



AUDIO SYSTEM

CONTENTS

	page		page
ANTENNAS	4	SPEAKERS	7
RADIOS	1		

RADIOS

INDEX

	page		page
Description	1	Radio Removal	1
Interference Elimination	1	Test	1

DESCRIPTION

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

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.

Ground straps are mounted from radio chassis to instrument panel support structure, engine to frame and engine cradle. These 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.

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.

TEST

Whenever a radio malfunction occurs:

(1) Check fuses first, number 2, 8, 13 and the circuit breaker in cavity 23.

(2) Check that the radio wire connector are properly connected before starting normal diagnosis and repair procedures.

Refer to Radio Diagnosis Chart (Fig. 1) and/or Radio Connector Circuit Chart (Fig. 2). For wiring circuits refer to Group 8W, Wiring Diagrams.

RADIO REMOVAL

(1) Remove center bezel by pulling straight back (Fig. 3).

(2) Remove two radio mounting screws (Fig. 4).

(3) Pull radio from panel and disconnect wiring, ground strap and antenna lead from radio.

(4) Remove radio.

(5) For installation reverse above procedures.

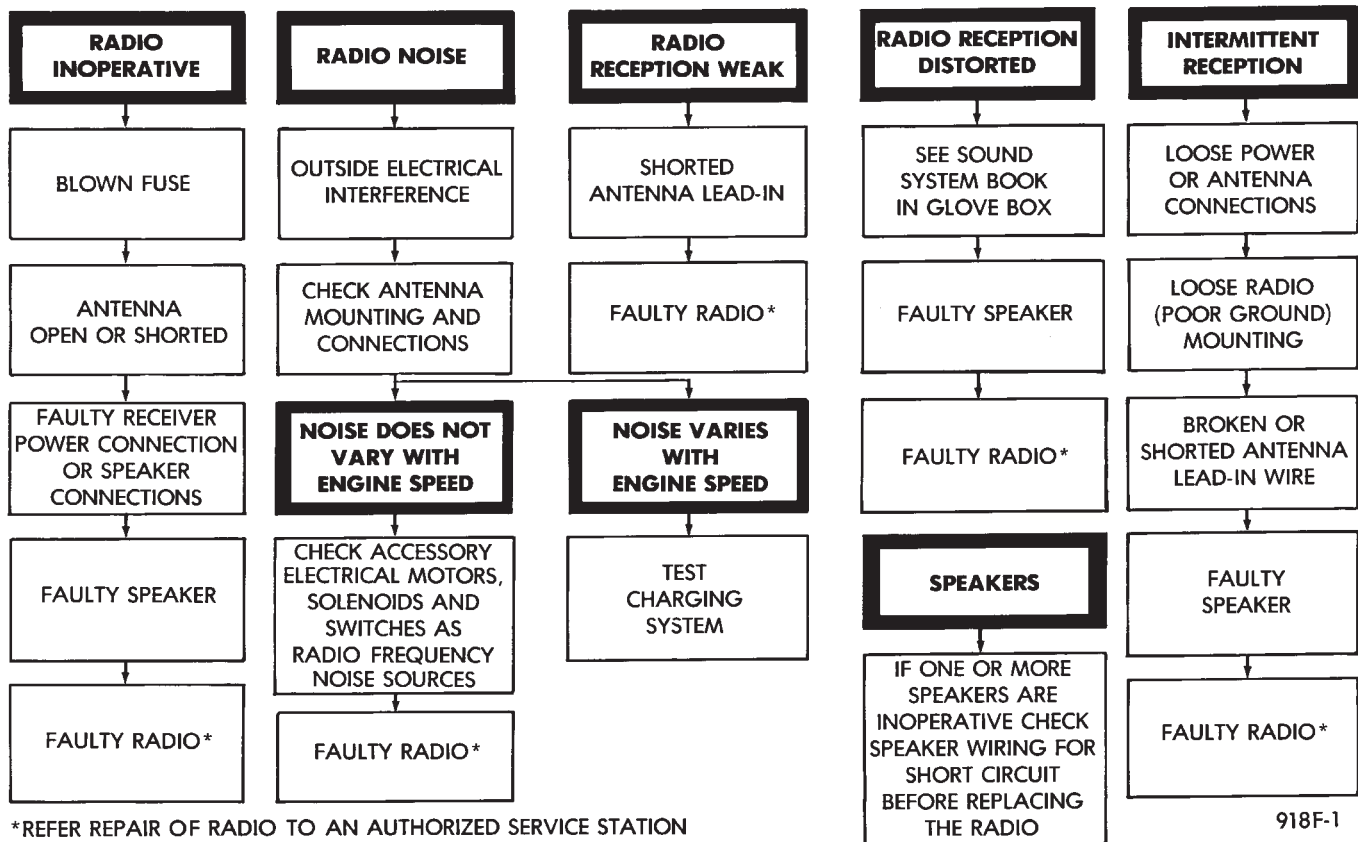


Fig. 1 Radio Diagnosis

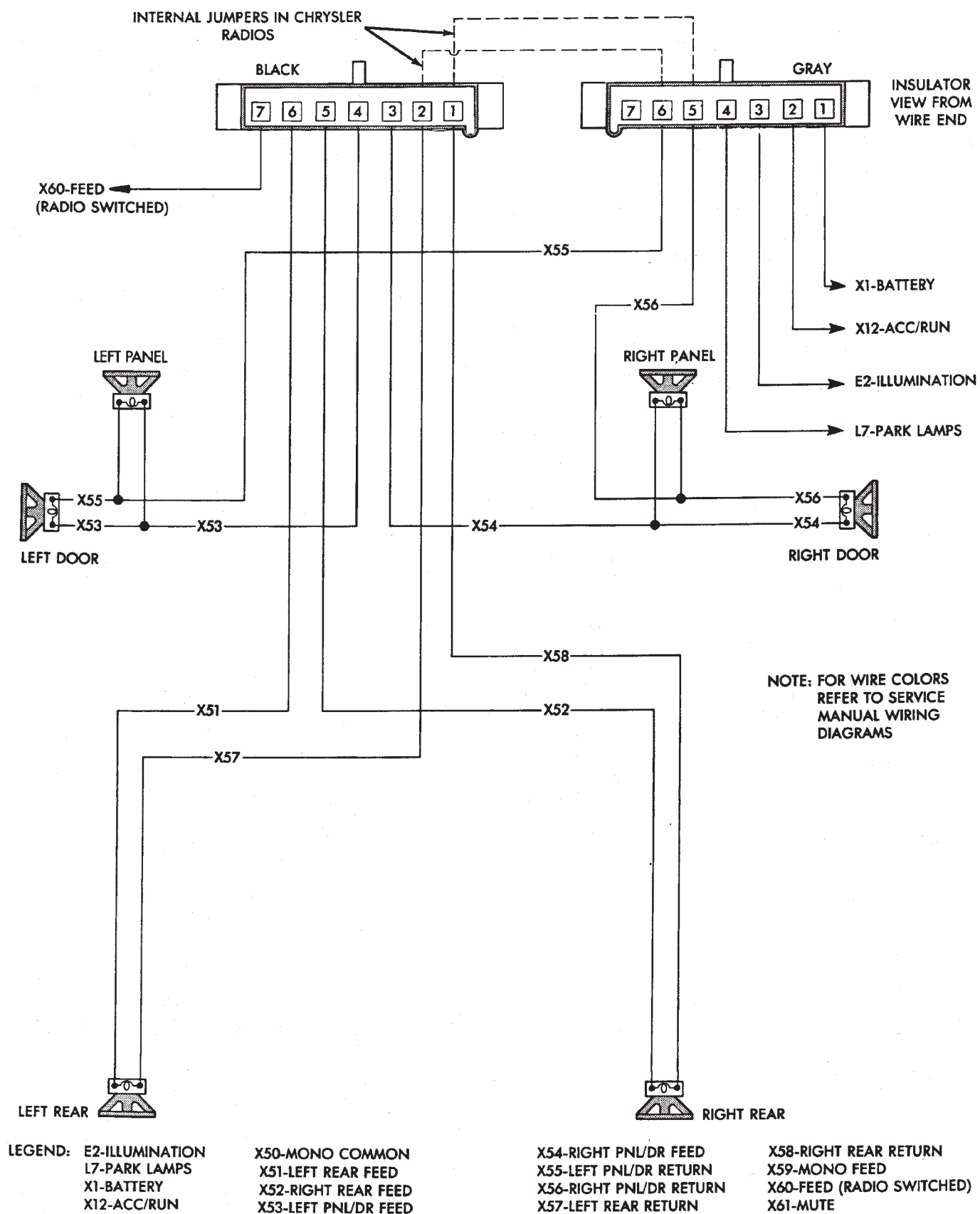


Fig. 2 Radio Connector Circuits

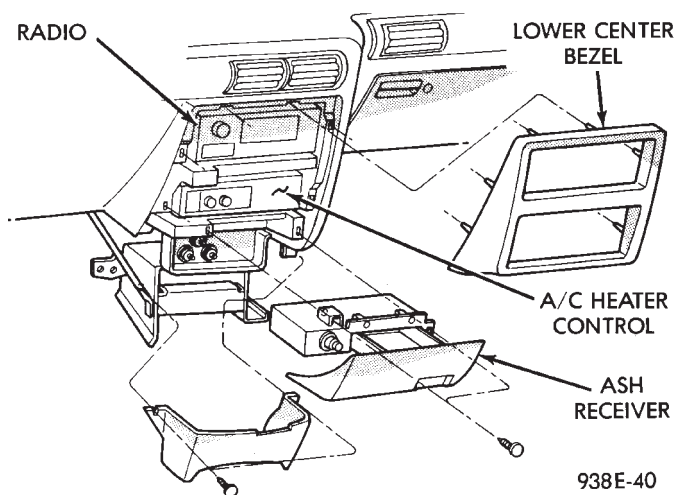


Fig. 3 Center Bezel Removal

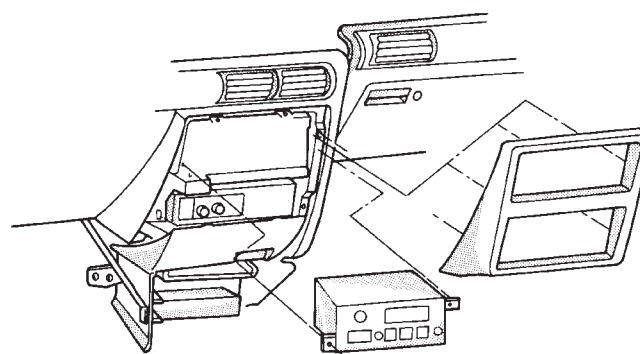


