AUDIO SYSTEMS

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GENERAL INFORMATION

DESCRIPTION

For operation of the factory installed radios refer to the Owners Manual supplied with the vehicle.

All radios receive IGN feed from the 10 amp #10 RADIO fuse.

All vehicles are equipped with an Ignition-Off Draw (IOD) fuse which is used when the vehicles are originally shipped from the factory. This fuse #F1, which is located in the Power Distribution Center, helps to prevent battery discharge during storage. For specific location refer to Group 8W - Wiring Diagrams.

The IOD fuse includes the radio memory circuitry and should be checked if the memory (time or radio station programming) is inoperative.

The radio is connected to fuse #8 in order to retain the radio's memory when the ignition switch is turned to OFF.

The electronically tuned (ETR) radio is self compensating. A radio trimmer adjustment is not required.

INTERFERENCE ELIMINATION

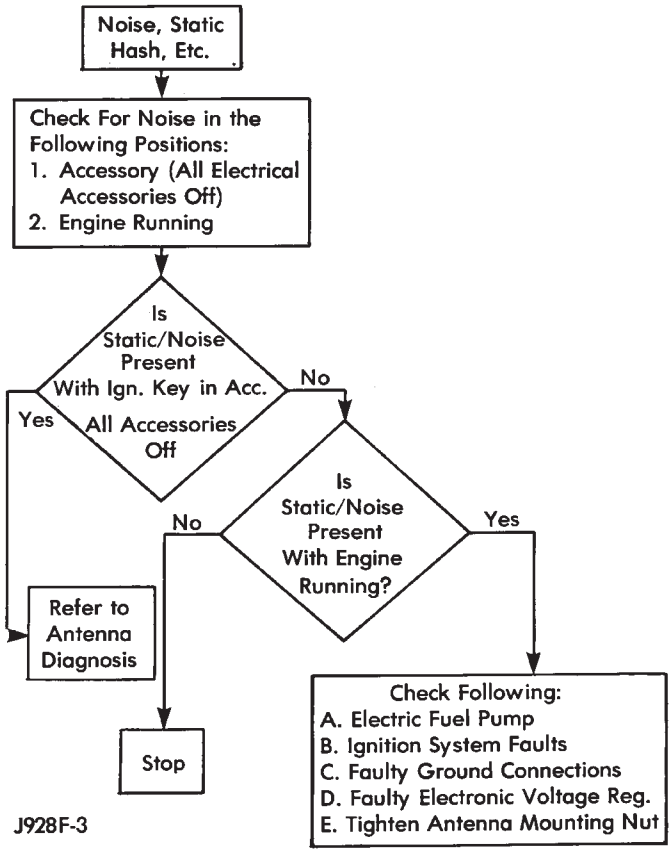
A number of components are used on vehicles equipped with a radio, to suppress radio frequency interference (static).

Capacitors are mounted in the generator and power mirror motors.

Radio resistance type spark plugs in the high tension circuit of the ignition system complete the interference suppression.

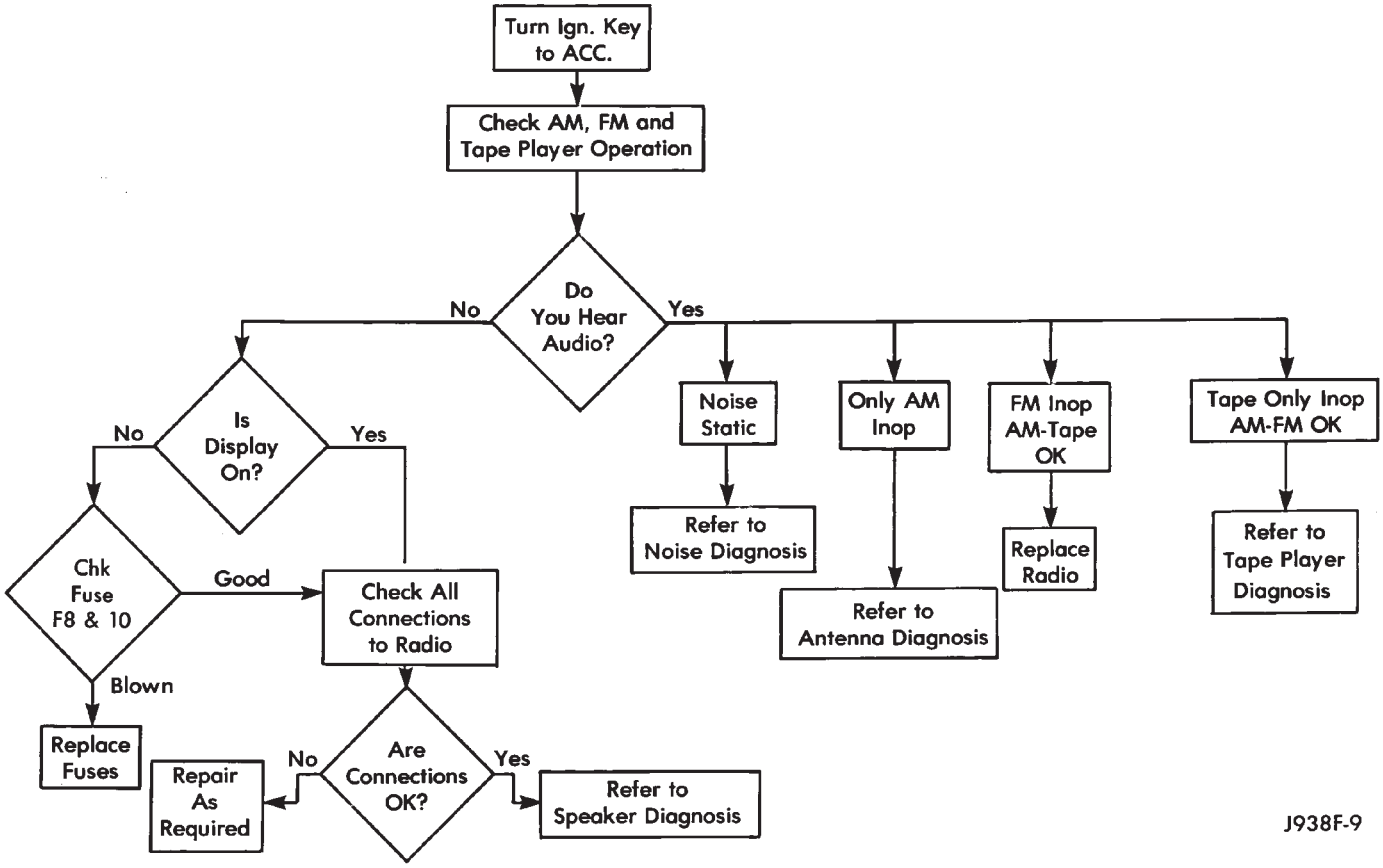
If radio noises are evident, isolate circuits with capacitors to be sure they are the cause. Faulty or deteriorated spark plug wires should be replaced.

