

AUDIO SYSTEMS

TABLE OF CONTENTS

	page		page
DESCRIPTION AND OPERATION		REMOVAL AND INSTALLATION	
AUDIO SYSTEM	1	DOOR MOUNTED SPEAKER.....	14
INTERFERENCE ELIMINATION	1	INSTRUMENT PANEL SPEAKER.....	15
REMOTE AMPLIFIER	2	MANUAL ANTENNA AND MAST.....	15
REMOTE CD CHANGER	2	RADIO.....	15
DIAGNOSIS AND TESTING		REAR QUARTER PANEL SPEAKER(S)	16
AUDIO DIAGNOSTIC TEST PROCEDURES.....	2	REMOTE AMPLIFIER	16
DIAGNOSTIC CONDITIONS.....	2	REMOTE CD CHANGER AND MOUNTING	
MANUAL ANTENNA	13	BRACKET.....	17
REMOTE CD CHANGER	13		

DESCRIPTION AND OPERATION

AUDIO SYSTEM

DESCRIPTION

Several combinations of radio receivers and speaker systems are offered as optional equipment. The audio system uses an ignition switched source of battery current so that the system will only operate when the ignition switch is in the ON or Accessory positions.

The audio system includes the following components:

- Antenna
- Power amplifier (with premium speaker system only)
- Radio noise suppression components
- Radio receiver
- Speakers

The vehicle has two speaker systems:

STANDARD SPEAKER SYSTEM

- Two instrument panel speakers
- Two door speakers
- Two rear quarter panel speakers

INFINITY AMPLIFIED SPEAKER SYSTEM

- Amplifier mounted under the passenger seat
- Two instrument panel speakers
- Two door speakers
- Two rear quarter panel speakers

OPERATION

See the owner's manual in the vehicle glove box for more information on the features, use and operation of each of the available audio systems.

INTERFERENCE ELIMINATION

DESCRIPTION

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

OPERATION

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

To eliminate radio interference, ground straps are used in different areas of the vehicle. These ground circuits should be securely tightened to assure good metal to metal contact. The ground straps conduct very small high frequency electrical signals to ground and require clean surface contact area. The radio ground wire is supplied from the instrument panel harness and is attached to the rear of the radio. Some engines have other ground straps to eliminate further radio interference:

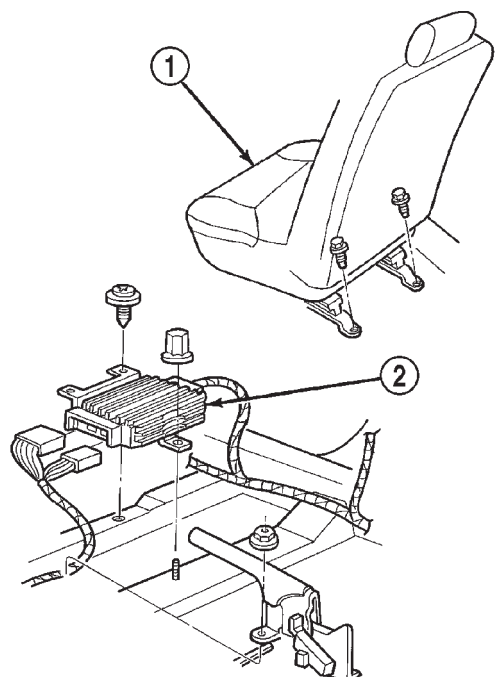
- Engine to shock tower, 2.0L - 2.4L - 2.5L engines
- Engine to transmission, 2.5L engine
- Muffler to bumper beam, 2.0L - 2.4L engines

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.

DESCRIPTION AND OPERATION (Continued)

REMOTE AMPLIFIER

DESCRIPTION



958F-21

Fig. 1 Remote Amplifier Location

- 1 - PASSENGER SEAT
2 - AMPLIFIER

The amplifier is located under the right front seat.

OPERATION

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.

The amplifier provides unique sound equalizations when the convertible top is in the up position or in the down position. The amplifier remembers which mode it is in as long as the battery voltage (B+) is supplied to the amplifier. If the battery voltage is removed for only a few minutes by:

- Disconnecting the battery
- Dead battery
- Fuse Removal
- Amplifier disconnected

The amplifier reverts to a top up condition even if the top is down. If the amplifier mode does not match the convertible top position, operate the convertible top one cycle and this will reset amplifier to the correct mode.

REMOTE CD CHANGER

DESCRIPTION

The remote CD changer is located in the center console and is capable of holding up to six discs in a magazine.

OPERATION

The magazine can be ejected at anytime that the ignition switch is in the ON position. After the ignition switch is turned OFF, the magazine can only be ejected within one minute. After that period, the magazine will be locked in the CD changer.

DIAGNOSIS AND TESTING

AUDIO DIAGNOSTIC TEST PROCEDURES

CAUTION: The CD changer/player is designed to 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) Fuse 5, Memory feed – Power Amplifier (if equipped)
- (b) Fuse 7, Illumination
- (c) Fuse 14, Ignition feed

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

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

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.

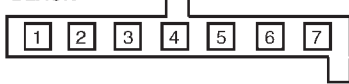
- Check battery voltage, for 11 Volts or more
- Check amplifier connector for proper connection
- If OK, check radio, refer to Radio Diagnosis
- If OK, check circuit between the radio and the amplifier. If OK, check between the amplifier and the speakers.
- If OK, replace amplifier

DIAGNOSIS AND TESTING (Continued)

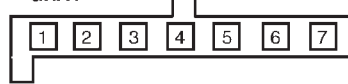
RADIO CONNECTORS

STANDARD SYSTEM

BLACK



GRAY

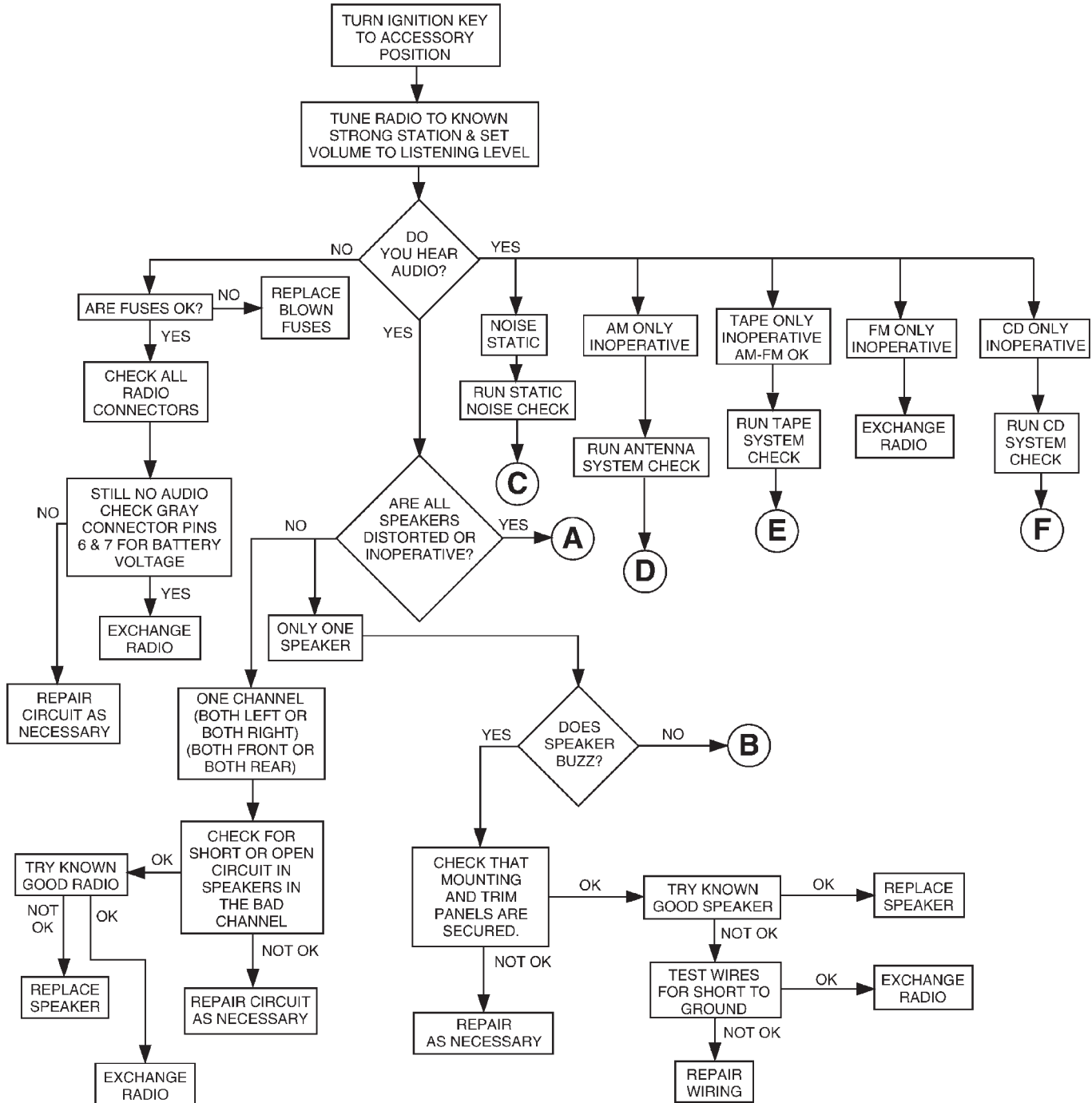


VIEW FROM
WIRE END

LEGEND:

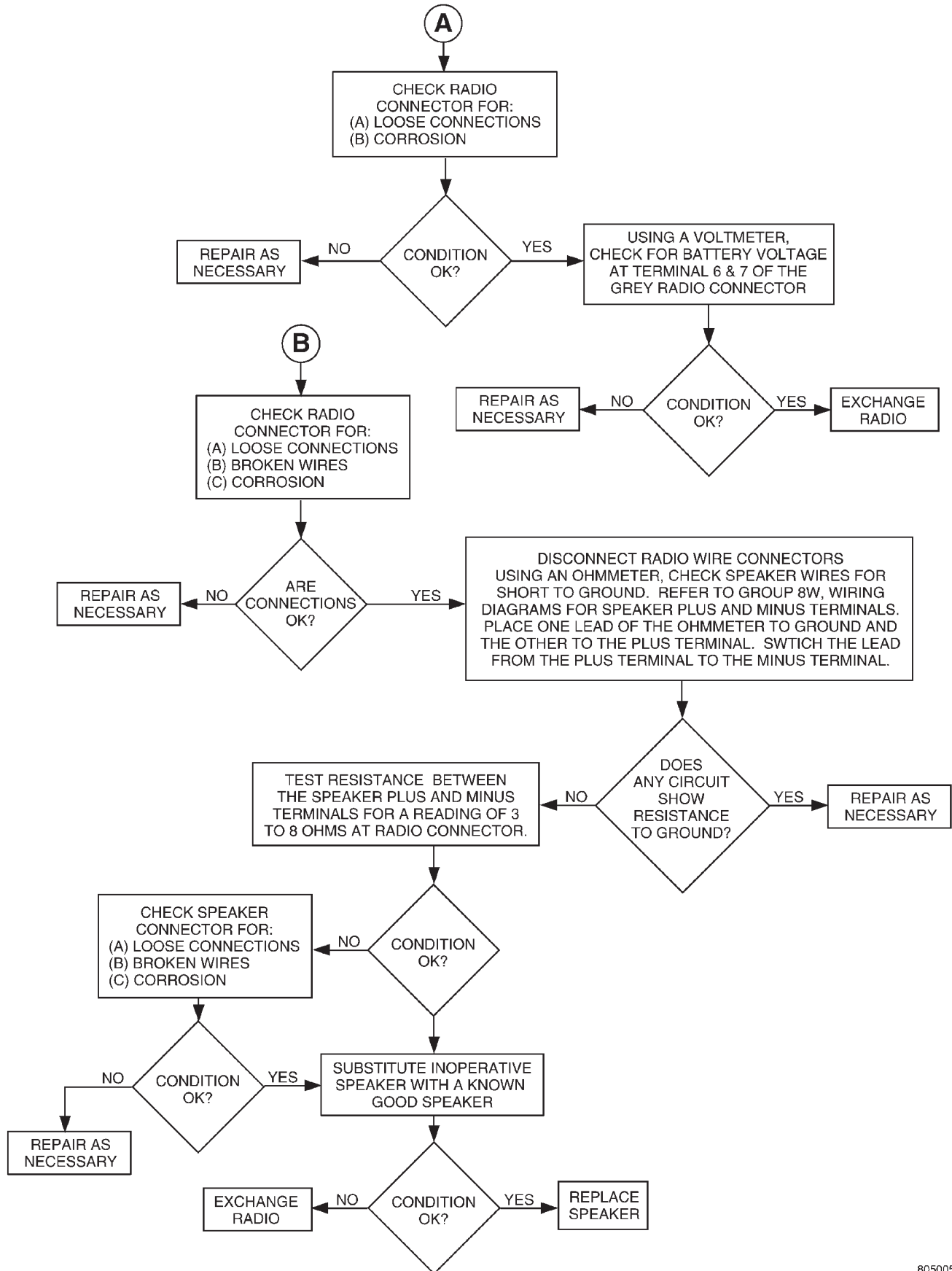
- 1 - AMP ON-OFF SIGNAL/ANT UP SIGNAL
- 2 - LEFT REAR SPEAKER FEED (+)
- 3 - RIGHT REAR SPEAKER FEED (+)
- 4 - LEFT FRONT SPEAKER FEED (+)
- 5 - RIGHT FRONT SPEAKER FEED (+)
- 6 - LEFT REAR SPEAKER RETURN (-)
- 7 - RIGHT REAR SPEAKER RETURN (-)

- 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)

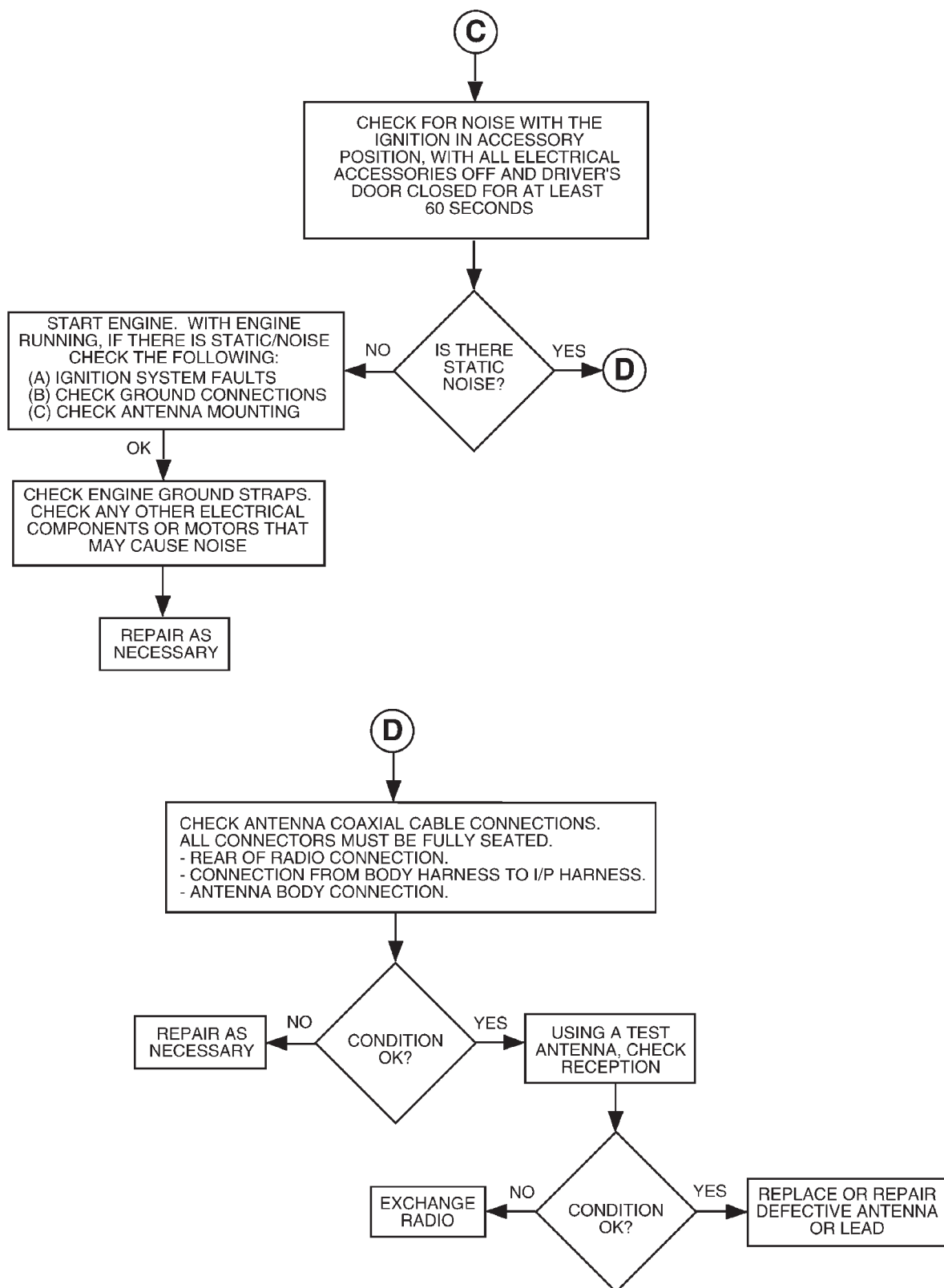


DIAGNOSIS AND TESTING (Continued)