Fig. 4 Radio Assembly

938E-40

938F-16

ANTENNAS

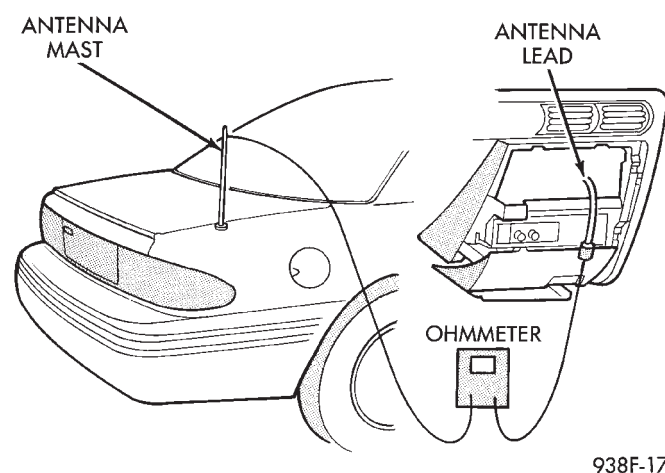
INDEX

	page		page
Manual Antennas Test	4	Power Antenna Removal	6
Power Antenna	4	Power Antenna Test	6
Power Antenna Mast Removal	6	Removal	4

MANUAL ANTENNAS TEST

Check for short or open circuits with an ohmmeter or continuity light once the antenna cable is disconnected from the radio as follows:

(1) Continuity should be present between the antenna mast and radio end pin of antenna cable plug (Fig. 5).



938F-17

Fig. 5 Antenna Test Points

(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

REMOVAL

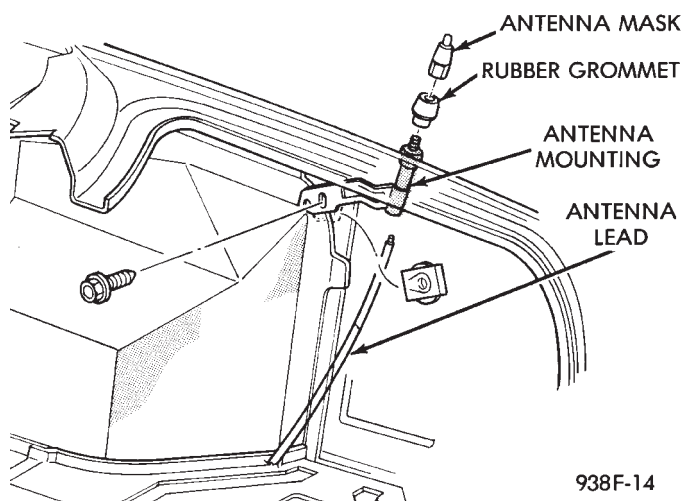
The rubber bezel grommets are not interchangeable between vehicle models.