RADIO NOISE DIAGNOSIS

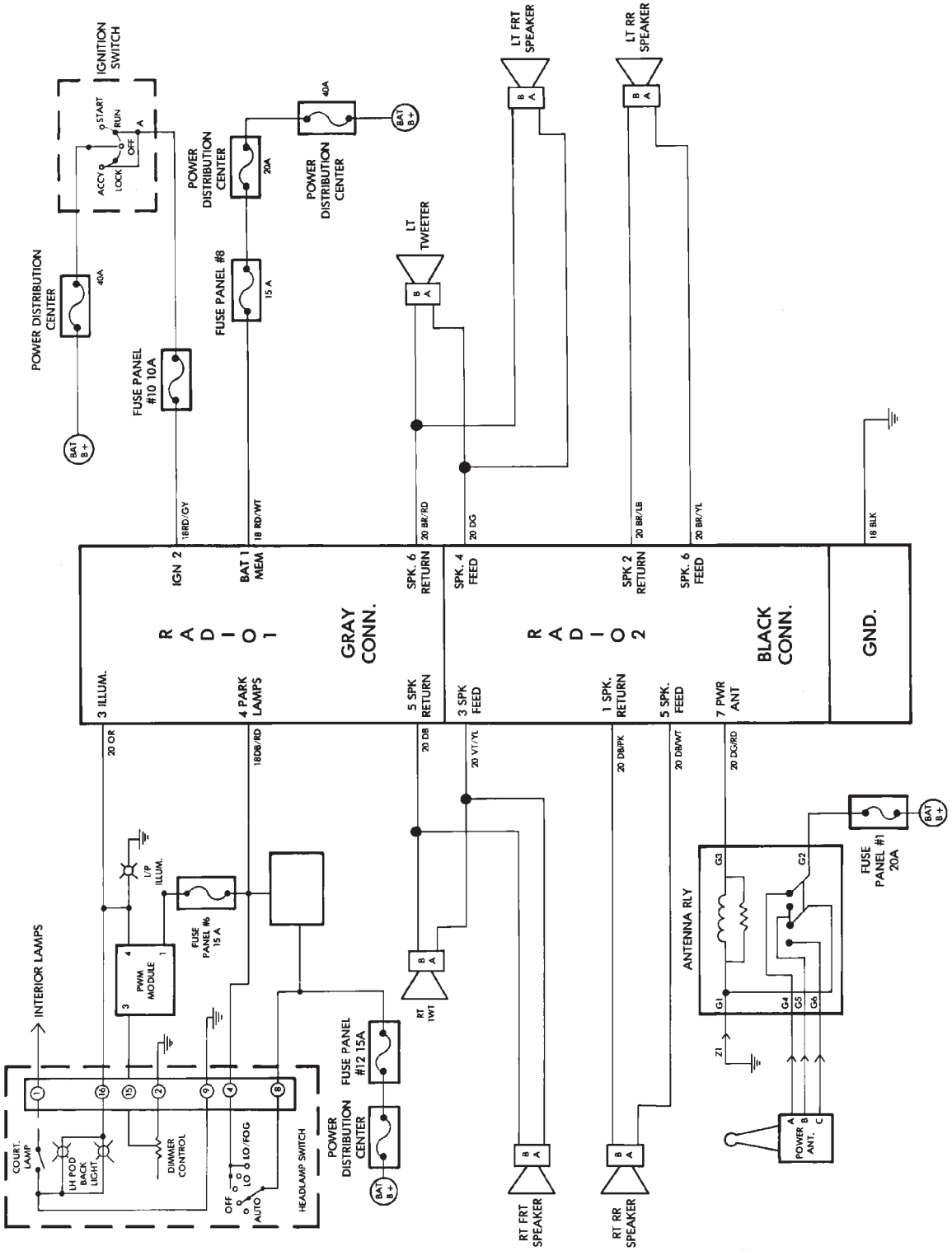


TEST PROCEDURES

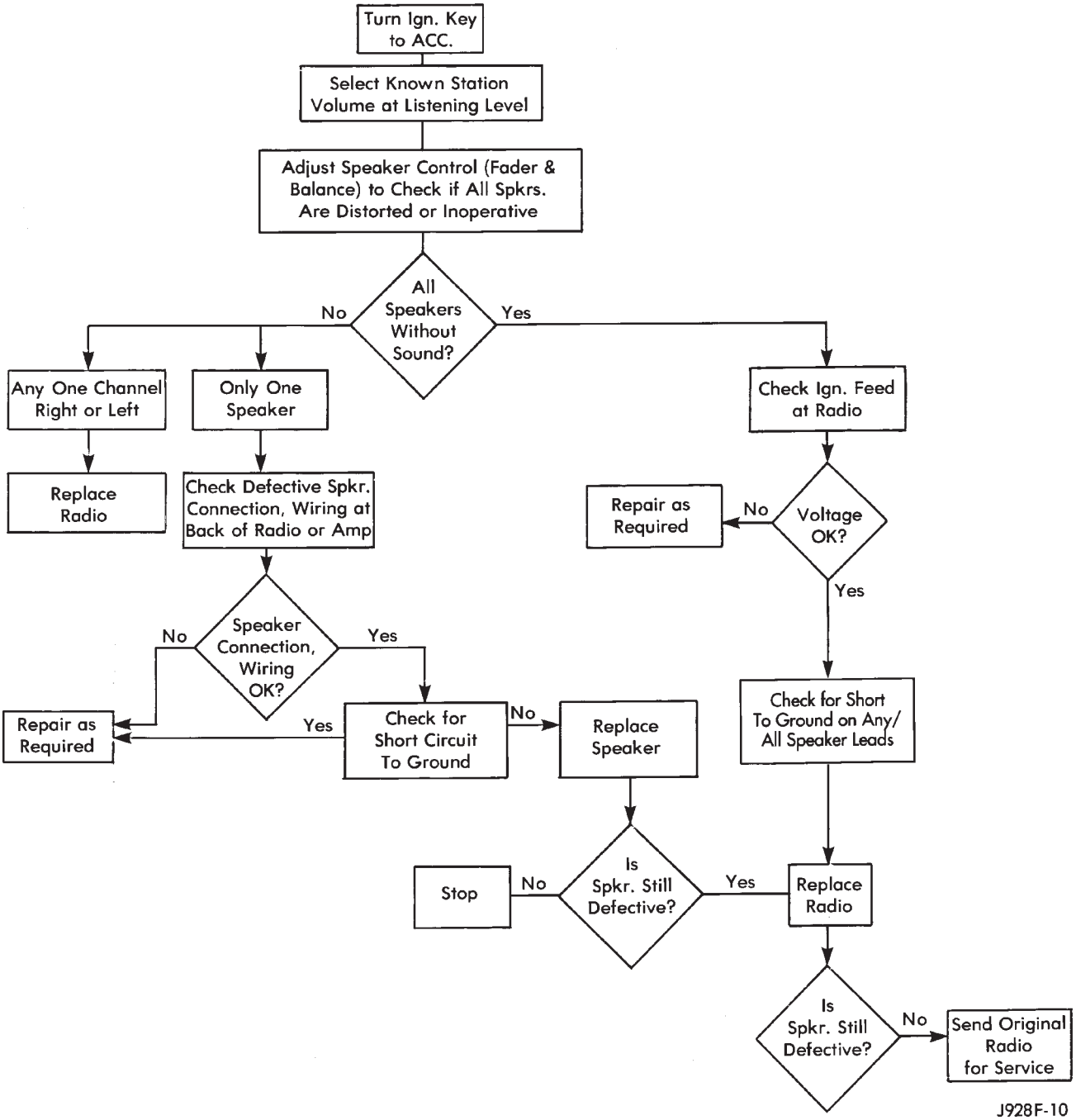
RADIO DIAGNOSIS



RADIO SCHEMATIC



SPEAKER DIAGNOSIS



AM/FM/STEREO—STEREO CASSETTE

Short Circuits

On some radios, if a speaker wire is shorted the audio output will automatically shut down. Turn fader and balance controls to mid position and volume at mid position. If display operates and there is no volume from any speaker proceed to the Short test.

Short Circuit Test

(1) Turn radio on to mid volume.

(2) Move balance and fader control to Left Front, Right Front, Right Rear, and Left Rear. If sound is heard from any speaker during any of these positions there is a short in one of the speaker feed wires.

(a) If front speakers have normal sound; one rear speaker has low sound and the other has no sound, then the speaker with low sound has a short in its feed line. Check wires to BLACK connector pins 5 and 6 for shorts to vehicle chassis.