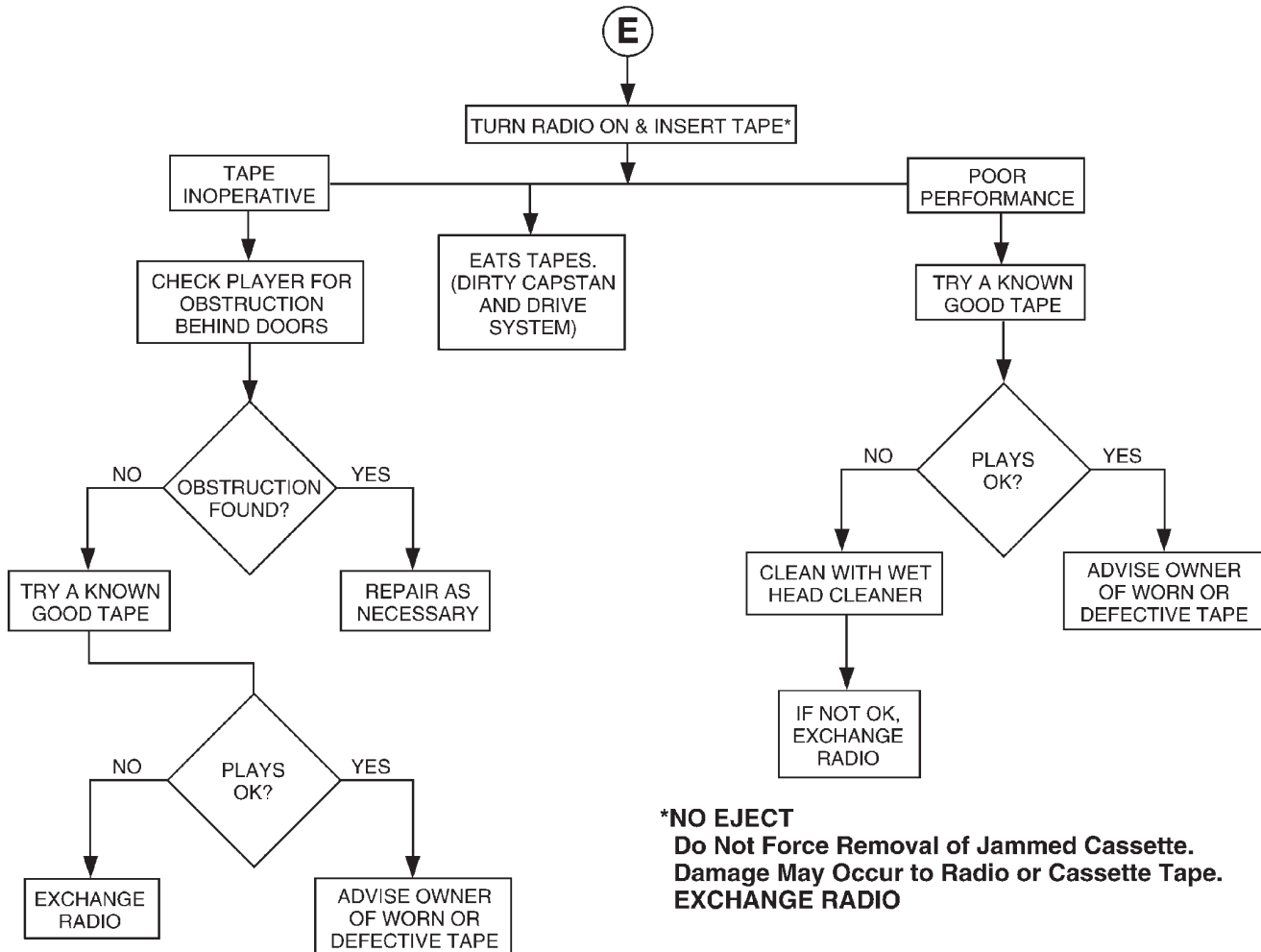
STANDARD SYSTEM CONTINUED



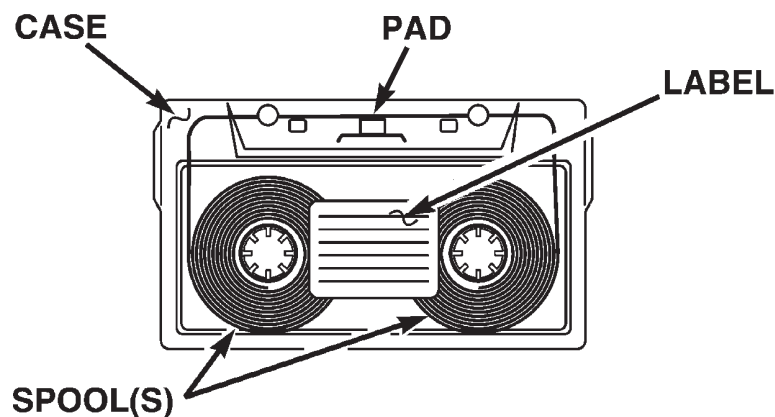
DIAGNOSIS AND TESTING (Continued)

STANDARD SYSTEM CONTINUED

DIAGNOSIS AND TESTING (Continued)

STANDARD SYSTEM CONTINUED**CHECK TAPES FOR:**

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

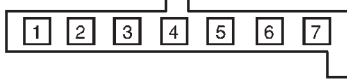


DIAGNOSIS AND TESTING (Continued)