- (1) Inside trunk, pull trunk liner aside.
- (2) Unplug antenna lead from base of antenna mast.
- (3) Remove antenna mast by unscrewing mast from antenna body.
- (4) Remove screw from mounting bracket (Fig. 6).
- (5) Pull antenna body down through the rubber grommet.
- (6) For installation reverse above procedures. Check that the grommet locating tab is in-line with the slot in the body before installing antenna.

POWER ANTENNA

The power operated radio antenna (Fig. 7) is a telescoping type antenna, extended and retracted by a reversible electric motor.

The Automatic Power Antenna is controlled by a combination of an internal relay and limit switches which, are built into the antenna motor housing. This antenna is actuated when the radio is switched ON and with the ignition switch in ON or ACCESSORY position. When

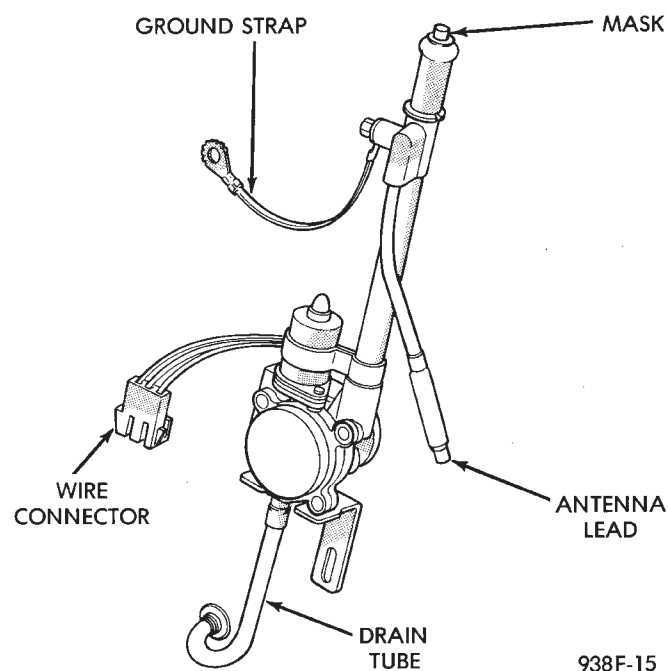
**Fig. 6 Antenna Mounting Removal**

the ignition switch or the radio is turned OFF the antenna mast should retract fully.

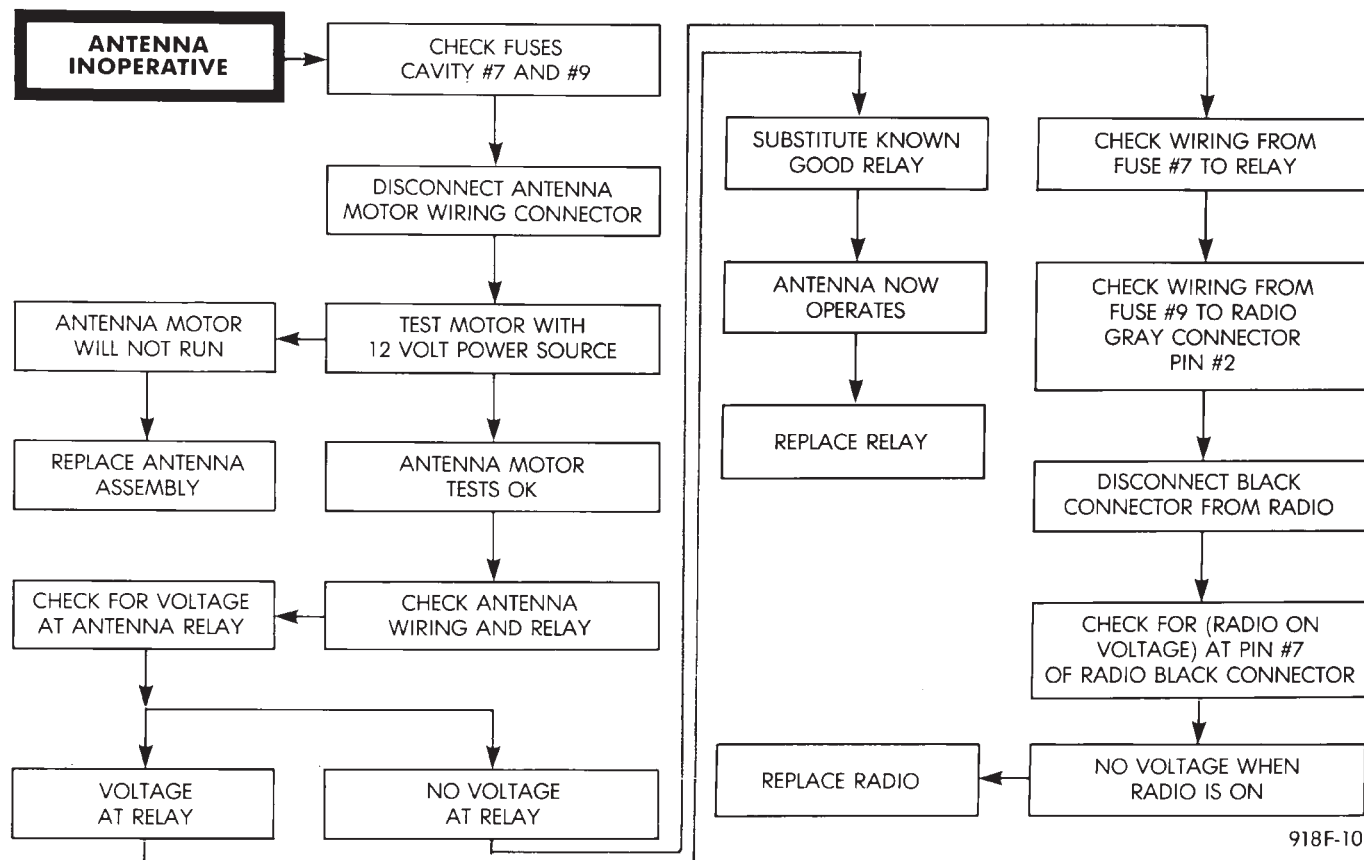
Many antenna problems may be avoided by frequent cleaning of the antenna mast telescoping sections. Clean the antenna mast sections with a clean soft cloth.