(b) If rear speakers have normal sound; one front speaker has low sound and the other has no sound, then the speaker with low sound has a short in its

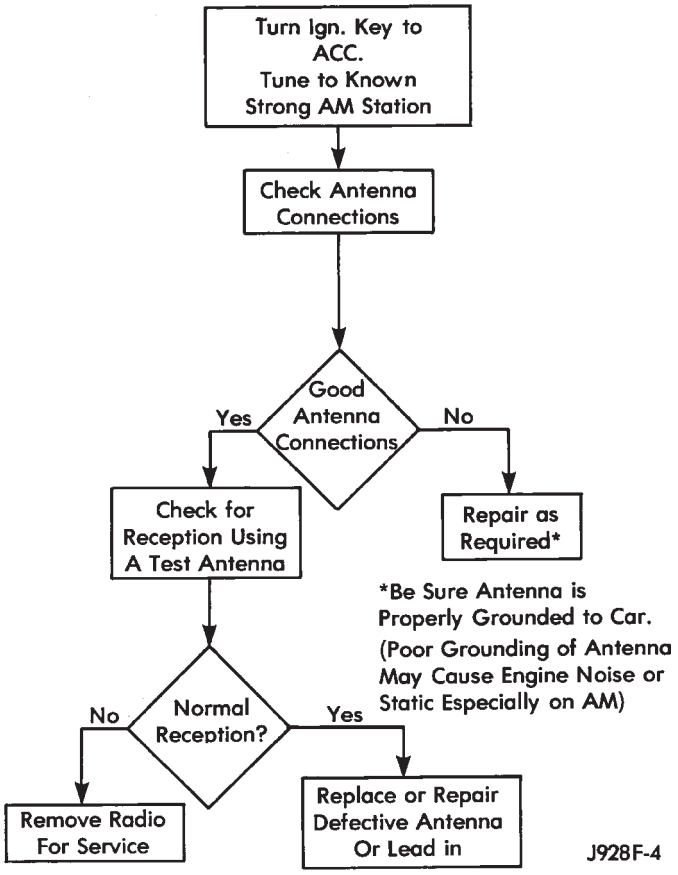
feed line. Check wires to BLACK connector pins 3 and 4 for shorts to vehicle chassis.

(3) If no sound is heard while adjusting the balance and fader controls there still may be a short in one of the 4 speaker return lines. Check speaker wires connected to GRAY connector pins 5 and 6 for shorts to vehicle chassis.

(4) If all the tests show no problem, replace radio.

ANTENNA TESTING

ANTENNA DIAGNOSIS



Antenna performance may be tested by substituting a known good antenna. Check 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 observed between the tip of the mast and radio end pin (Fig. 1).

(2) No continuity or a very high resistance of several megohms should be observed 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 on the fender.