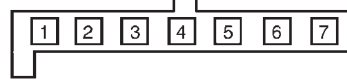
INFINITY AMPLIFIED SYSTEM

RADIO CONNECTORS

BLACK



GRAY

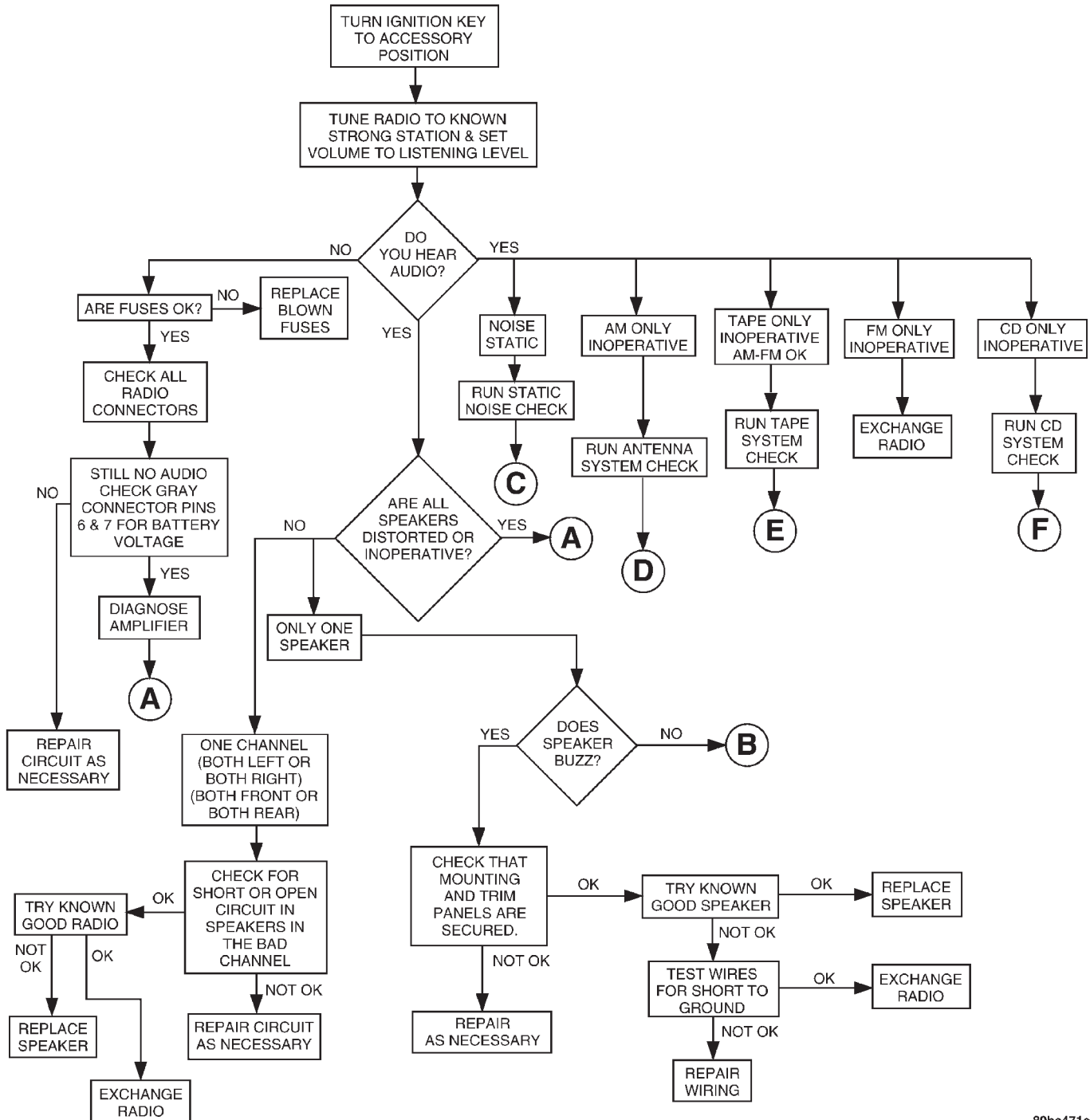


VIEW FROM
WIRE END

LEGEND:

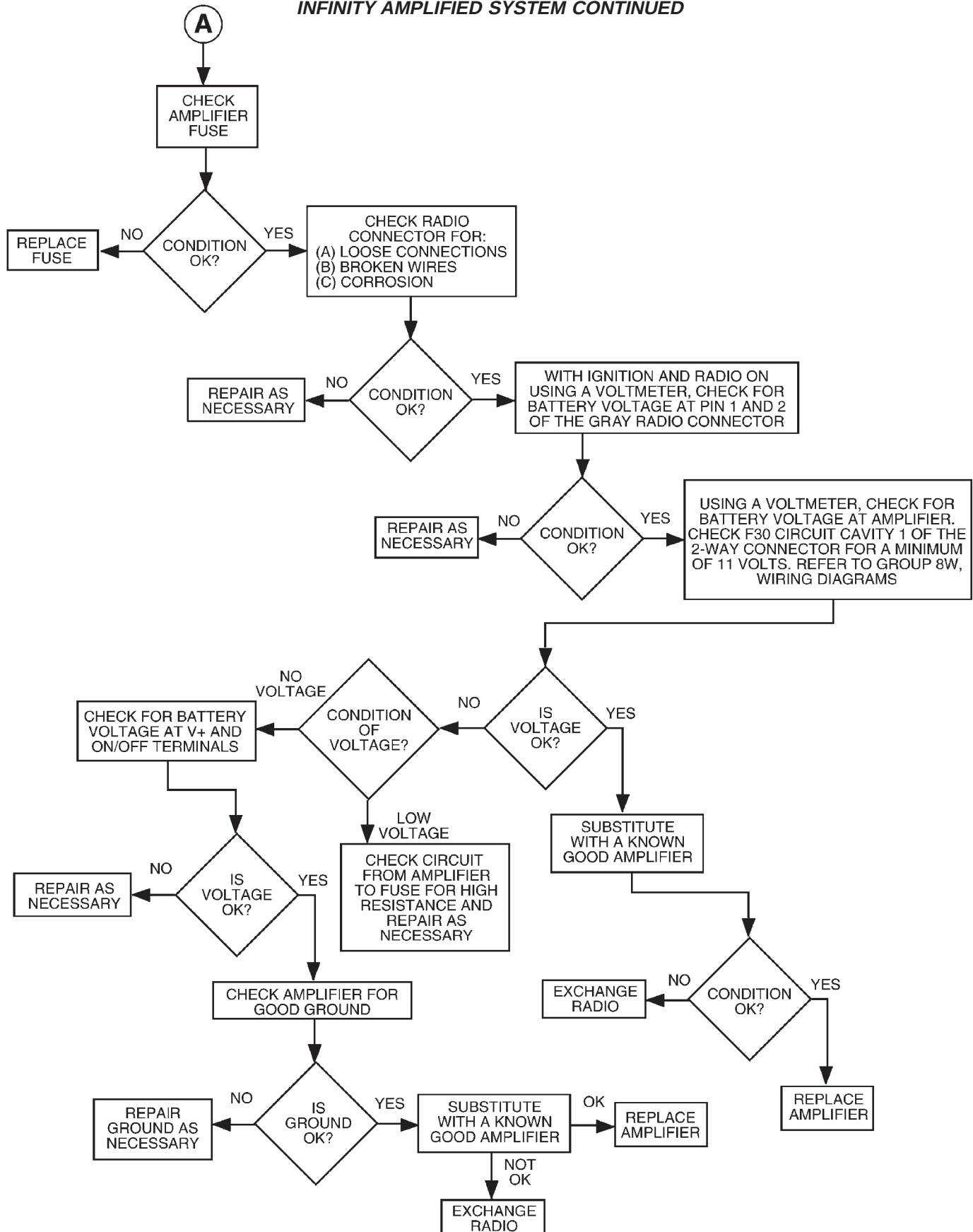
- 1 - AMP ON-OFF SIGNAL/ANT UP SIGNAL
- 2 - LEFT REAR SPEAKER FEED (+)
- 3 - RIGHT REAR SPEAKER FEED (+)
- 4 - LEFT FRONT SPEAKER FEED (+)
- 5 - RIGHT FRONT SPEAKER FEED (+)
- 6 - LEFT REAR SPEAKER RETURN (-)
- 7 - RIGHT REAR SPEAKER RETURN (-)

- 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)



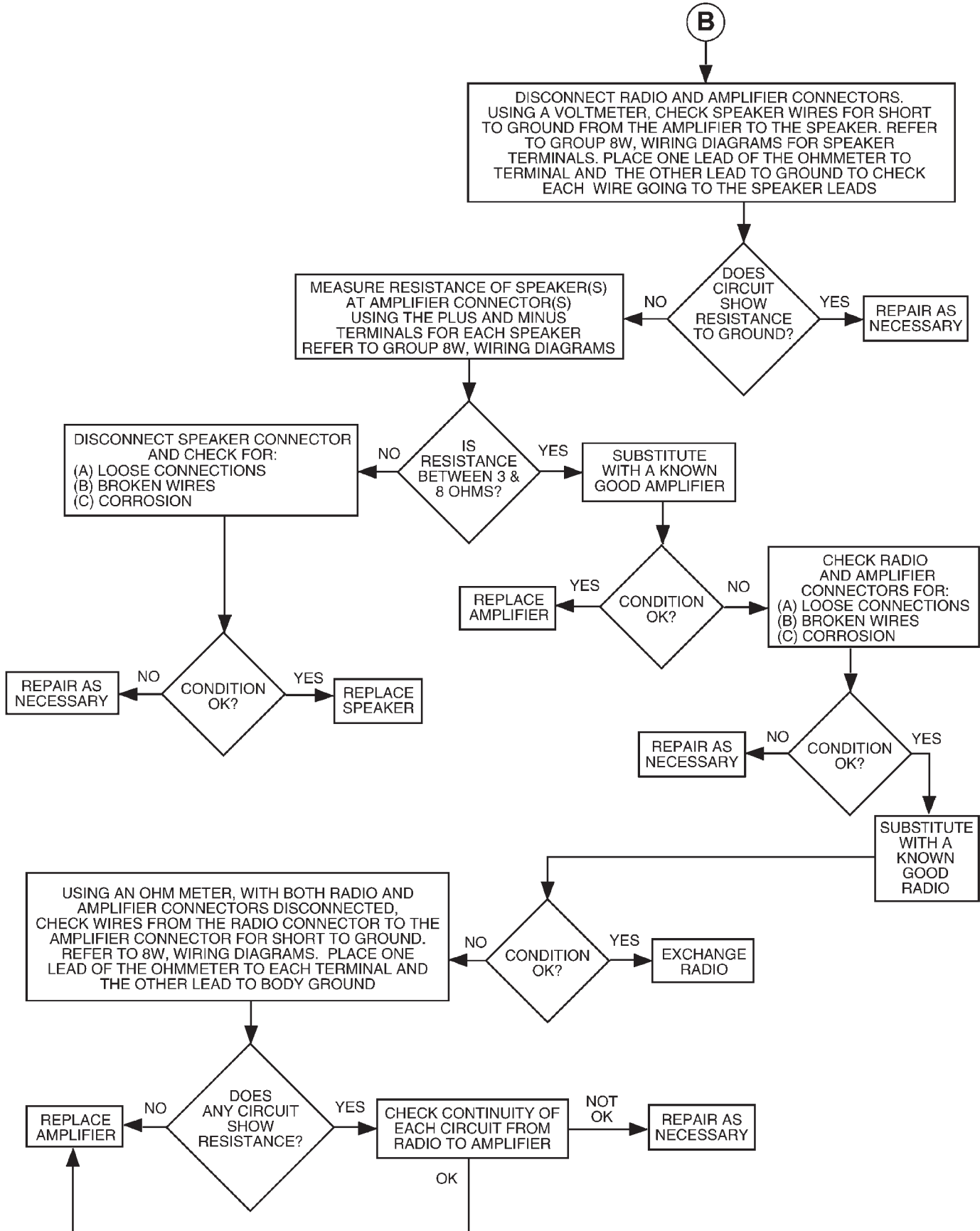
DIAGNOSIS AND TESTING (Continued)

