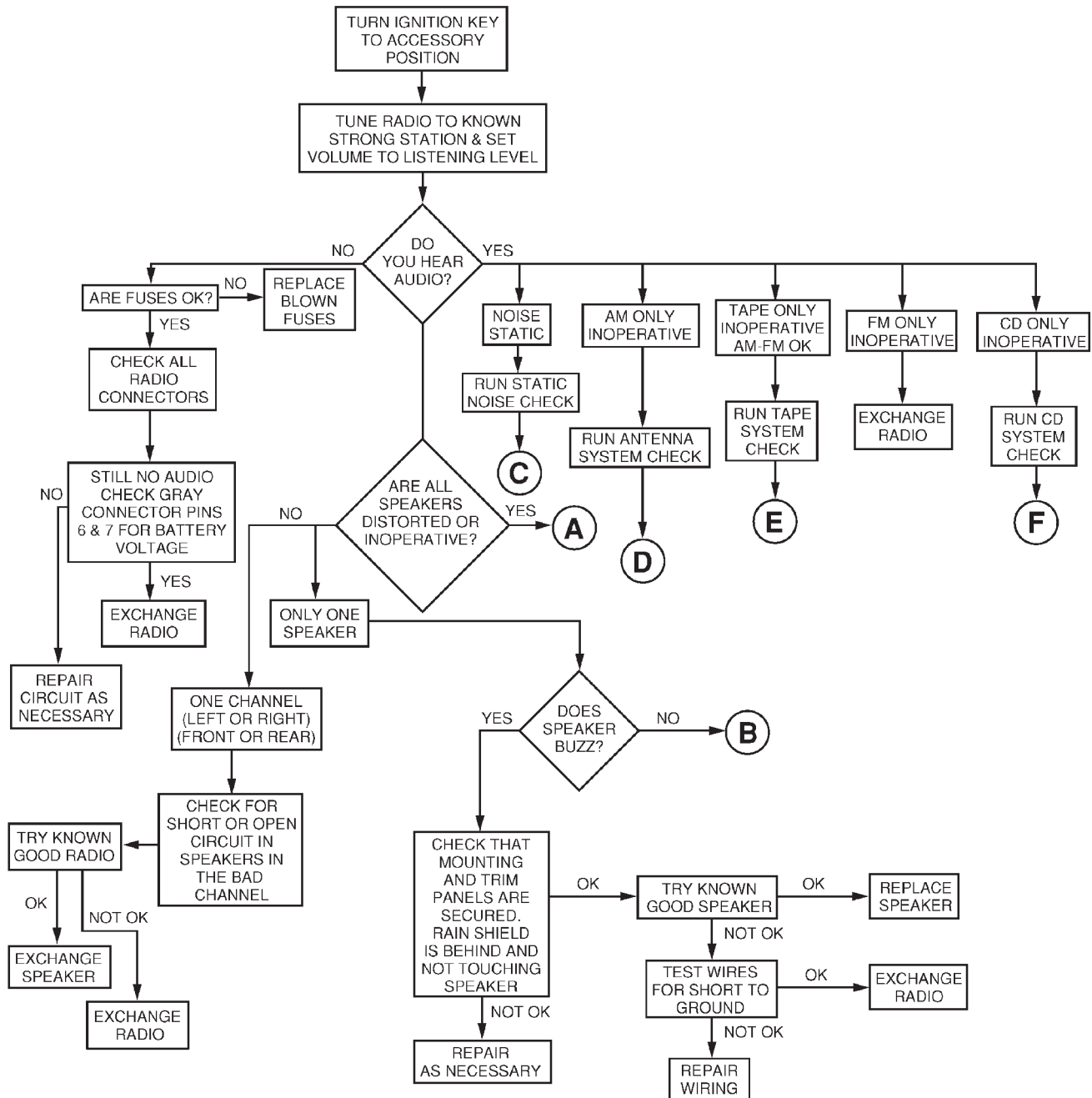


LEGEND:

- 1 - AMP./ANT. ON - OFF SIGNAL
- 2 - LEFT REAR SPEAKER FEED (+)
- 3 - RIGHT REAR SPEAKER FEED (+)
- 4 - LEFT FRONT SPEAKER FEED (+)
- 5 - RIGHT FRONT SPEAKER FEED (+)
- 6 - LEFT REAR SPEAKER RETURN (-)
- 7 - RIGHT REAR SPEAKER RETURN (-)

VIEW FROM
WIRE END

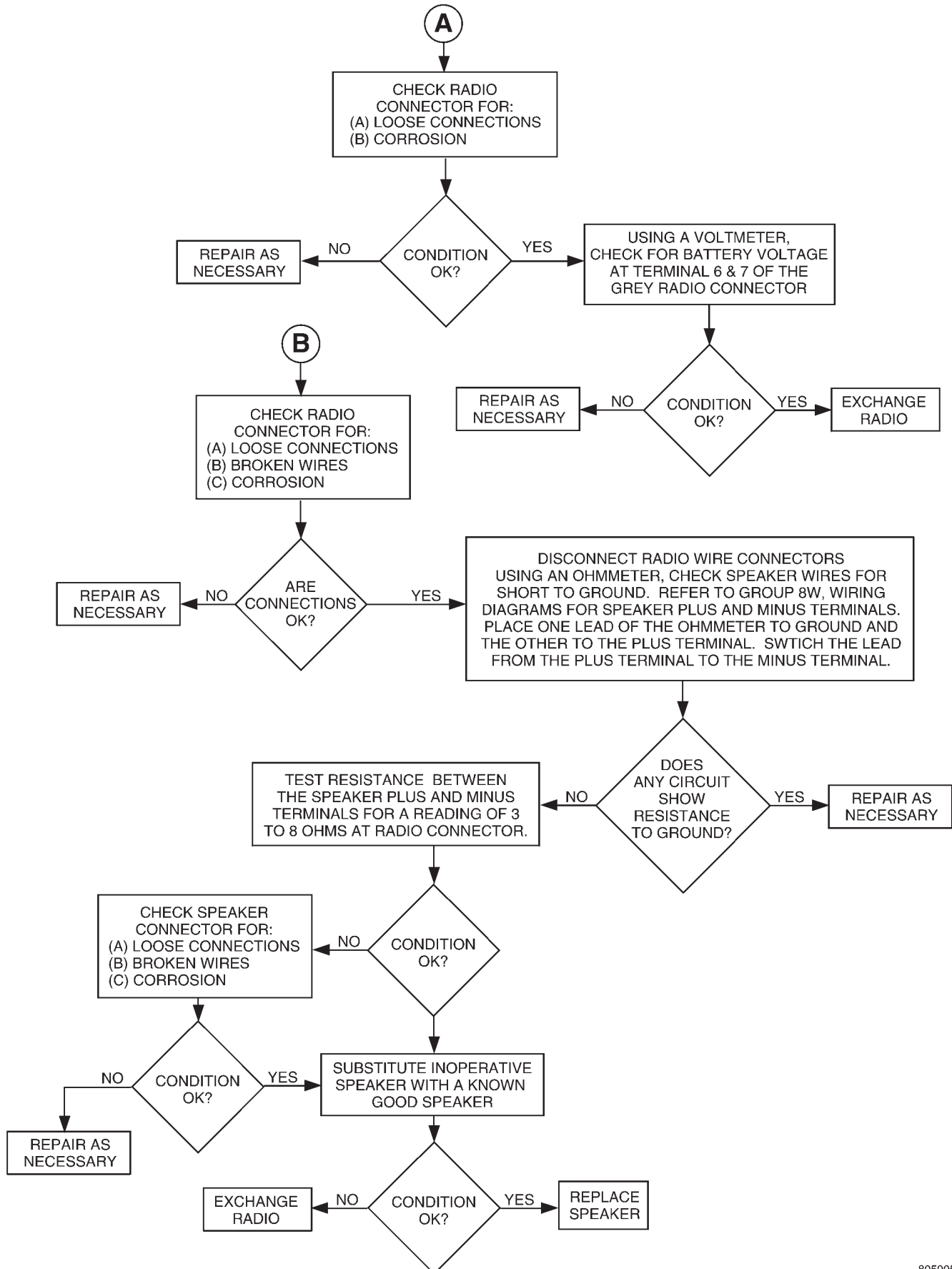
- 1 - RADIO MUTE
- 2 - LEFT FRONT SPEAKER RETURN (-)
- 3 - RIGHT FRONT SPEAKER RETURN (-)
- 4 - MARKER -- (HEAD/PARK LAMPS)
- 5 - DIMMER -- (PANEL, LAMPS, VARIABLE)
- 6 - ACCESSORY -- (SWITCHED B+)
- 7 - BATTERY -- (MEMORY)