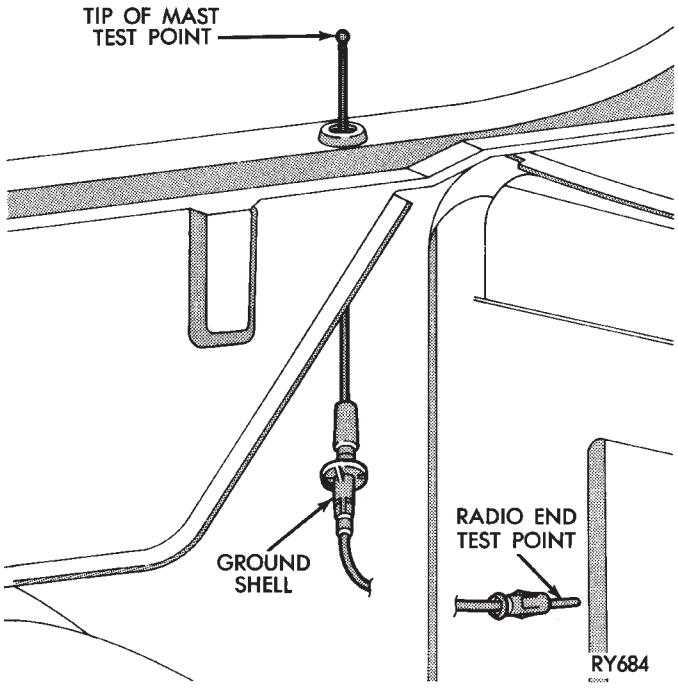
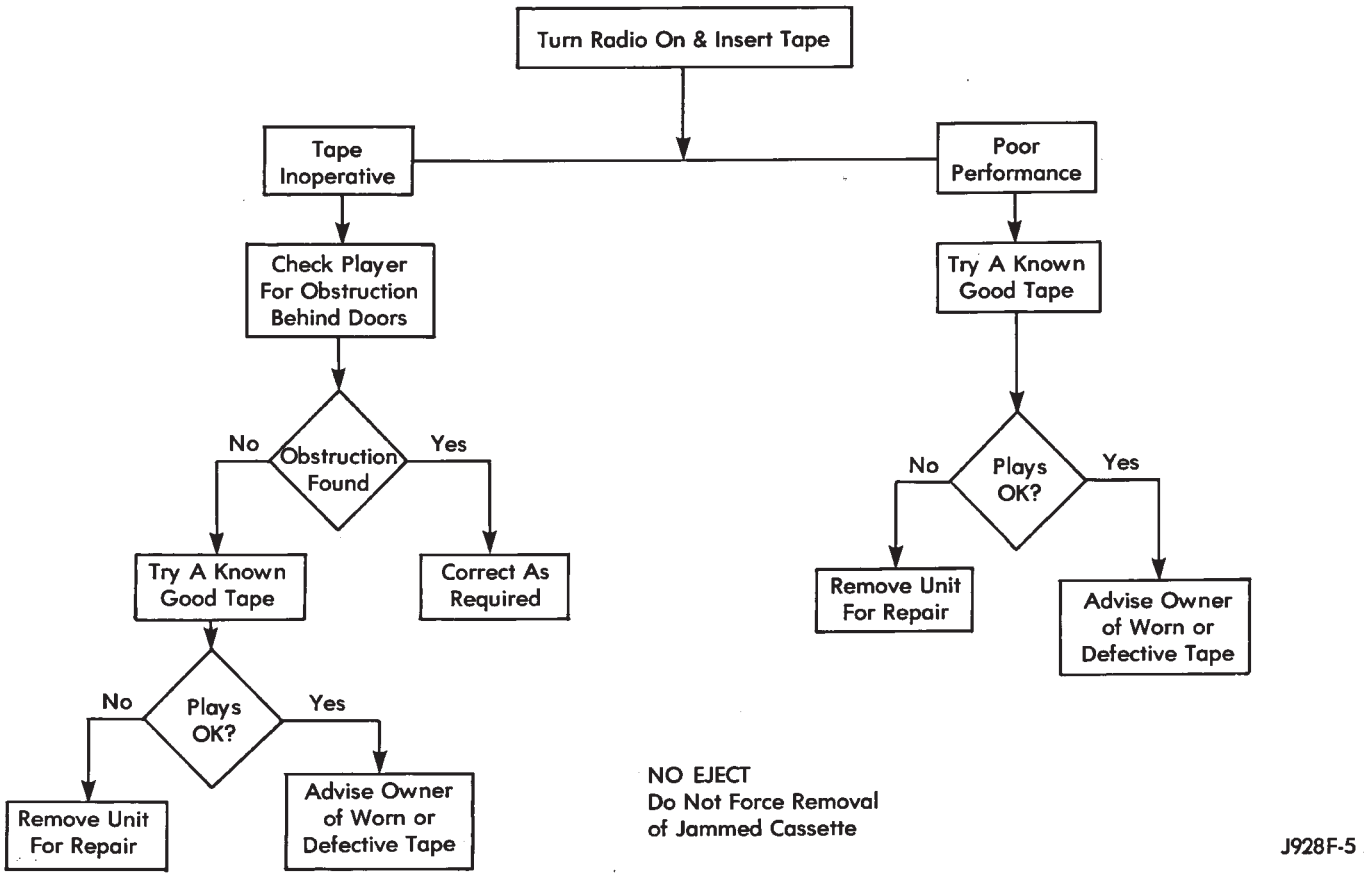


Fig. 1 Antenna Test Points

CASSETTE TAPE PLAYER DIAGNOSIS

TAPE PLAYER DIAGNOSIS



COMPACT DISC PLAYER DIAGNOSIS

WARNING: USE OF THE CONTROLS, ADJUSTMENTS, OR SERVICE PROCEDURES NOT SPECIFIED HERE OR IN THE OWNER MANUAL MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. REPAIR PROCEDURES SHOULD ONLY BE PERFORMED BY A TRAINED TECHNICIAN.