INFINITY AMPLIFIED SYSTEM CONTINUED



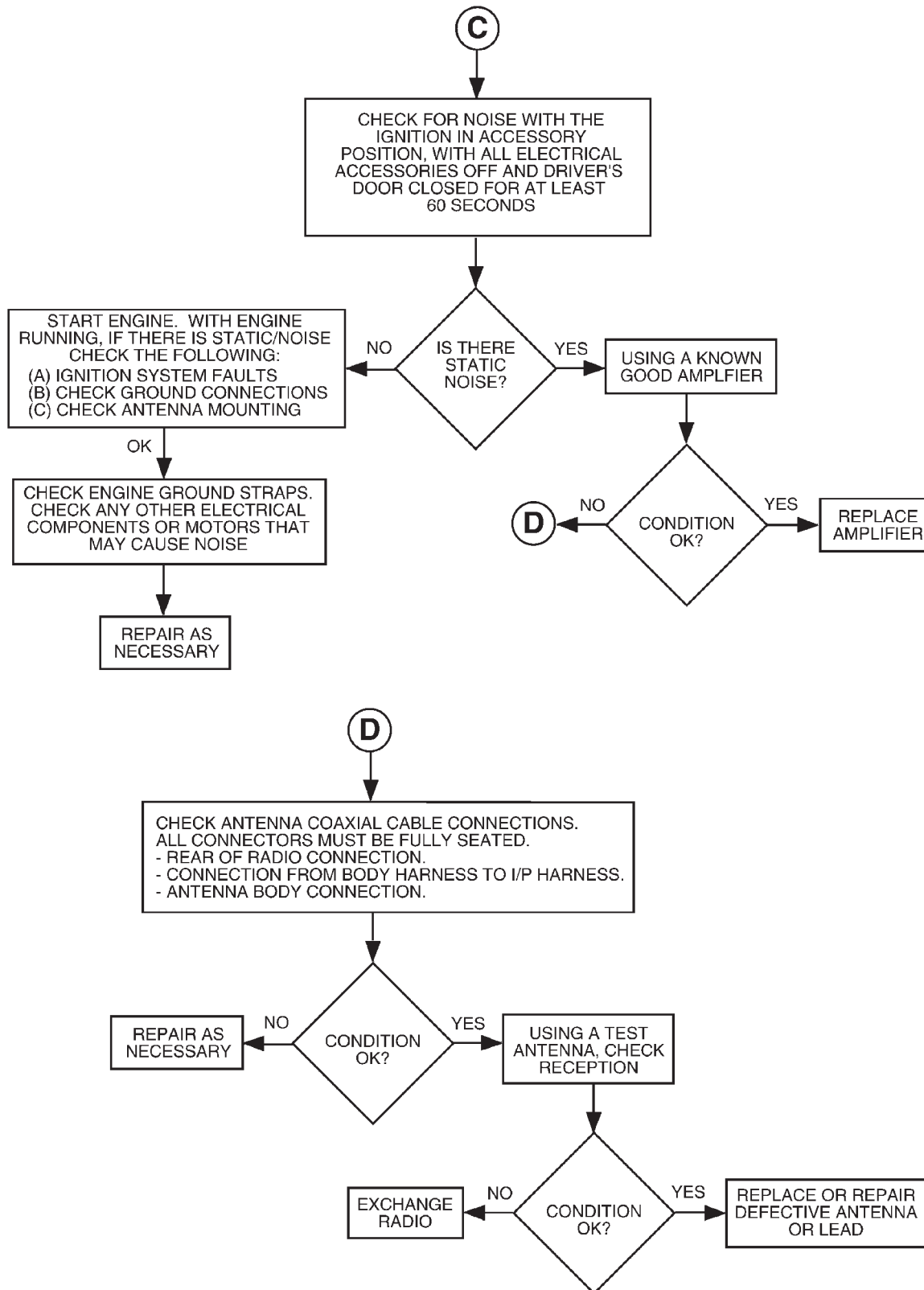
DIAGNOSIS AND TESTING (Continued)

INFINITY AMPLIFIED SYSTEM CONTINUED



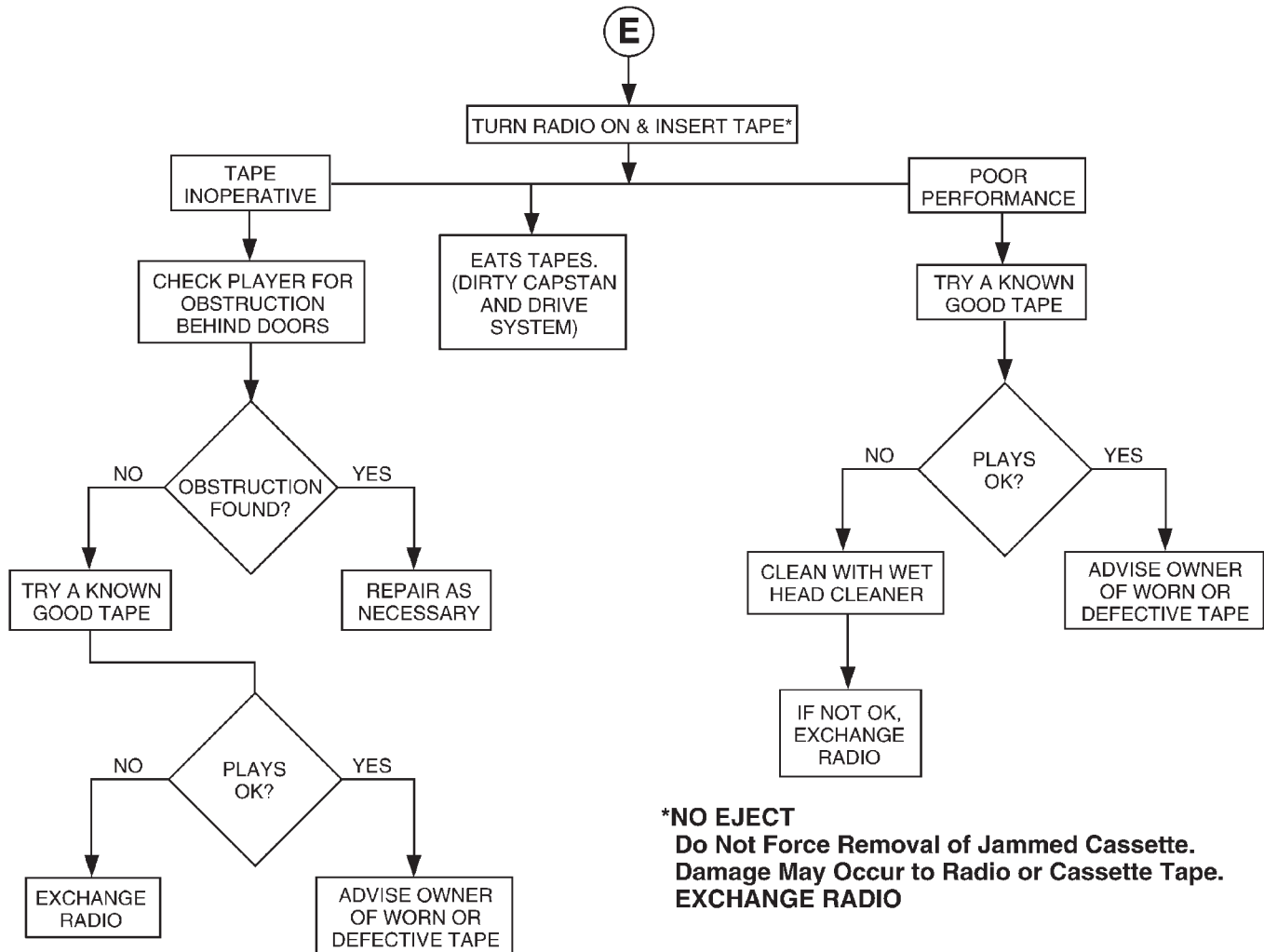
DIAGNOSIS AND TESTING (Continued)