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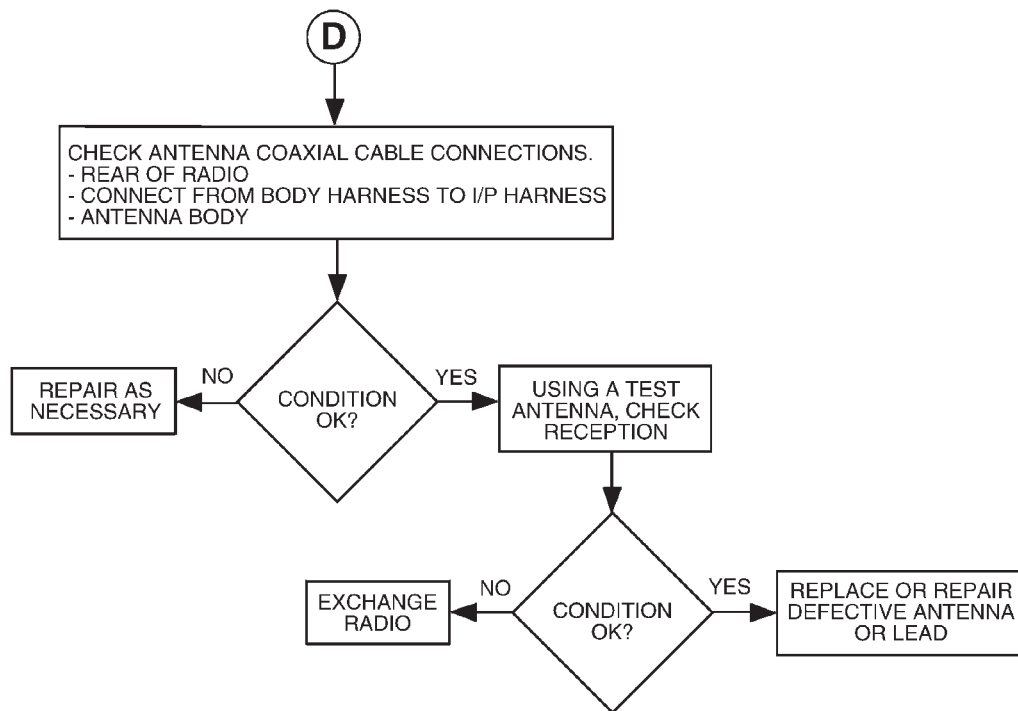
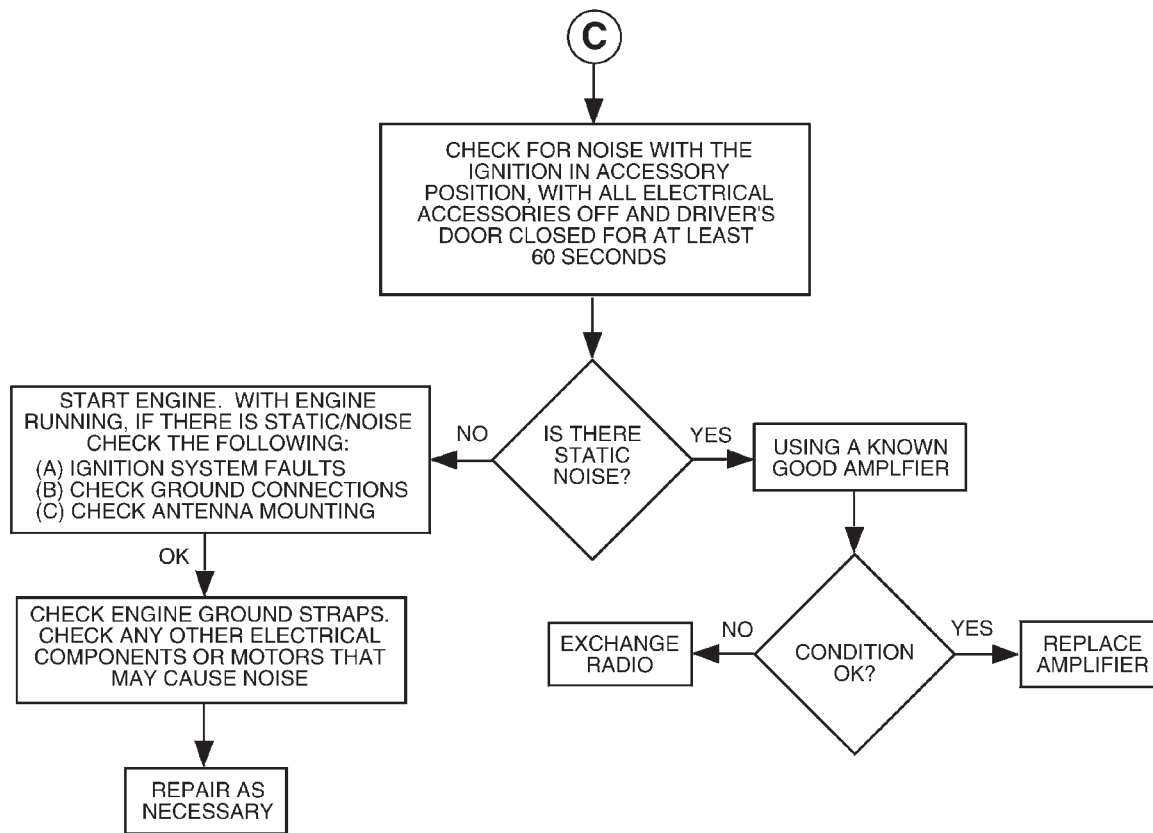
BASE 6 SPEAKER SYSTEM

DIAGNOSIS AND TESTING (Continued)