Before an antenna is removed, the antenna performance should be tested to decide if it is a reception problem or an operational problem.

Whenever a operational malfunction occurs, first verify that the radio antenna wire harness is properly connected. Check all connectors before starting

**Fig. 7 Power Antenna Assembly**

normal diagnosis and repair procedures. Refer to Power Antenna Electrical Diagnosis Chart (Fig. 8).

**Fig. 8 Power Antenna Electrical Diagnosis**



POWER ANTENNA TEST

(1) To extend antenna, using jumper wires, attach one end to a battery positive source and the other to red and green wire terminals. The second lead connect it to ground and the black wire terminal.

(2) To retract antenna attach the battery positive source to the red wire terminal. The second lead connect it to ground and the black wire terminal.

(3) If the motor will not operate, replace the antenna assembly.

(4) If the motor runs freely and the antenna does not extend or retract, the mast or drive assembly is at fault. Remove the mast and verify that all the drive teeth are intact. If not replace mast.

(5) If the mast jumps or travel rate is slow during operation or the motor labors.

(a) Check for bent mast. If bent replace mast.

(b) Check for dirty mast and clean it as necessary. If corroded, replace mast.

(c) If cleaning the antenna sections does not solve the problem, the antenna mast should be replaced.

(6) If mast fails to extend or retract completely, or motor continued to operate after full extension or retraction of mast. Check for broken teeth on the mast drive rod or bent mast.

(7) If the mast checks good, the antenna assembly should be replaced.

(8) Upon establishing that the fault is in the antenna assembly, it may be traced to one or more of the following conditions:

(a) Broken lead-in wire or shielding.

(b) Grounded lead-in wire or mast.

(c) Moisture in support tube or lead-in assembly.

(d) Poor connection at antenna lead-in assembly or shielding ground.

POWER ANTENNA REMOVAL

The rubber bezel grommets are not interchangeable between vehicle models.

(1) Disconnect battery negative cable.

(2) Inside trunk, pull trunk liner aside.

(3) Unplug antenna lead from pigtail connector, disconnect wire connector, remove drain tube from grommet (Fig. 9).

(4) Remove screws attaching ground strap and antenna brace.

(5) Pull antenna body down through the rubber grommet.

(6) For installation reverse above procedures. Check that the grommet locating tab is in-line with the slot in the body before installing antenna. Tighten antenna bracket ground strap screws to 4 N•m (40 in. lbs.) torque.