INFINITY AMPLIFIED SYSTEM CONTINUED



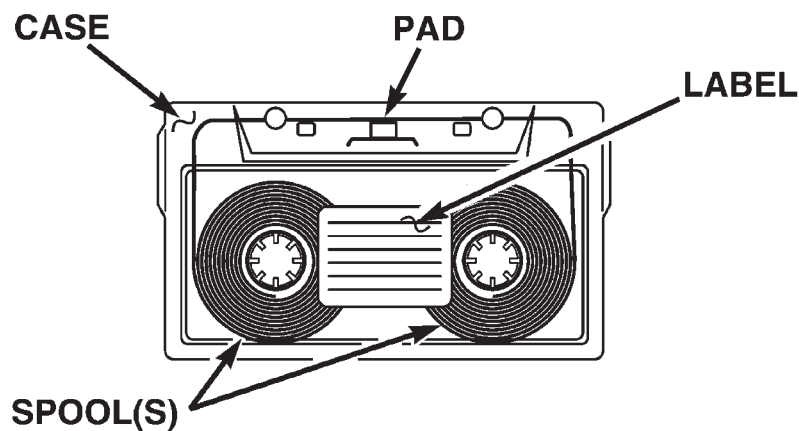
DIAGNOSIS AND TESTING (Continued)

INFINITY AMPLIFIED SYSTEM CONTINUED



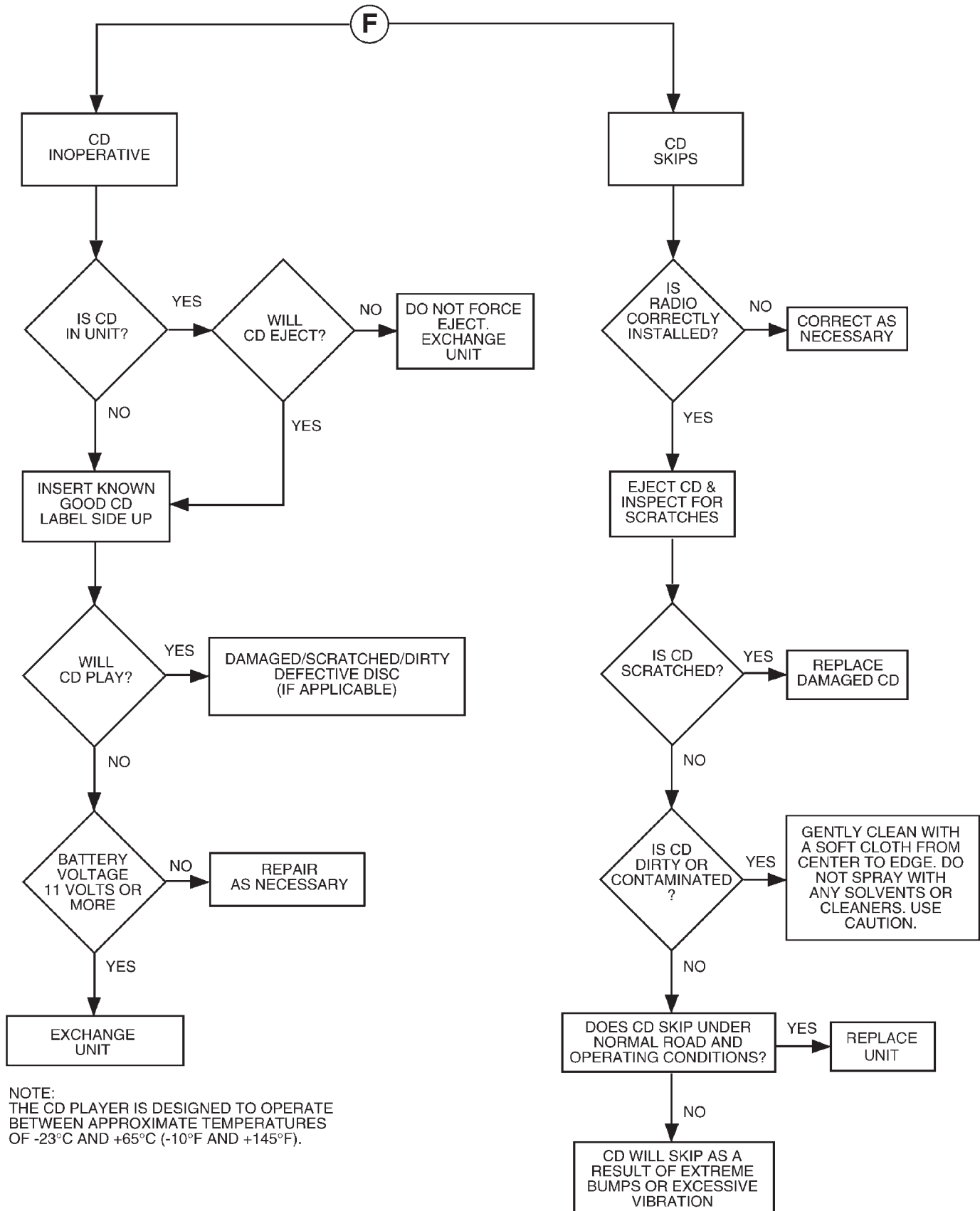
CHECK TAPES FOR:

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



DIAGNOSIS AND TESTING (Continued)

INFINITY AMPLIFIED SYSTEM CONTINUED



NOTE:
THE CD PLAYER IS DESIGNED TO OPERATE
BETWEEN APPROXIMATE TEMPERATURES
OF -23°C AND +65°C (-10°F AND +145°F).

DIAGNOSIS AND TESTING (Continued)

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

NOTE: (*) From radio if standard system.

MECHANICAL NOISE DISTORTION

- Check trim for loose parts, and speaker attachments for buzzes, repair as necessary.
- Remove speaker while still connected and listen for distortion. If distortion remains, replace speaker.

ONE SPEAKER NON-OPERATIVE

- Remove 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, refer to Audio Diagnostic Test Procedures. If not OK, replace speaker.

NOTE: (*) From radio if standard system.

ALL SPEAKERS NON-OPERATIVE

- Check radio for ON state, 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 (if equipped with premium system), 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 5 in the Junction Block. 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.

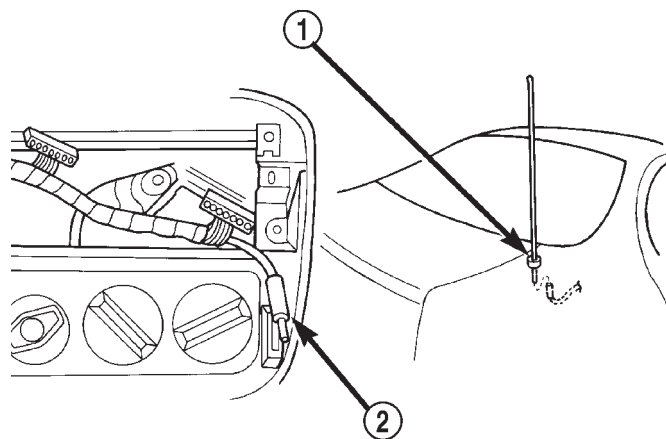
MANUAL ANTENNA

Check for short or open circuits with an ohmmeter once the antenna cable is disconnected from the radio. The radio coax cable has a connector that connects behind the between passenger seat and console.

(1) Continuity (less than 1 ohm) should be present between the antenna mast and radio end pin of antenna cable plug (Fig. 2).

(2) No continuity should be observed or a very high resistance of several megohms between the ground shell of the connector and radio end pin.