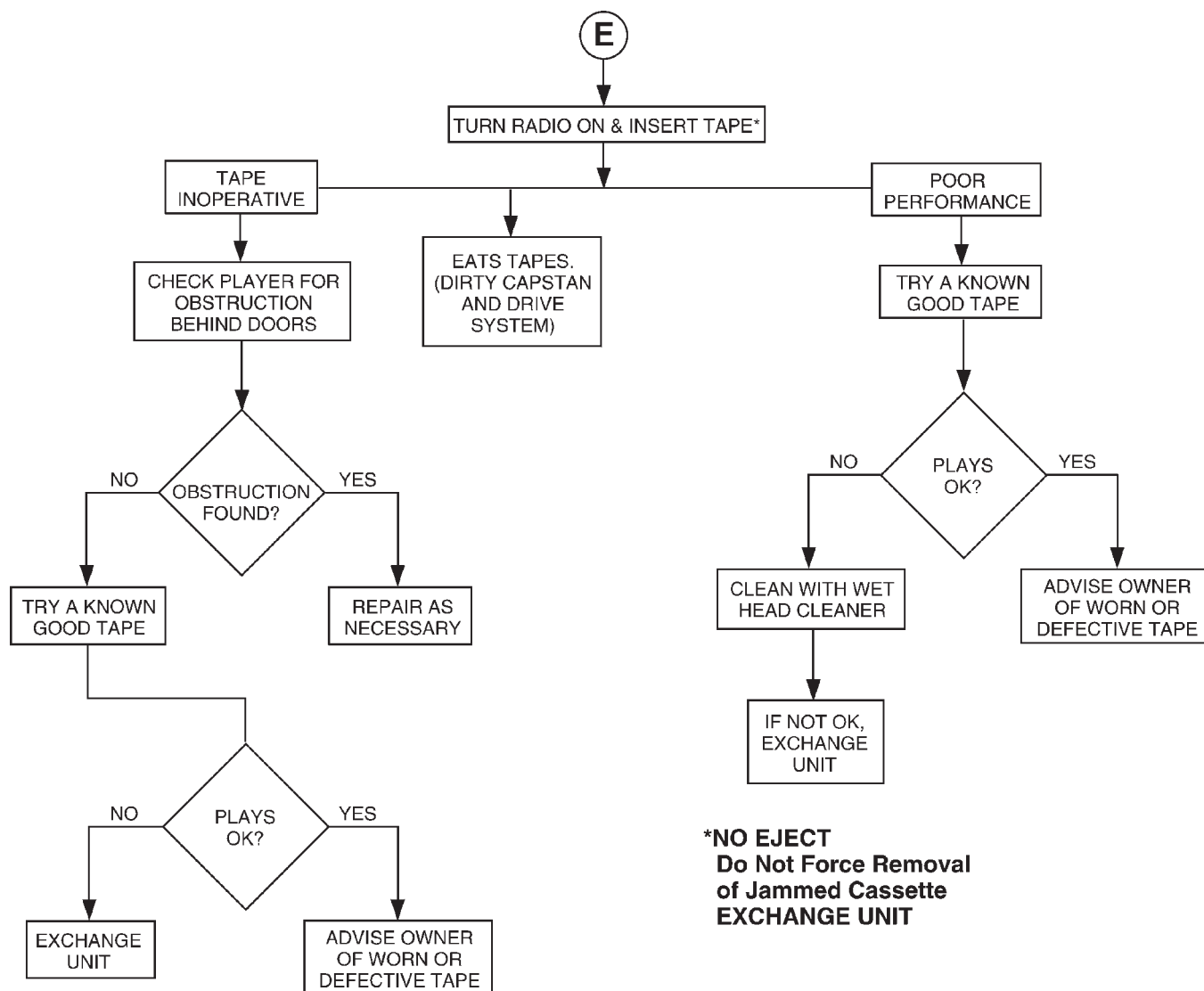
BASE 6 SPEAKER SYSTEM (CONTINUED)

DIAGNOSIS AND TESTING (Continued)

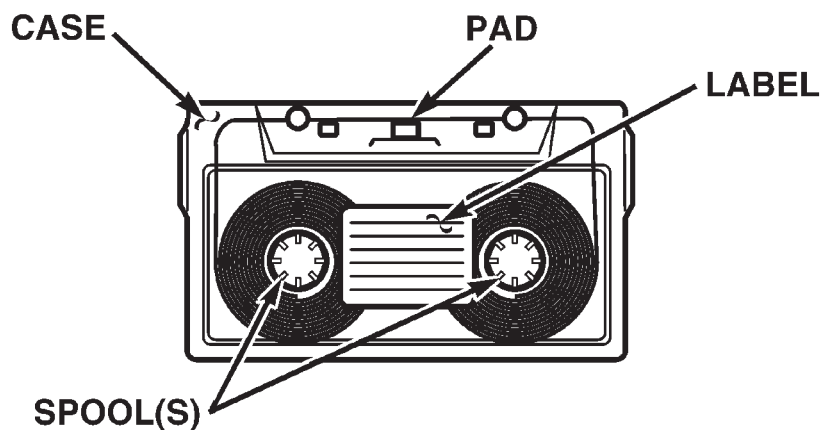


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DIAGNOSIS AND TESTING (Continued)

**CHECK TAPES FOR:**

- **CRACKED OR WARPED CASE**
- **LOOSE LABEL ON CASE**
- **TAPE PAD MISSING**
- **TAPE SPOOL(S) JAMMING**

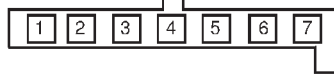


BASE 6 SPEAKER SYSTEM (CONTINUED)

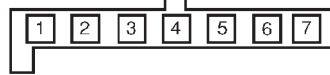
DIAGNOSIS AND TESTING (Continued)