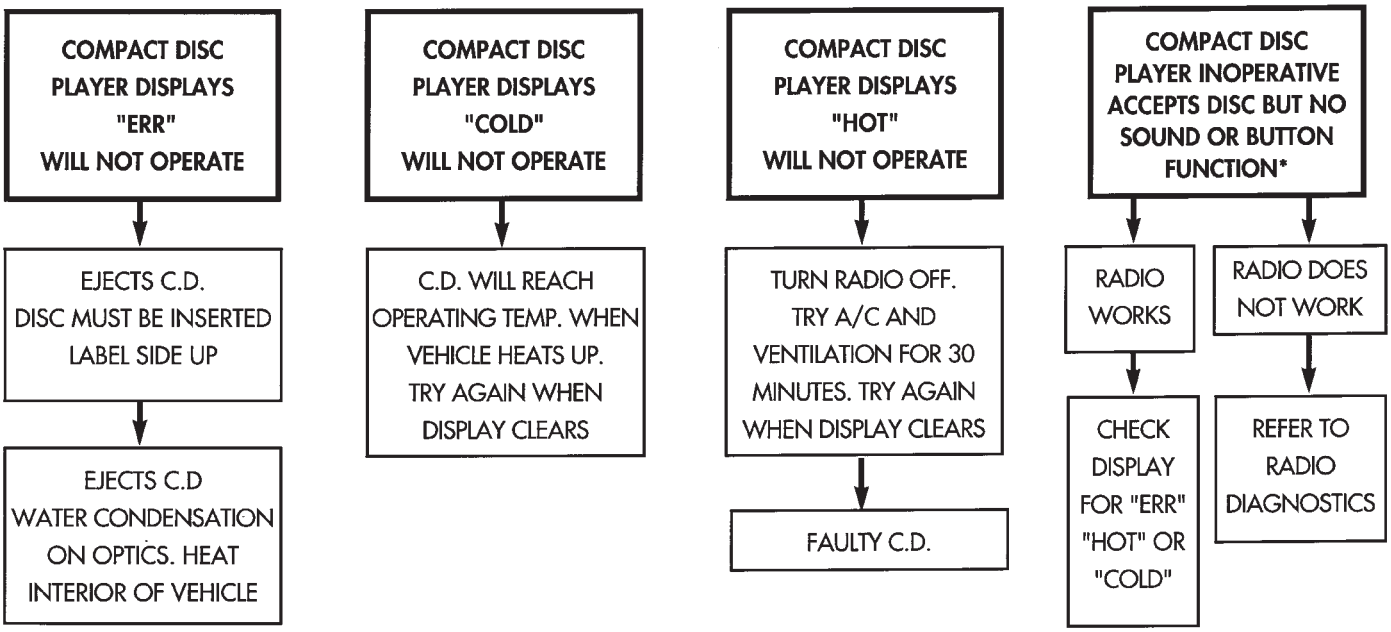
The CD player may eject the disc with a display of "ERR" under the following conditions:

- The surface of the disc is dirty or wet (moisture).
- The disc was inserted with the label side facing down.
- Damaged disc.
- Water condensation.
- The disc is defective.
- The CD player may skip or mute while playing a disc under severe vibration conditions, example: pot holes, railroad tracks.
- The CD player may skip or mute while playing due to dirt or skin oils on disc.
- If the CD player becomes too hot. At temperatures above 60°C (140°F) the CD player will shut down with a display of HOT until it cools down. Refer to the Compact Disc Player diagnosis chart.

COMPACT DISC PLAYER REPLACEMENT

The compact disc player is part of the radio. Perform Radio Replacement in this group.

COMPACT DISC PLAYER DIAGNOSIS



* RADIO VOLUME CONTROL MUST BE TURNED "ON" FOR C.D. TO OPERATE

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SERVICE PROCEDURES

RADIO REPLACEMENT

(1) Disconnect negative cable from the battery.
(2) Remove ash tray.
(3) Remove 6 screws holding center cluster bezel (Fig. 1).

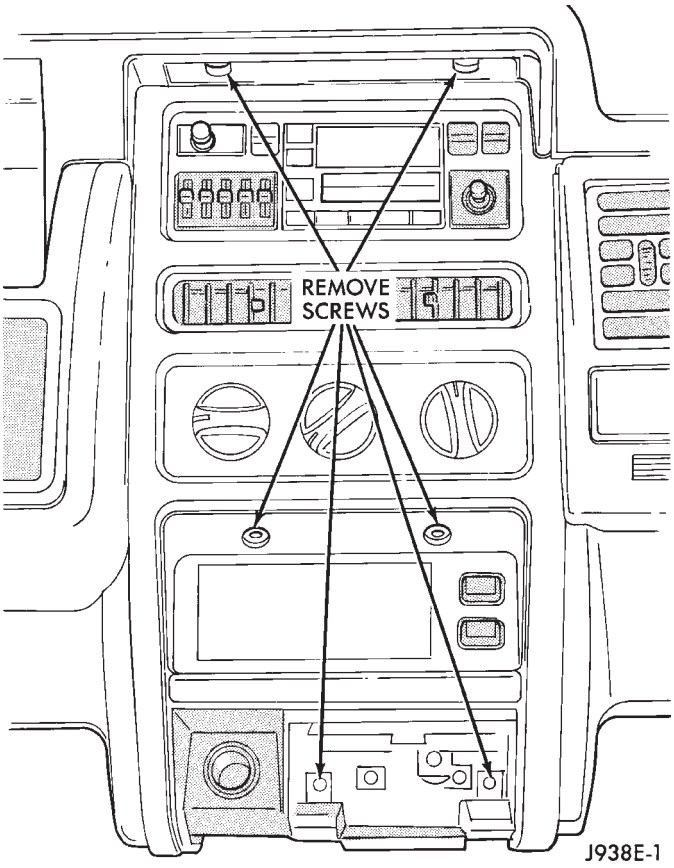

Fig. 1 Remove Center Bezel Retaining Screws

(4) Remove center bezel.
(5) Remove 2 screws from radio (Fig. 2).

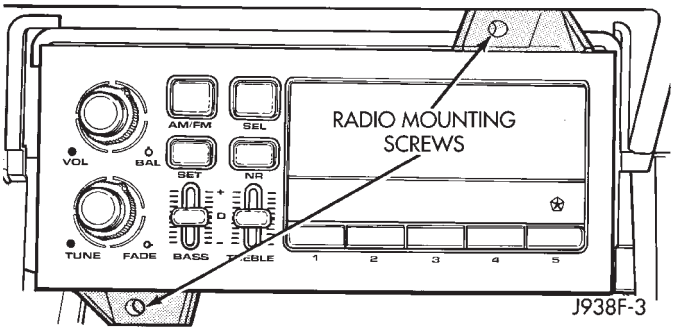

Fig. 2 Radio Removal

(6) Pull radio out far enough to gain access to the ground terminal on the rear of the radio.
(7) Remove ground clip from terminal on rear of radio and remove radio.