(3) Continuity should be observed between the ground shell of the connector and the mounting hardware in the trunk right rear quarter panel



80a243a8

Fig. 2 Antenna Test Points

- 1 – BASE TEST POINT
- 2 – RADIO TEST POINT

REMOTE CD CHANGER

CD changer inoperative.

(1) The CD changer receives its power and ground through the radio via the DIN connector. Verify that the radio powers up and functions before proceeding.

(2) With the radio turned ON, check the radio display when pushing the MODE/EJECT button to select the CD mode.

(a) If the display shows “- - -”, then insert a CD magazine in the changer.

(b) If the display shows “nocd”, then insert a CD into the magazine.

(c) If the display shows Err “xxxx”, then check the error message table below.

DIAGNOSIS AND TESTING (Continued)

(d) If the radio only switches between AM and FM turning modes, then perform the following:

(I) Check the connection of the DIN cable to the CD changer and radio.

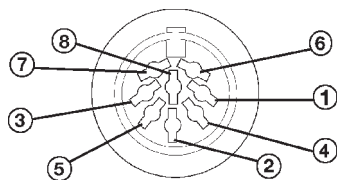
(II) If OK, then check the DIN cable at the CD changer side.

(III) Make sure the DIN cable is connected to the radio and radio is turned ON and operating. Check for battery voltage at Pins 6 and 7 using Pin 8 for ground.

(IV) If OK, then replace CD changer.

(V) If not OK, then remove DIN cable from radio and changer. Check DIN cable for continuity from connector to connector, using a ohmmeter on each Pin. If not OK, replace DIN cable.

(VI) If the DIN cable OK, then replace the radio.



DIN Cable Connector
DIN CABLE PIN-OUTS

PIN 1	DATA BUS (-)	PIN 5	AUDIO IN (L)
PIN 2	AUDIO GRD	PIN 6	BATTERY
PIN 3	DATA BUS (+)	PIN 7	IGNITION
PIN 4	AUDIO IN (R)	PIN 8	GROUND

ERROR MESSAGES

DISPLAY	EXPLANATION	WHAT TO DO
NOCD	NO DISC OR DISCS IN MAGAZINE	LOAD DISCS IN MAGAZINE
- - - -	NO MAGAZINE IN PLAYER	LOAD MAGAZINE IN PLAYER
ERR HOT	PLAYER OVERHEATING	ALLOW TO COOL DOWN
ERR EE EE	COMMUNICATION PROBLEM	TURN IGNITION OFF TO RESET, CHECK CABLE CONNECTION. IF OK, REPLACE CHANGER.
ERR E-01	DEADLOCK PROBLEM	REPLACE CHANGER.
ERR E-02	DISC EJECT PROBLEM	REPLACE CHANGER.
ERR E-06	ELEVATOR PROBLEM	REPLACE CHANGER.
ERR E-07	MAGAZINE EJECT PROBLEM	CHECK THAT THE MAGAZINE IS OK. IF OK, REPLACE CHANGER.
ERR PLAY	DISCS CANNOT PLAY	CHECK DISC LOADING, OR TRY ANOTHER DISC. IF OK, REPLACE CHANGER.

REMOVAL AND INSTALLATION

DOOR MOUNTED SPEAKER

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

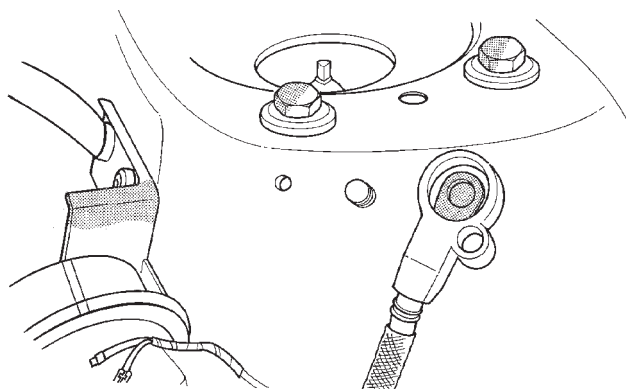
REMOVAL

(1) Disconnect and isolate the battery negative remote cable (Fig. 3).

(2) Carefully, pry speaker grille away from door trim panel (Fig. 4).

(3) Remove four speaker retaining screws.

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



958A-18

Fig. 3 Battery Negative Remote Cable Removal

INSTALLATION

For installation reverse above procedures. Ensure speaker is in the proper position and screws are tight.

REMOVAL AND INSTALLATION (Continued)

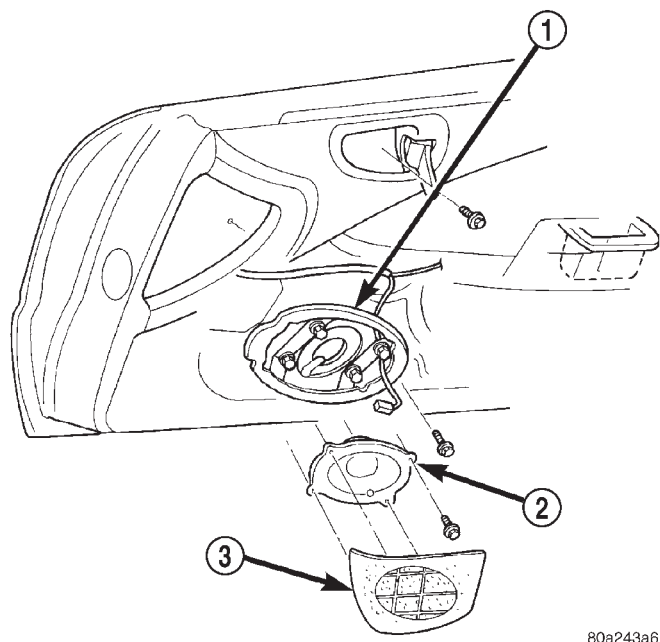


Fig. 4 Door Mounted Speaker

- 1 - FRONT DOOR SPEAKER BRACKET
- 2 - SPEAKER
- 3 - GRILLE

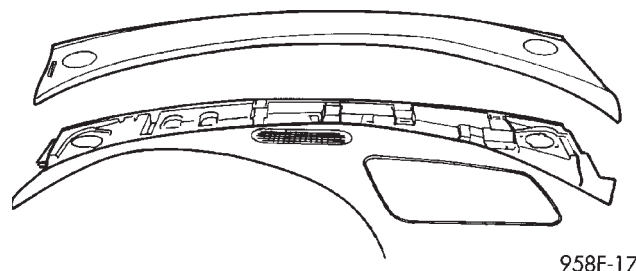


Fig. 5 Instrument Panel Top Cover

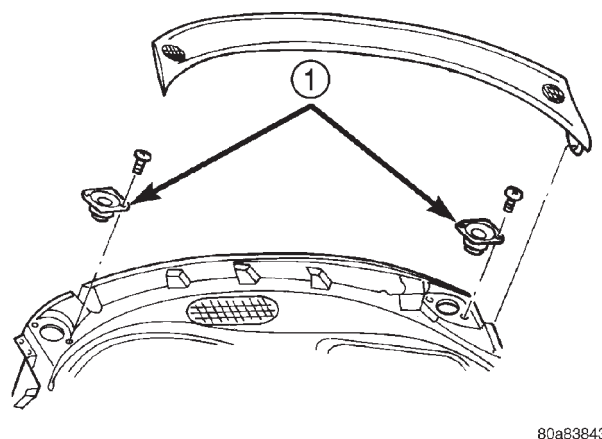


Fig. 6 Instrument Panel Speakers

- 1 - SPEAKER

INSTRUMENT PANEL SPEAKER

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

REMOVAL

- (1) Disconnect and isolate the battery negative remote cable.
- (2) Using a trim stick (special tool #C-4755) or suitable tool, gently pry out and remove both left and right A-pillar trim moldings.
- (3) Remove instrument panel top cover:
 - (a) Remove screw from right side of the top cover.
 - (b) Carefully, pry up each end of top cover to disengage clips (Fig. 5).
 - (c) Lift rear edge of top cover using a trim stick along rear edge.
 - (d) While lifting rear edge slide top cover rearward to disengage front clips and remove the top cover.
- (4) To remove speaker, remove two retaining screws. Lift up speaker and disconnect wire connector (Fig. 6).

INSTALLATION

For installation, reverse the above procedures.

MANUAL ANTENNA AND MAST

REMOVAL

- (1) Inside trunk, pull the right side trunk liner aside.
- (2) Unplug antenna lead from base of antenna body.
- (3) Remove antenna mast by unscrewing mast from antenna body. Use tape (electrical) to prevent scratching of the mast base.
- (4) Remove cap nut and adapter (Fig. 7).
- (5) Pull antenna body down through the quarter panel and remove.