RADIO CONNECTORS

BLACK



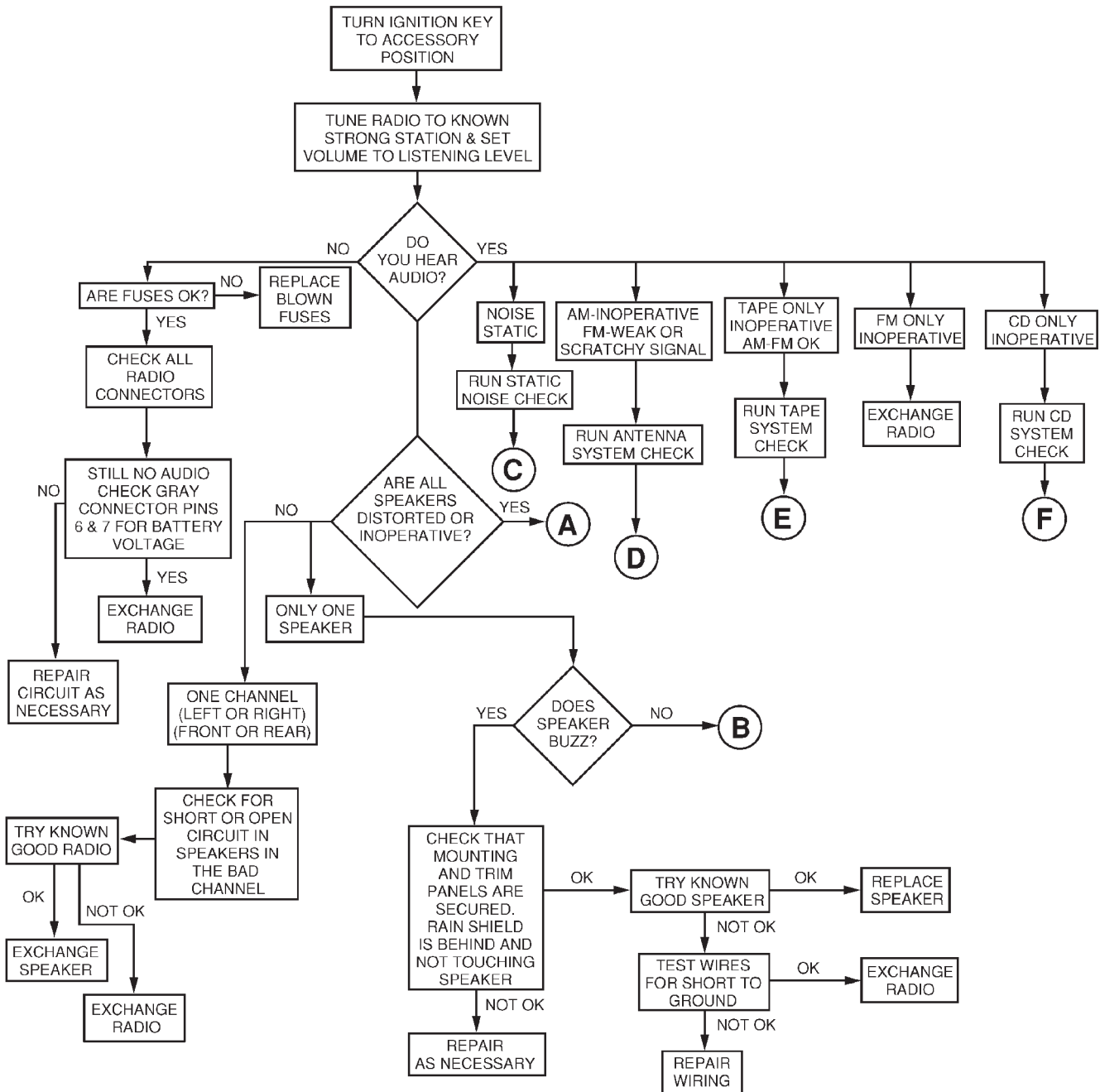
GRAY

VIEW FROM
WIRE END

LEGEND:

- 1 - AMP./ANT. ON - OFF SIGNAL
- 2 - LEFT REAR SPEAKER FEED (+)
- 3 - RIGHT REAR SPEAKER FEED (+)
- 4 - LEFT FRONT SPEAKER FEED (+)
- 5 - RIGHT FRONT SPEAKER FEED (+)
- 6 - LEFT REAR SPEAKER RETURN (-)
- 7 - RIGHT REAR SPEAKER RETURN (-)

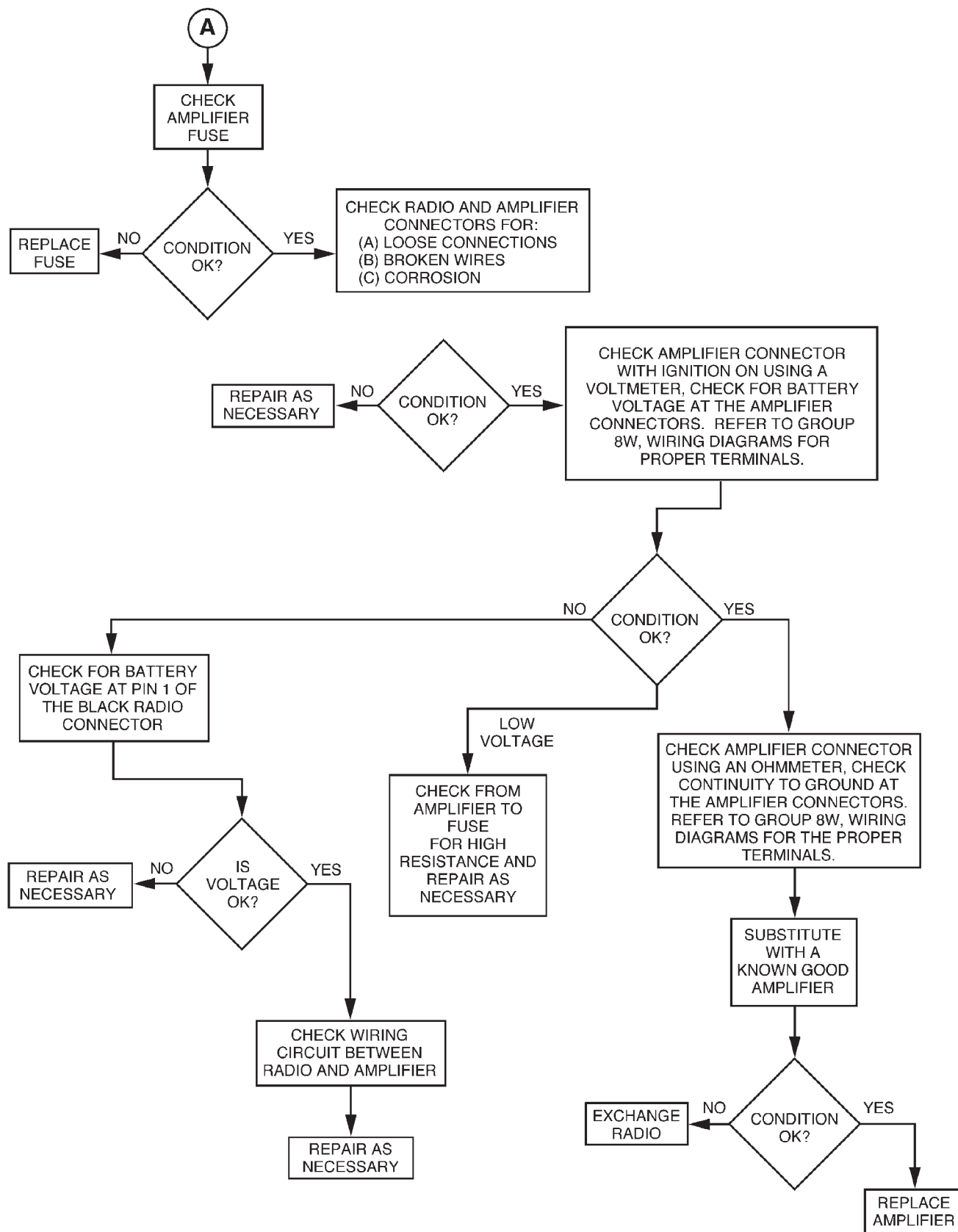
- 1 - RADIO MUTE
- 2 - LEFT FRONT SPEAKER RETURN (-)
- 3 - RIGHT FRONT SPEAKER RETURN (-)
- 4 - MARKER -- (HEAD/PARK LAMPS)
- 5 - DIMMER -- (PANEL, LAMPS, VARIABLE)
- 6 - ACCESSORY -- (SWITCHED B+)
- 7 - BATTERY -- (MEMORY)