DOOR MOUNTED SPEAKERS

(1) Remove screw from demister opening at front of door (front door).
(2) Remove screw at top of trim panel near mirror (Fig. 3).

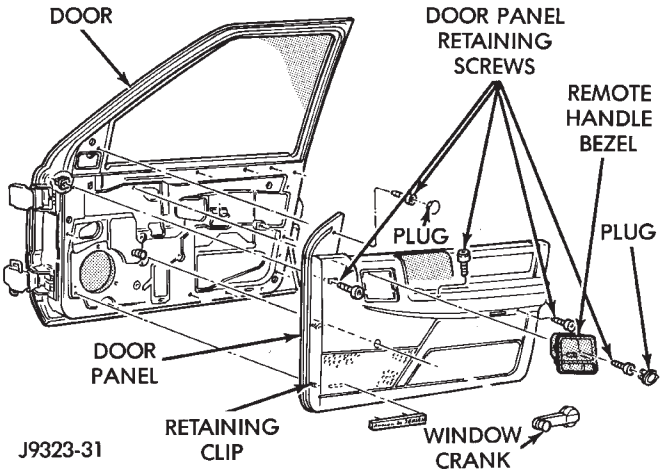

Fig. 3 Door Panel Removal

(3) Remove screw and door handle cover.
(4) Remove screw from under armrest.
(5) Remove screw from bottom of hand hold in armrest.
(6) Remove the trim panel with a wide flat blade tool (Fig. 4).

To aid in removal of the trim panel, start at the bottom of the panel.

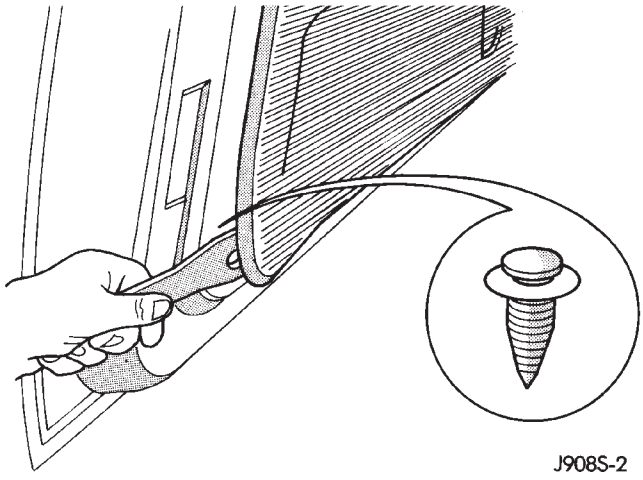

Fig. 4 Trim Panel Removal

(7) Remove screws holding speaker in door.
(8) Pull speaker out far enough to unplug connector.
(9) Install a new speaker.
(10) Install door trim panel by reversing the removal procedures.

INSTRUMENT PANEL MOUNTED TWEETERS

(1) Disconnect negative cable from the battery.

(2) Remove ash tray.

(3) Remove 6 screws holding center cluster bezel (Fig. 5).

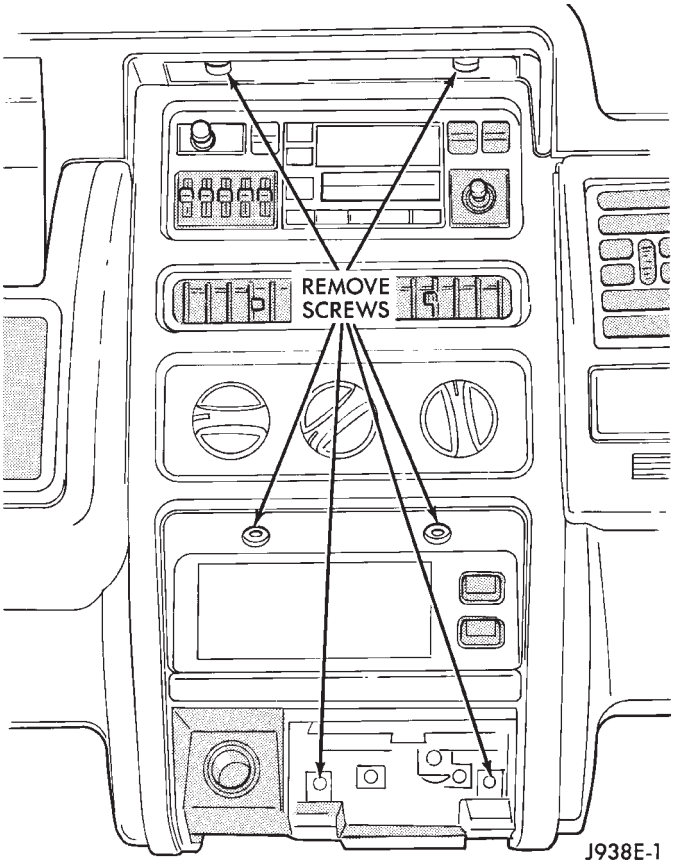

Fig. 5 Remove Center Bezel Upper Screws

(4) Remove center bezel.

(5) Remove 2 screws holding dash pad located behind top of center bezel.

(6) Gently pry defroster grille out of dash pad.

(7) Unplug sensors (if equipped) and set defroster grille aside.

(8) Remove 4 screws in defroster duct opening holding dash pad (Fig. 6).

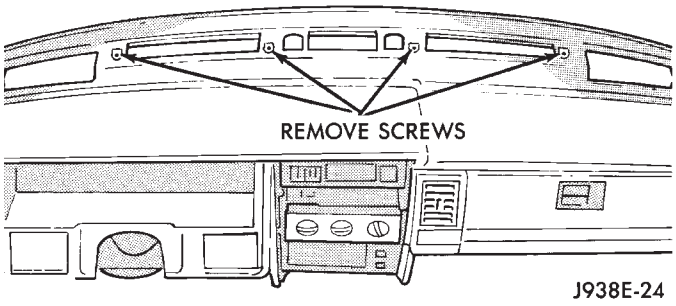

Fig. 6 Upper Dash Pad Attaching Screws

(9) Remove 3 screws above instrument panel cluster holding dash pad (Fig. 7).