INSTALLATION

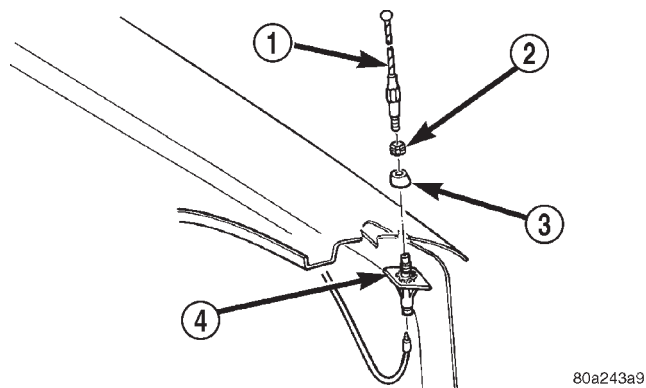
For installation, reverse the above procedures. Check that the locating tab is in-line with the slot in the body before installing antenna. Tighten cap nut to 7 N·m (65 in. lbs.).

RADIO

REMOVAL

- (1) Disconnect and isolate the battery negative remote cable.
- (2) Remove center bezel by pulling straight back (Fig. 8).
- (3) Remove two radio mounting screws (Fig. 9).

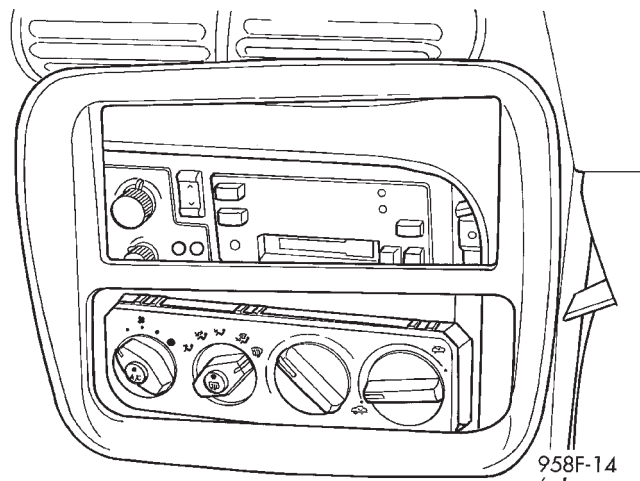
REMOVAL AND INSTALLATION (Continued)



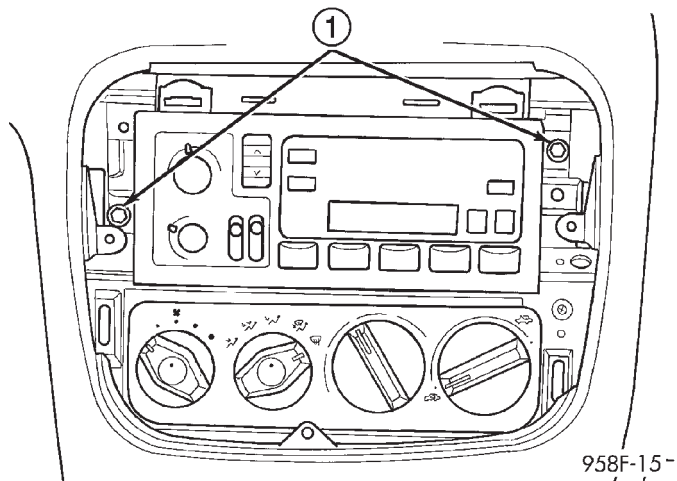
80a243a9

Fig. 7 Antenna Mounting Removal

- 1 - MANUAL MAST
- 2 - ANTENNA NUT
- 3 - ADAPTER
- 4 - ANTENNA BASE



958F-14

Fig. 8 Center Bezel Removal

958F-15-

Fig. 9 Radio Assembly

- 1 - MOUNTING SCREWS

(4) Pull radio from panel and disconnect wire connectors and antenna lead from radio.

(5) Remove radio from vehicle.

INSTALLATION

For installation, reverse the above procedures.

REAR QUARTER PANEL SPEAKER(S)

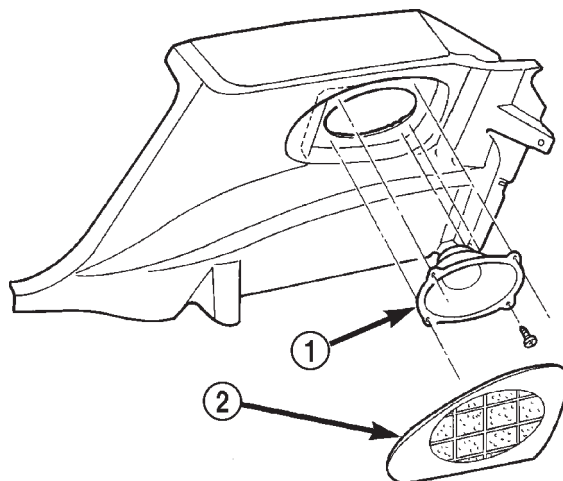
CAUTION: Do not operate the radio with speaker leads detached. Damage to the output devices may result.

REMOVAL

(1) Disconnect and isolate the battery negative remote cable (Fig. 3).

(2) Remove rear quarter panel speaker grille.

(3) Remove four retaining screws (Fig. 10).



80a243a7

Fig. 10 Rear Speakers

- 1 - SPEAKER
- 2 - GRILLE

(4) Disconnect wire connector and remove speaker.

INSTALLATION

For installation reverse the above procedures. Be sure that the wire connectors are facing rearward in vehicle, and the screws are tightened.

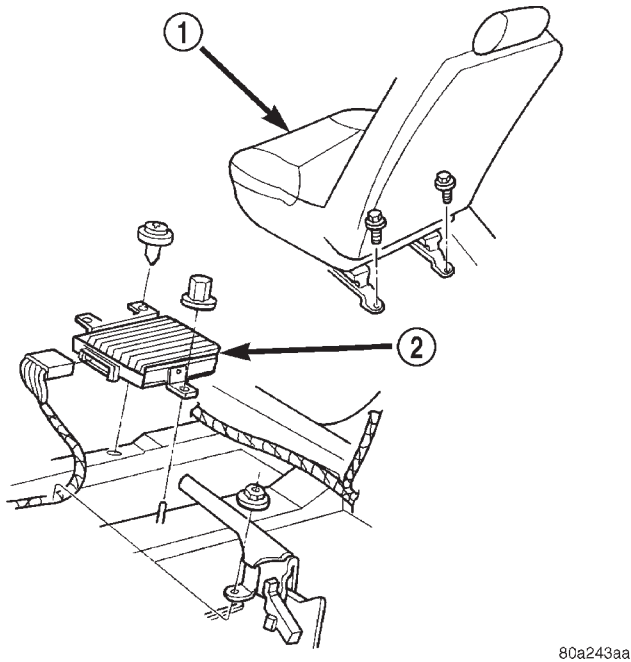
REMOTE AMPLIFIER**REMOVAL**

(1) Disconnect and isolate the battery negative remote cable.

(2) Remove the right front seat. Refer to Group 23-Body, Manual Front Seat Removal and Installation.

(3) Remove the two front attaching screws and loosen the rear retaining nut (Fig. 11) to amplifier.

REMOVAL AND INSTALLATION (Continued)

**Fig. 11 Amplifier Location**

- 1 – PASSENGER SEAT
2 – AMPLIFIER

(4) Disconnect the electrical connector and remove amplifier from vehicle.

INSTALLATION

- (1) For installation, reverse the above procedures.

- (2) Tighten amplifier screws to 4 N·m (40 in. lbs.) torque.
(3) Push nut onto stud until seated.
(4) Reinstall front seat.

REMOTE CD CHANGER AND MOUNTING BRACKET**REMOVAL**

- (1) Disconnect and isolate the battery negative remote cable.
(2) Remove the instrument cluster hood. Refer to Group 8E, Instrument Panel and Systems for Removal and Installation.
(3) Remove the two CD changer attaching screws located under the HVAC control.
(4) Slide the CD changer/power outlet assembly rearward in the vehicle.
(5) Disconnect CD cable, cigar lighter / power outlet, and the light socket assembly wire connectors.
(6) Remove the CD changer and mounting bracket from vehicle.

INSTALLATION

For installation, reverse the above procedures.