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AMPLIFIED

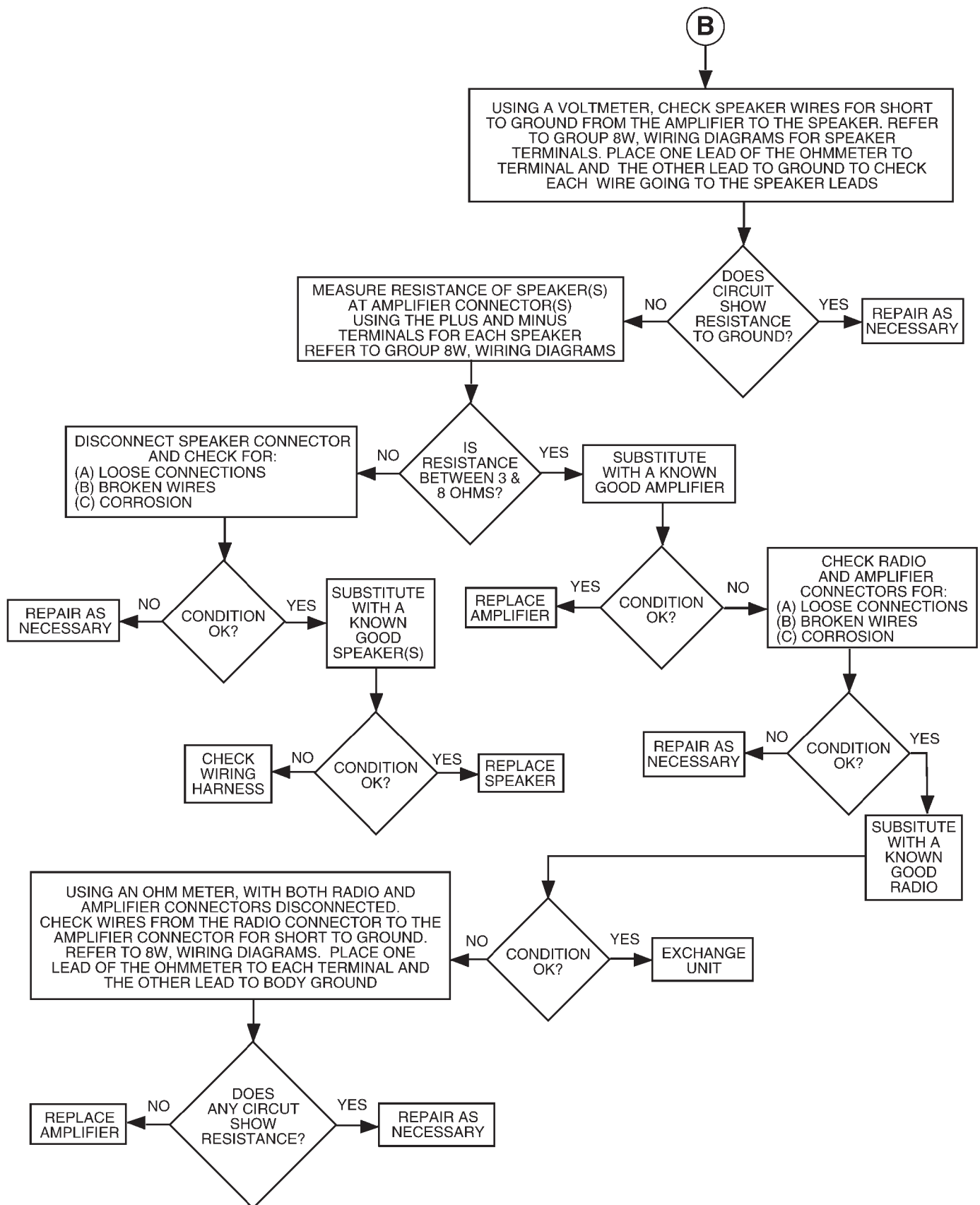
DIAGNOSIS AND TESTING (Continued)



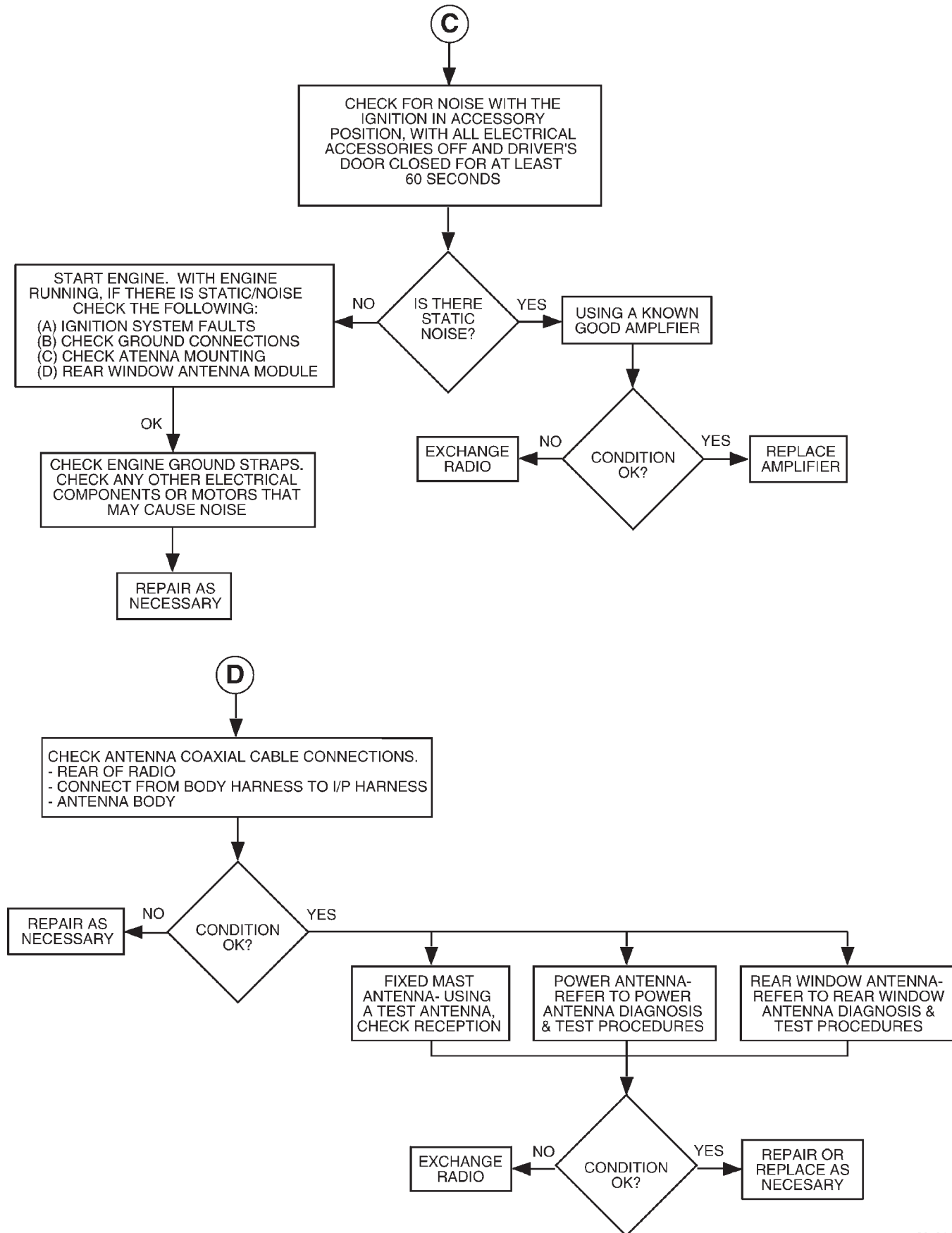
AMPLIFIED (CONTINUED)

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DIAGNOSIS AND TESTING (Continued)