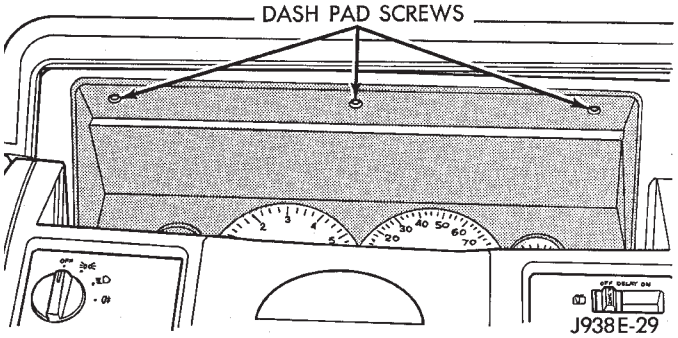

Fig. 7 Remove Screws Holding Dash Pad

(10) Open glove box and remove 2 screws holding dash pad.

(11) Remove dash pad.

(12) Remove 2 screws holding tweeter (Fig. 8).

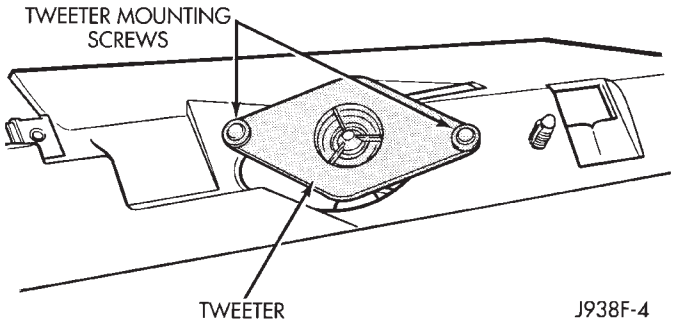

Fig. 8 Tweeter Removal

(13) Unplug tweeter connection and remove tweeter.

STANDARD RADIO ANTENNA

GENERAL INFORMATION

AM/FM radio model antennas must have a good ground to eliminate static. The antenna mast is connected to the inner wire of the co-axial cable and is not grounded to any part of the vehicle. The coaxial shield (the wire mesh) surrounding the center conductor wire of the antenna lead-in cable is grounded to the radio and the antenna base.

REPLACEMENT

(1) Remove the fender inner splash panel to gain access to the antenna base and cable.

(2) Remove the antenna mast, cap nut and escutcheon from the top of the fender (Fig. 1).

(3) Remove the passenger side kick panel.

(4) Disconnect the antenna lead (Fig. 2) by pulling apart while twisting the metal connectors. DO NOT PULL ON THE COAX CABLE.

(5) Pull the rubber grommet out of the kick panel.

(6) Remove the antenna assembly from the inside of the wheel well.

(7) To install the antenna, reverse the removal procedure.

(8) Verify antenna and radio operation.

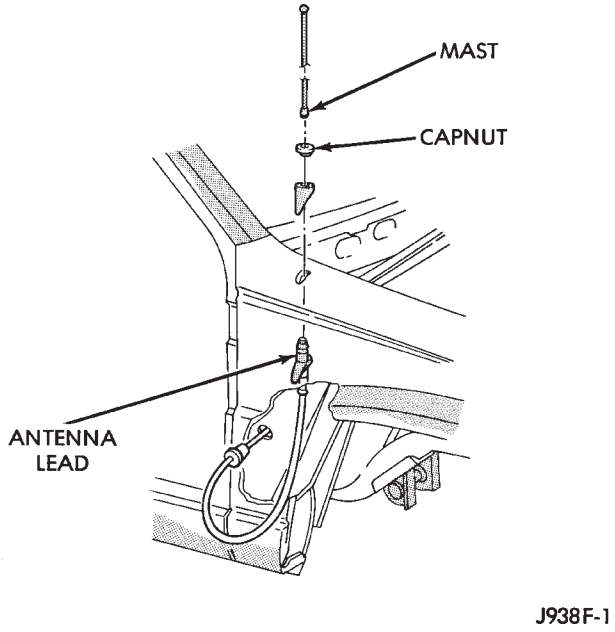

Fig. 1 Remove/Install Nut and Escutcheon

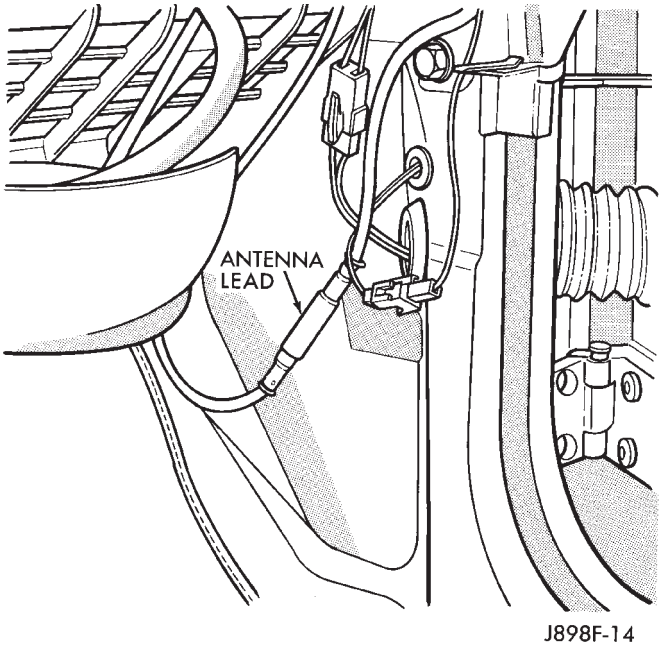

Fig. 2 Disconnect Antenna Lead—Typical

POWER RADIO ANTENNA

GENERAL INFORMATION

The power antenna is designed to raise automatically when both the ignition switch and the radio are turned ON. When the ignition is turned ON and the radio is turned OFF, the antenna will return to, or remain in, the retracted position.

The power antenna is a telescoping type antenna, extended and retracted by a reversible electric motor.

The antenna is controlled by a combination of an external relay and two limit switches that are built into the antenna motor housing. There is a gear-operated cam system to activate the switches. The limit switches are used to open the motor circuits when the antenna mast reaches the full UP position.