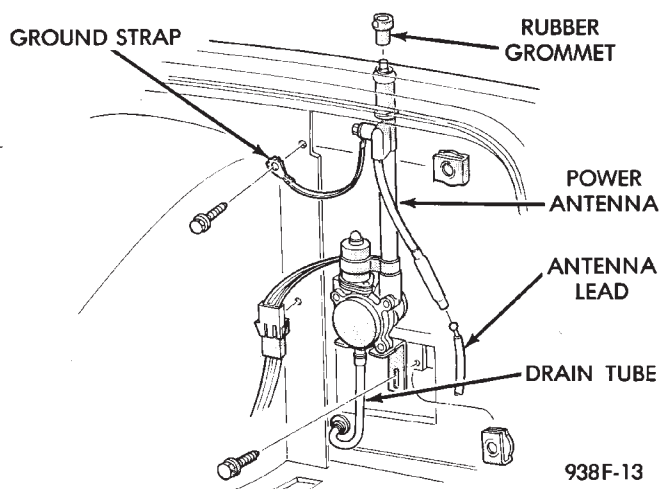


Fig. 9 Power Antenna

POWER ANTENNA MAST REMOVAL

(1) Remove cap nut.

(2) Turn ignition key to ACCESSORY position and turn on radio.

(3) While the mast is moving up pull upward to remove mast, contact spring and drive rod from the mast tube.

INSTALLATION

(1) Insert new drive rod into mast tube with drive teeth toward antenna motor (Fig. 10).

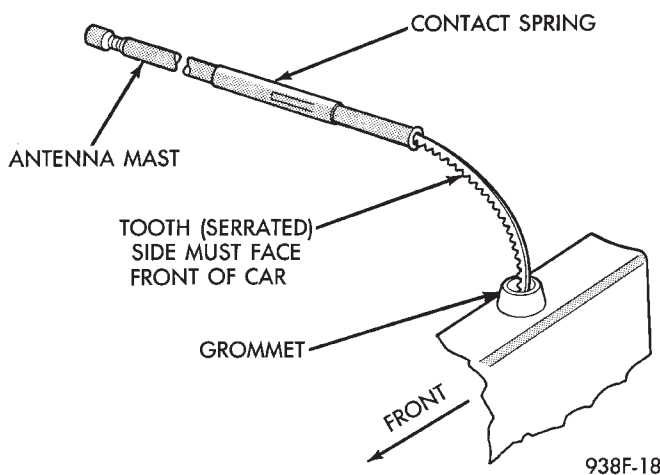


Fig. 10 Power Mast Replacement

(2) Turn off radio and guide mast into tube. The mast may not be fully lowered when first installed.

(3) Replace the cap nut and tighten to 1.5 N•m (15 in. lbs.) torque.

(4) Turn radio on and off to extend and retract antenna. Mast should be fully lowered after recycling.



SPEAKERS

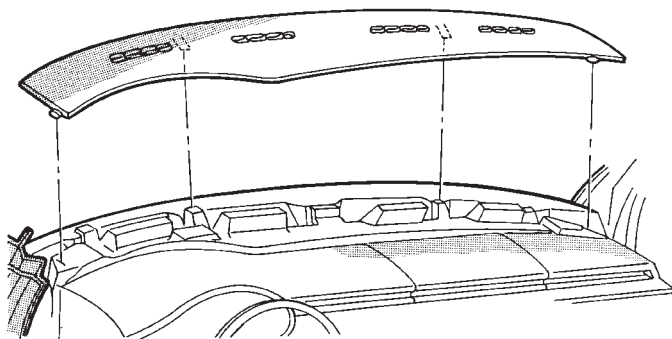
INDEX

	page		page
Amplifier Removal	8	Door Mounted Speaker Replacement	7
Condition: All Speakers Non-Operative	9	Infinity Remote Amplifier	8
Condition: Electrical Noise Distortion One Speaker ..	8	Instrument Panel Speaker Replacement	7
Condition: Mechanical Noise Distortion	9	Noise Distortion in All Speakers	8
Condition: One Speaker Non-operative	9	Rear Speaker Replacement	7

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

INSTRUMENT PANEL SPEAKER REPLACEMENT

- (1) Remove instrument panel top cover:
 - (a) Carefully, pry up each end of top cover to disengage clips (Fig. 11).