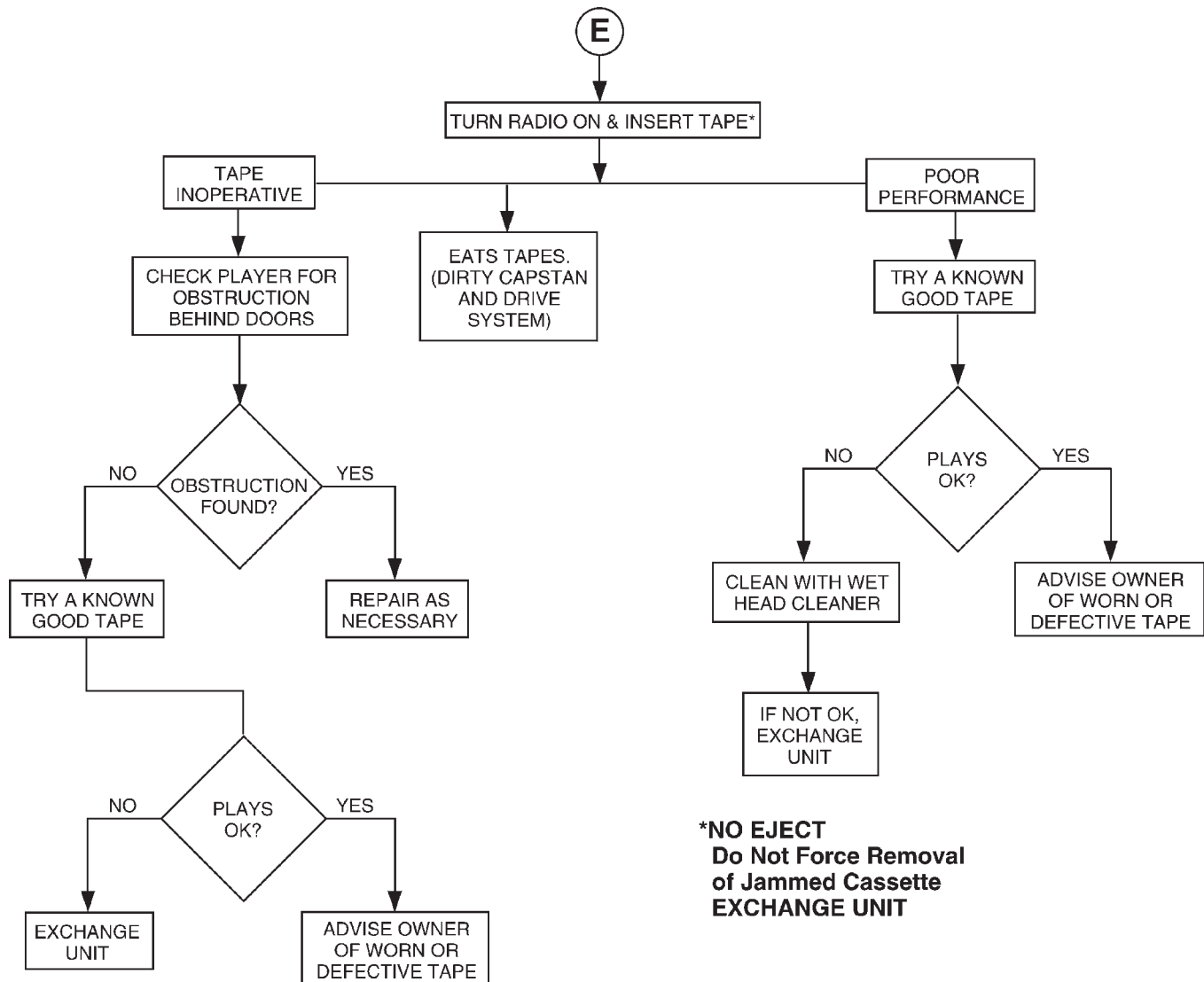


DIAGNOSIS AND TESTING (Continued)

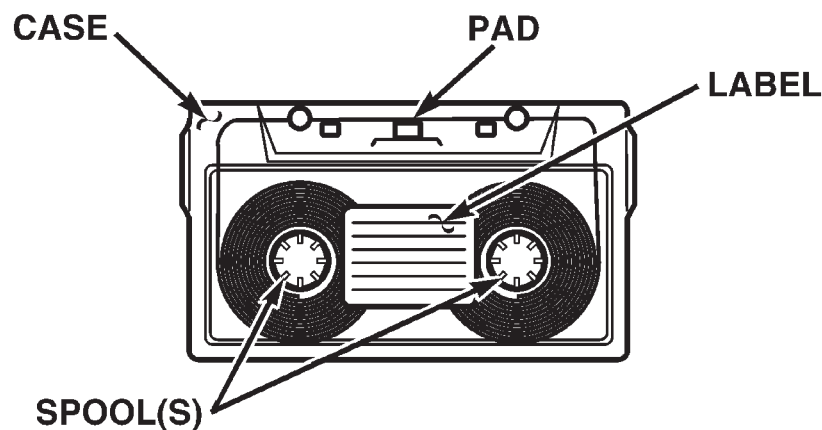


AMPLIFIED (CONTINUED)

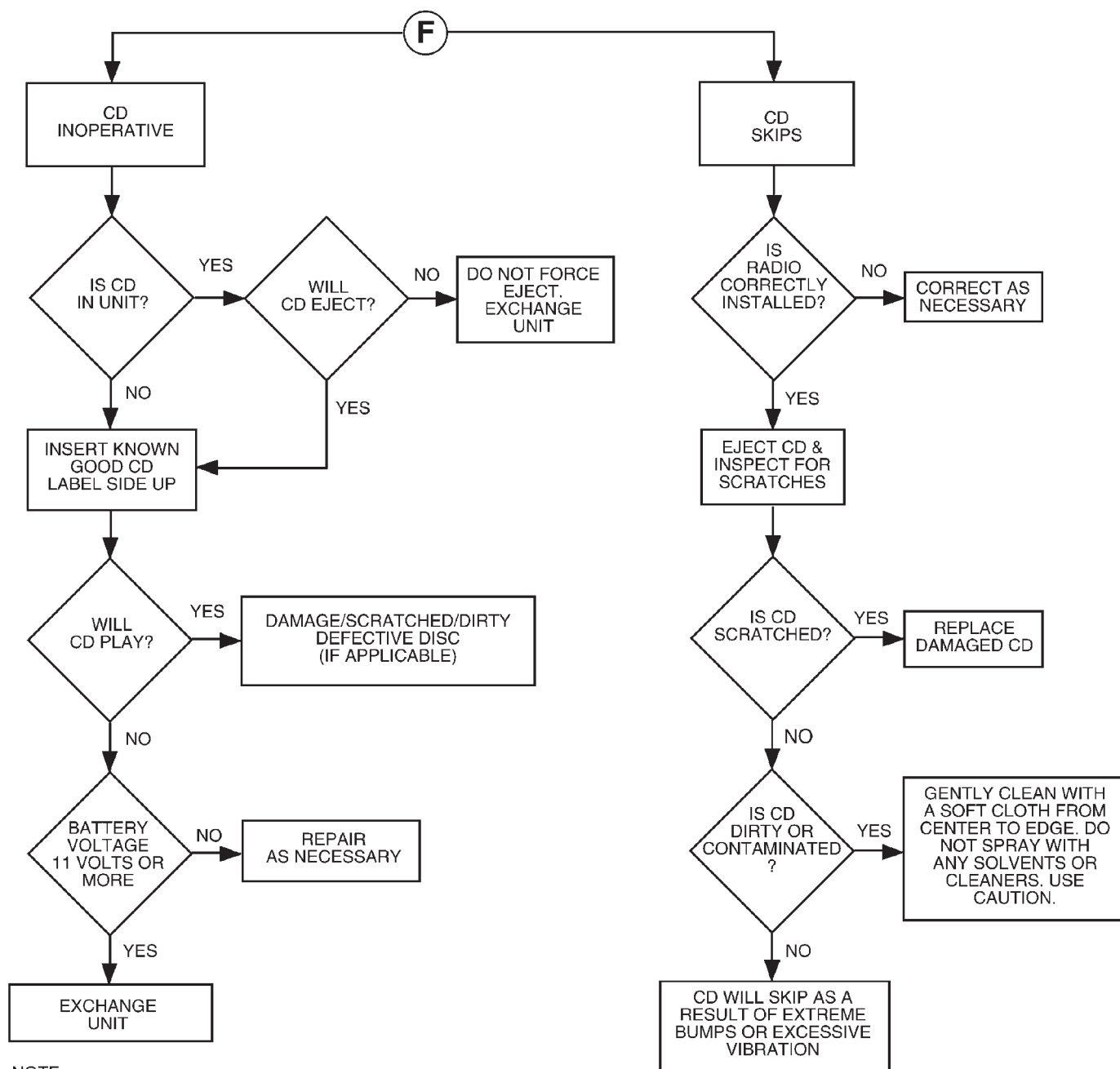
DIAGNOSIS AND TESTING (Continued)

**CHECK TAPES FOR:**

- **CRACKED OR WARPED CASE**
- **LOOSE LABEL ON CASE**
- **TAPE PAD MISSING**
- **TAPE SPOOL(S) JAMMING**

*AMPLIFIED (CONTINUED)*

DIAGNOSIS AND TESTING (Continued)



NOTE:
THE CD PLAYER WILL ONLY OPERATE BETWEEN
APPROXIMATE TEMPERATURES OF -23°C AND
+65°C (-10°F AND +145°F)

DIAGNOSIS AND TESTING (Continued)

DIAGNOSTIC CONDITIONS

NOISE DISTORTION IN ALL SPEAKERS

Does the distortion occur through all operations:

- AM and FM stations
- Cassette tape
- Compact disc

If not, check for radio interference, damaged tape or disc that may be causing the distortion. Refer to Sound Systems Operating Instructions in the Owners Manual for cleaning procedures of the cassette tape player.