The antenna cannot be adjusted to an intermediate position. It must be fully extended or retracted.

When the radio or ignition is turned OFF, the relay coil is de-energized. With the coil de-energized battery voltage switches to the motor through the closed lower limit switch. The antenna then retracts until the lower limit switch opens.

DESCRIPTION

When the radio is turned ON battery voltage is applied to the antenna relay coil pin 3. The antenna relay contacts close, and battery voltage is applied from the Power Antenna/Trailer Tow fuse #1 to the relay contacts to pin 4; and then to the antenna motor. The other motor pin is grounded through the up switch and the relay contacts. The motor drives the antenna up. At the end of its travel the up switch opens and the motor stops.

When the radio or ignition is turned OFF, the circuit through the power antenna relay coil relay is opened. The contacts open applying battery voltage to pin 5. Pin 4 is now grounded. The voltage to the motor has reversed polarity. At the end of its travel the down switch opens and the motor stops.

REPLACEMENT

(1) Remove the fender inner splash panel to gain access to the antenna mounting screws.

(2) Remove the cap nut and escutcheon from the top of the fender (Fig. 1).

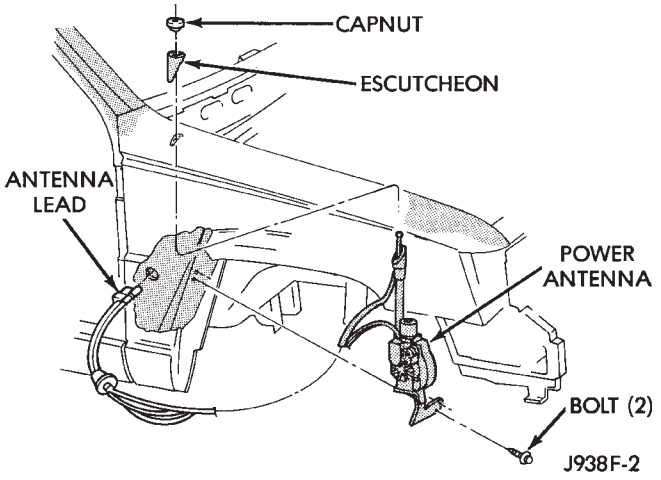

Fig. 1 Remove/Install Escutcheon and Antenna Pad

(3) Remove the passenger side kick panel.

(4) Disconnect the antenna lead.

(5) Disconnect the antenna harness connector.

(6) Remove the antenna mounting bolts and washers (Fig. 1).

(7) Pull the rubber grommet out of the kick panel.

(8) Pull the antenna motor harness through the hole in the kick panel.

(9) Remove the antenna assembly from the inside of the wheel well.

(10) To install the antenna, reverse the removal procedure.

(11) Verify antenna and radio operation.

POWER ANTENNA RELAY

REPLACEMENT

(1) Open glove box and remove 3 screws holding relay center cover (Fig. 1).

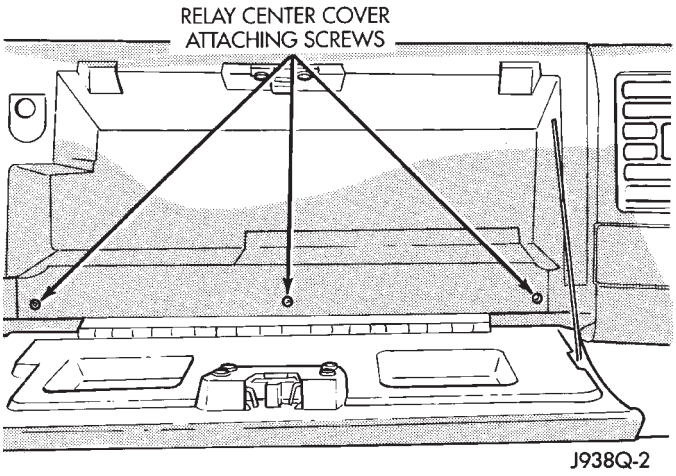

Fig. 1 Relay Center Cover

(2) Replace power antenna relay (Fig. 2)

DIAGNOSIS

POWER ANTENNA RELAY

The relay is located in the relay center located under the glove box.

RADIO ON—RELAY REMOVED

(1) Measure the voltage at connector pin 2. There should be 12 volts. If not, repair open to fuse #1.

(2) Measure the voltage at connector pin 3. There should be 12 volts. If not, repair open to radio.

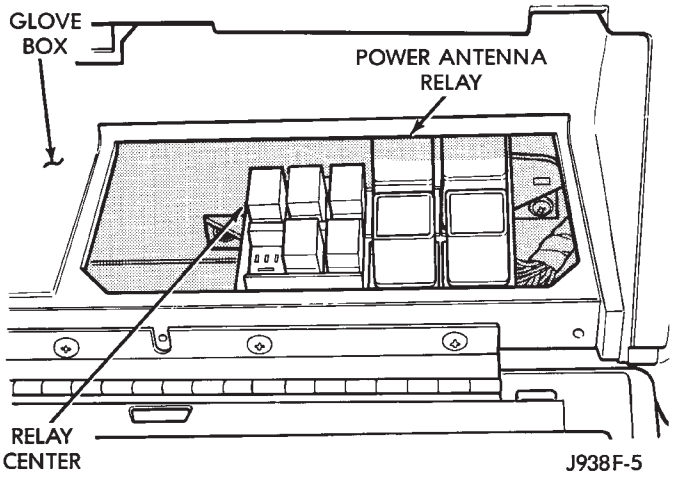

Fig. 2 Power Antenna Relay

(3) TURN RADIO OFF. Measure the resistance at connector pin 1. Meter should read zero ohms. If not, repair open to ground.

POWER ANTENNA

RELAY REMOVED

(1) Connect a jumper wire between the connector pins 2 and 4. Continue with next step.

(2) Connect a jumper wire between the connector pins 6 and 1. The antenna should go up. If not, replace power antenna.

(3) Move the jumper wire between pins 2 and 4 to pin 5. Continue with next step.

(4) Move the jumper wire between pins 6 and 1 to pin 4. The antenna should go down. If not, replace power antenna. If antenna went up and down, replace the antenna relay.