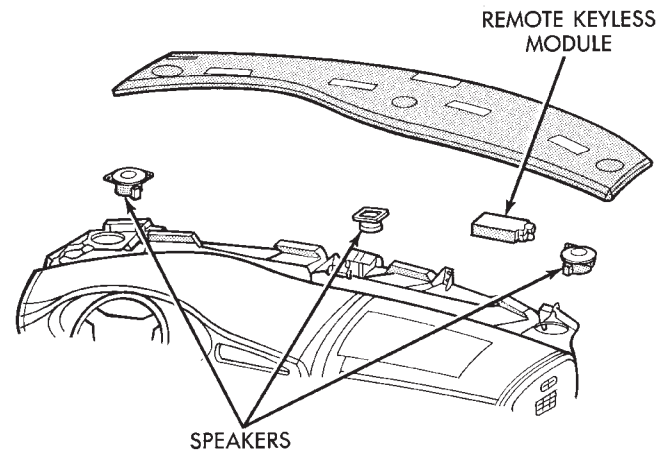
938M-5

Fig. 11 Instrument Panel Top Cover

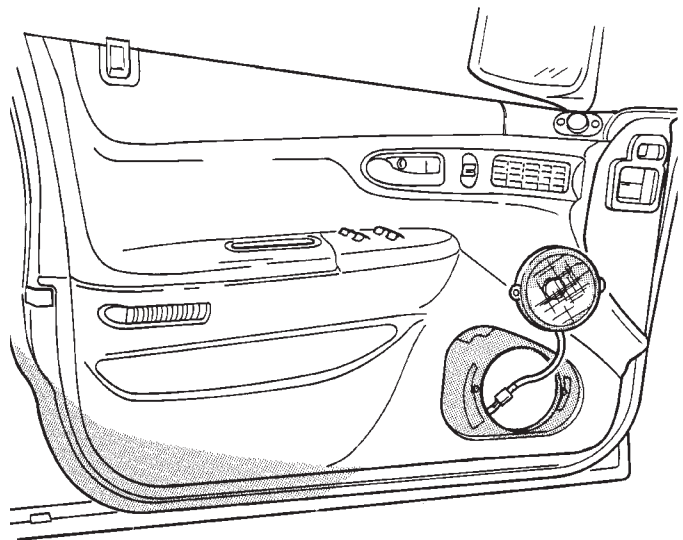
- (b) Lift rear edge of top cover using an trim stick along rear edge.
 - (c) While lifting rear edge slide top cover rearward to disengage front clips and remove the top cover.
- (2) Remove the two speaker retaining screws and lift up speaker to disconnect wire connector (Fig. 12).
- (3) Remove speaker.
- (4) For installation reverse above procedures.

DOOR MOUNTED SPEAKER REPLACEMENT

- (1) Carefully, pry speaker grille away from door trim panel (Fig. 13). Remove window crank handle if equipped.
- (2) Remove two speaker retaining screws.
- (3) Pull speaker away from door and disconnect wiring.
- (4) For installation reverse above procedures.



938F-19

Fig. 12 Instrument Panel Speakers

938F-20

Fig. 13 Door Mounted Speaker**REAR SPEAKER REPLACEMENT**

The wire connectors can be accessed through the trunk.



(1) Remove parcel shelf panel, refer to Group 23, Body. Vehicles with grilles, pry up on grilles to remove.

(2) Remove four retaining screws (Fig. 14).

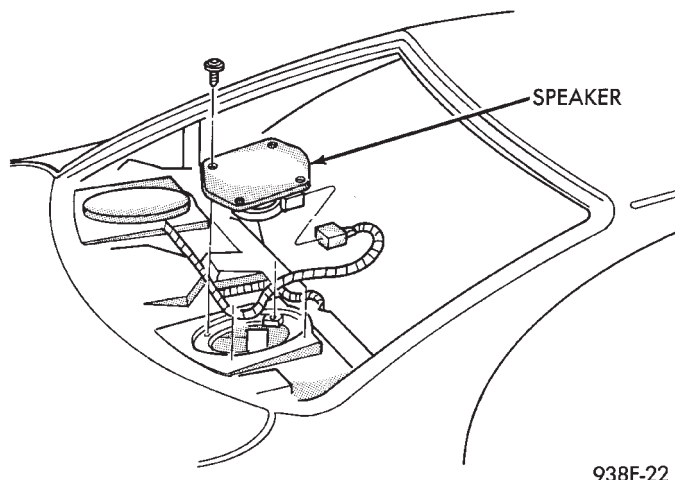


Fig. 14 Rear Speakers

(3) Disconnect wire connector and remove speaker.
(4) For installation reverse above procedures. Be sure that the wire connectors are facing forward in vehicle.

INFINITY REMOTE AMPLIFIER

The amplifier is located in the trunk on the left side wall of trunk and behind the liner.

When the radio system is ON, and all or some speakers are not operating or have a noise distortion refer to the diagnostic tests. The amplifier has the pin connections list on the case (Fig. 15).