- Check battery voltage, for 11 Volts or more
- Check amplifier connectors, and wires for proper connection
- If OK, check radio, refer to Radio Diagnosis
- If OK, replace amplifier

ELECTRICAL NOISE DISTORTION ONE SPEAKER

- Remove output signal connector from amplifier and check for short to ground on the speaker with the distortion. Refer to Group 8W, Wiring Diagrams for the appropriate pin numbers.
- If shorted to ground, disconnect speaker connector and recheck from the amplifier for short to ground.
- If still shorted to ground, repair wires. Not shorted to ground, replace speaker.
- Not shorted to ground, check speaker resistance at amplifier connector for two to five ohms.
- If resistance is OK, refer to Radio Diagnosis. If radio checks OK, replace amplifier.
- If resistance is less than two ohms, replace speaker. If resistance is OK, repair wires.

MECHANICAL NOISE DISTORTION

- Check trim for loose parts, and speaker attachments for buzzes.
- Remove speaker that is still connected and listen for distortion. If distortion remains, replace speaker.

ONE SPEAKER NON-OPERATIVE

- Remove output signal connector from amplifier and check for two to five ohms resistance to the non-operative speaker. Refer to Group 8W, Wiring Diagrams for the appropriate pin numbers.
- If resistance is less than two ohms, test speaker for resistance.
- If OK, repair wire. If not OK, replace speaker.

ALL SPEAKERS NON-OPERATIVE

- Check radio for being ON, are the display lights on?
- Radio not ON, refer to Radio Diagnosis.

- Check fuses, amplifier connectors and wires for proper connection.

- Check for good ground.

- Check amplifier, for battery voltage and ON/OFF voltage.

(1) Battery voltage OK and NO voltage at the ON/OFF terminal, check for short or open in the ON/OFF circuit.

(2) ON/OFF voltage OK, and NO battery voltage, check for short or open in battery circuit.

(3) Prior to replacing amplifier check fuse to the cigar lighter and horn. If not OK, replace fuse. If fuse blows again disconnect amplifier B+ wire connector. Refer to Group 8W, Wiring Diagrams for the proper connector.

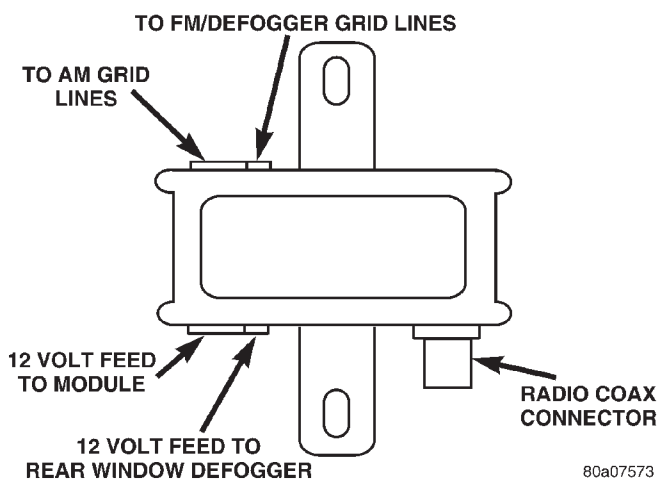
(4) If fuse still blows the problem is not the amplifier. If fuse does not blow replace the amplifier.

(5) If shorted or open circuit repair as necessary.

REAR WINDOW ANTENNA

NOTE: Due to a capacitor integral with the coaxial cable, the coax cable can not be tested. The continuity test between the center pin of the coax to the antenna does not apply. An ohm meter check to the center pin of the coaxial cable will falsely indicate an open circuit. The coaxial shield to ground test can be performed. Verify coaxial cable performance by using a known good cable.

Before performing any antenna service procedures, verify that Rear Window Defogger is operating properly (Fig. 7) and (Fig. 8). If no, repair as necessary. Refer to Group 8N, Electrically Heated Systems. Any repairs to either the AM or FM grid should be performed as in Group 8N, Electrically Heated Systems, Grid Line and Terminal Repair.

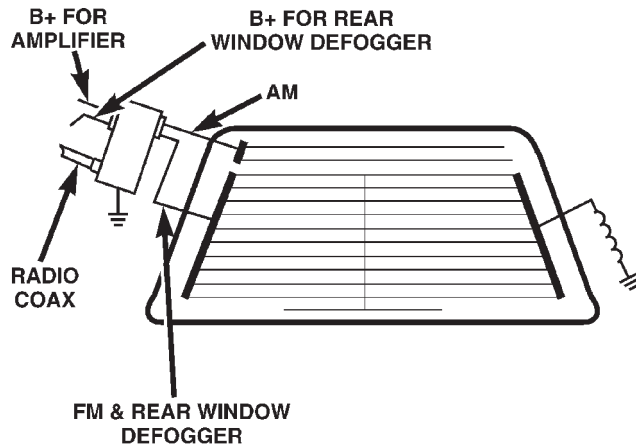


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Fig. 7 Rear Window Antenna Module

(1) Check that the rear window adhesive does not come in contact with any portion of the grid lines or

DIAGNOSIS AND TESTING (Continued)



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Fig. 8 Rear Window Grid Lines and Module

bus bars. There should be a minimum of 2 mm gap between adhesive and the grid lines or bus bars. If not OK, repair as necessary. If OK, go to Step 3.

(2) Check for proper radio coaxial cable connections at the radio and rear window antenna module. If not OK, repair as necessary. If OK, go to Step 4.

(3) Loss of reception on only one band (AM or FM) may indicate a continuity problem on the rear window grids. Test the grid lines with an ohmmeter. If not OK, repair grid lines as necessary. If OK, go to Step 5.

(4) Turn the radio and rear window defogger ON position. Using a voltmeter, test for battery voltage at the X60 and C15 circuit terminals of the rear window antenna module wire harness connector (Fig. 7). If not OK, check fuses, if fuses are OK, repair wire harness as necessary. Refer to Group 8W, Wiring Diagrams for circuit information.

(5) Ensure that the rear window defogger ground wire with integral coil in the C-pillar has a good ground.

(6) If not OK, repair as necessary. If OK, go to Step 8.

CAUTION: Rear Window Defogger must be in the OFF position

(7) Quick check of the module:

- Place the ignition switch in the ACC position with the radio in the ON position on a appropriate station (AM/FM).
- Tune to an AM station
- Using a grounded jumper wire, momentarily short the AM lead to the grid lines (Fig. 8).
- There should be an audible CRACKLE through the speakers indicating circuit continuity.
- Tune to an FM station
- Using a grounded jumper wire, momentarily short the FM lead to the grid lines (Fig. 8).

• There should be an audible CRACKLE through the speakers indicating circuit continuity.

If not OK, go to Step 9. If OK, go to Step 10.

(8) Using a ohmmeter, check continuity between the module wire connector and:

- AM grid lines
- FM/rear window antenna grid lines

If not OK, repair necessary. Refer to Group 8N, Electrically Heated Systems and Group 8W, Wiring Diagrams. If OK, go to Step 10.

(9) If neither AM or FM can be received, use a known good radio and verify. If not OK, use a known good antenna module and verify. If OK, either exchange radio or replace antenna module.

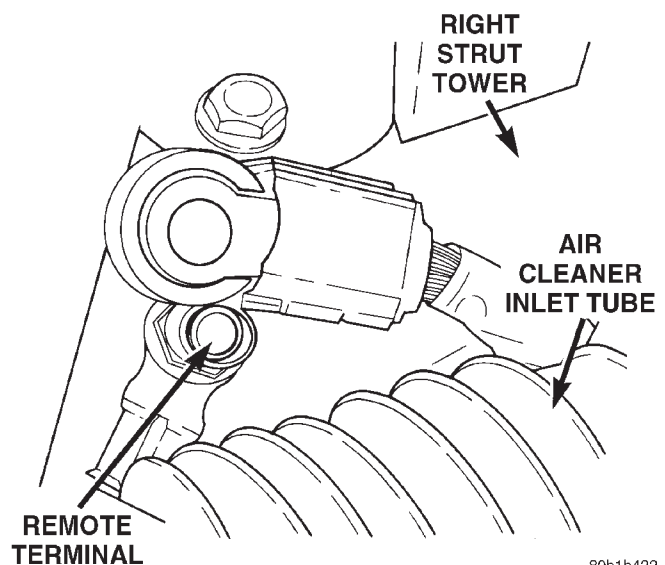
REMOVAL AND INSTALLATION

DOOR MOUNTED SPEAKERS

CAUTION: Do not operate the radio with speaker leads detached. Damage to the output devices may result.

REMOVAL - 6.5 INCH LOWER DOOR MOUNTED SPEAKERS

(1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).



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Fig. 9 Negative Battery Cable Remote Terminal

(2) Open drivers door.

(3) Using a trim stick (special tool #C-4755), carefully pry speaker grille away from door trim panel (Fig. 10).

(4) Remove two speaker retaining screws.

REMOVAL AND INSTALLATION (Continued)

(5) Pull speaker away from door and disconnect wiring.

INSTALLATION

For installation, reverse the above procedures.

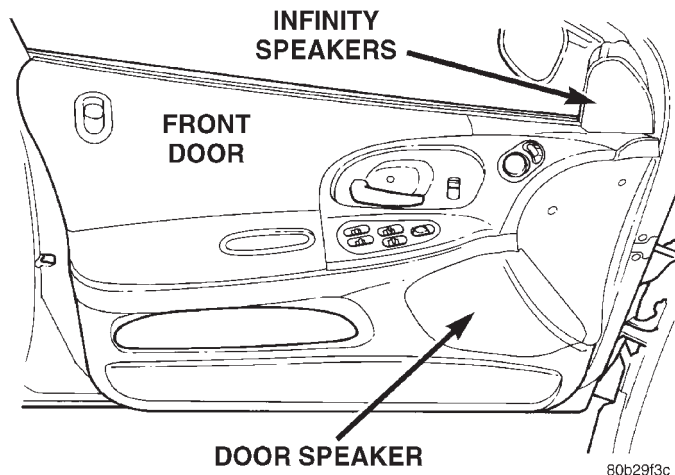


Fig. 10 Door Mounted Speakers

REMOVAL – 2.5 INCH LOWER FRONT WINDOW CORNER SPEAKERS (INFINITY)

- (1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).
- (2) Open drivers door.
- (3) Remove two speaker enclosure attachment screws holding the enclosure ring and grill to the door (Fig. 10).
- (4) Remove two speaker retaining screws.
- (5) Pull speaker away from door and disconnect wiring.

INSTALLATION

For installation, reverse the above procedures.

FIXED MAST ANTENNA (INTREPID ONLY)**REMOVE**

- (1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).
- (2) Inside trunk, pull passenger side trunk liner aside.
- (3) Unplug antenna lead from base of antenna mast.
- (4) Remove antenna mast by unscrewing mast from antenna body.
- (5) Remove screw from mounting bracket.
- (6) Pull antenna body down through the rubber grommet.

INSTALLATION

For installation, reverse the above procedures.

INSTRUMENT PANEL SPEAKER

CAUTION: Do not operate the radio with speaker leads detached. Damage to the output devices may result.

REMOVAL

- (1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).
- (2) Remove instrument panel top cover: Refer to Group 8E, Instrument Panel Systems for Removal and Installation procedures.
- (3) Remove two retaining screws to center speaker, remove plastic retainer and disconnect wire.
- (4) Remove speaker.

INSTALLATION

For installation, reverse the above procedures.

RADIO/TAPE/CD PLAYER**REMOVAL**

- (1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).
- (2) Remove instrument panel center trim bezel. Refer to Group 8E, Instrument Panel and Systems for Removal and Installation procedures.
- (3) Remove four radio mounting screws.
- (4) Pull radio from panel and disconnect wiring, ground strap, wires and antenna lead from radio.
- (5) Remove radio from vehicle.

INSTALLATION

For installation, reverse the above procedures.

REAR DOOR SPEAKER**REMOVAL**

- (1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).
- (2) Open rear door.
- (3) Using a trim stick (special tool #C-4755), carefully pry speaker grille away from door trim panel.
- (4) Remove two speaker retaining screws.
- (5) Pull speaker away from door and disconnect wiring.

INSTALLATION

For installation, reverse the above procedures.

REMOVAL AND INSTALLATION (Continued)

REAR SHELF SPEAKER

CAUTION: Do not operate the radio with speaker leads detached. Damage to the output devices may result.

REMOVAL

(1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).

(2) Remove rear shelf panel, refer to Group 23, Body for Removal and Installation procedures.

(3) Remove four retaining screws.

(4) Remove speaker and disconnect wire connector. The wire connectors can be accessed through the trunk.

INSTALLATION

For installation, reverse the above procedures. Be sure that the wire connectors are facing forward in vehicle.

REAR WINDOW ANTENNA

To replace the rear window antenna the rear backlite has to be replaced. Refer to Group 23, Body for proper procedures.

REAR WINDOW ANTENNA MODULE*REMOVAL*

(1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).

(2) Remove right upper quarter trim panel. Refer to Group 23, Body for Removal and Installation procedures.

(3) Remove attaching screws from module.

(4) Disconnect wire connectors and radio coaxial cable (Fig. 7).

(5) Remove module from vehicle.

INSTALLATION

For installation, reverse the above procedures.

REMOTE AMPLIFIER*REMOVAL - MIDLINE AND INFINITY I SYSTEM*

(1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).

(2) Remove right under panel silencer/duct. Refer to Group 8E, Instrument Panel and Systems for Removal and Installation procedures.

(3) Remove two retaining nuts to remote amplifier.

(4) Pull amplifier inboard and then pull downward to remove from upper retaining clips.

(5) Disconnect two wiring connectors.

(6) Remove remote amplifier from vehicle.

INSTALLATION

For installation, reverse the above procedures.

REMOVAL - INFINITY II SYSTEM

(1) Open hood and disconnect the negative battery cable remote terminal from the remote battery post (Fig. 9).

(2) Inside trunk, pull the trunk liner aside (right quarter panel passenger side).

(3) Remove three retaining screws.

(4) Disconnect two wire connectors.

(5) Remove remote amplifier from vehicle.

INSTALLATION

For installation, reverse the above procedures.