AMPLIFIER REMOVAL

- (1) Pull aside left side trunk liner.
- (2) Loosen the three amplifier attaching bolts (Fig. 16).
- (3) Raise up amplifier to remove and disconnect the three electrical connectors.
- (4) For installation reverse above procedures. Tighten amplifier bolts to 4 N•m (40 in. lbs.) torque.

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 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

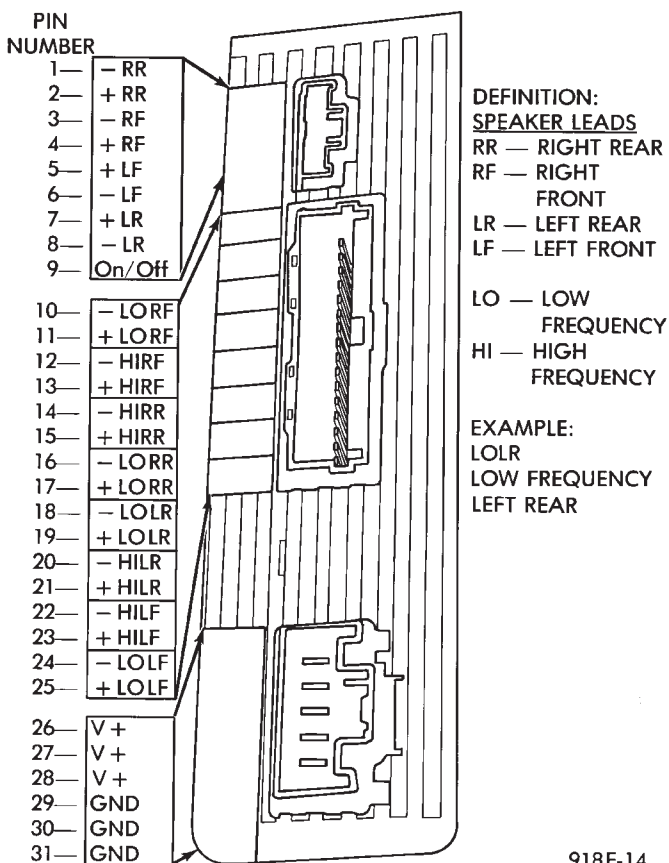


Fig. 15 Amplifier

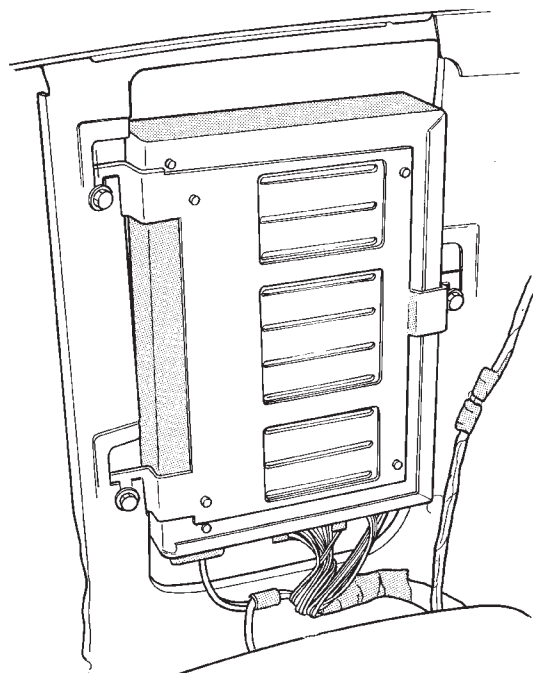


Fig. 16 Amplifier Location

CONDITION: 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 Fig. 15 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.
- No Short 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

CONDITION: MECHANICAL NOISE DISTORTION

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

CONDITION: 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 Fig. 15 for the appropriate pin numbers.
- If resistance is less than two ohms, test speaker for resistance.

- If OK repair wire. If not replace speaker.

CONDITION: 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 Pin 9 and Pin 28 of the amplifier for battery voltage
- Check Pin 29 for ground
- If voltage OK replace amplifier
- If pin 28 has battery voltage and pin 9 has 0 voltage. Refer to Power Antenna Diagnosis and test voltage at antenna connector. Repair wiring.
- If pin 9 has battery voltage and pin 28 has 0 voltage. Check pin 28 for short to ground.
- If shorted to ground repair wire
- If no short to ground check fuse number 8 for blown fuse. Check cigar lighter and horn prior to replacing amplifier.
- If fuse blows again replace amplifier

