# GROUP 11

# ACCESSORIES

## SECTIONS IN GROUP 11



# SECTION 11-A

# RADIO AND ANTENNA

## CONTENTS OF SECTION 11-A



## 11-1 RADIO DESCRIPTION AND OPERATING INSTRUCTIONS

### a. Description

The Sonomatic and the Wonderbar Radios (see Figures 1-1 and 11-2) are available as optional equipment.

The Buick Sonomatic and Wonderbar radio installation consists of a receiver with separate speaker mounted at the center of the instrument panel on 45000, 46000, 48000 and 49000 Series. All speakers have an impedance of 10 ohms. When replacing a speaker, the replacement speaker must have the same impedance for satisfactory results.

All model radios are transistor radios which play immediately when turned on. Each radio has five push buttons (see Figures 11-1 and 11-2) for push-tuning of five pre-selected stations. In addition to the push buttons, a

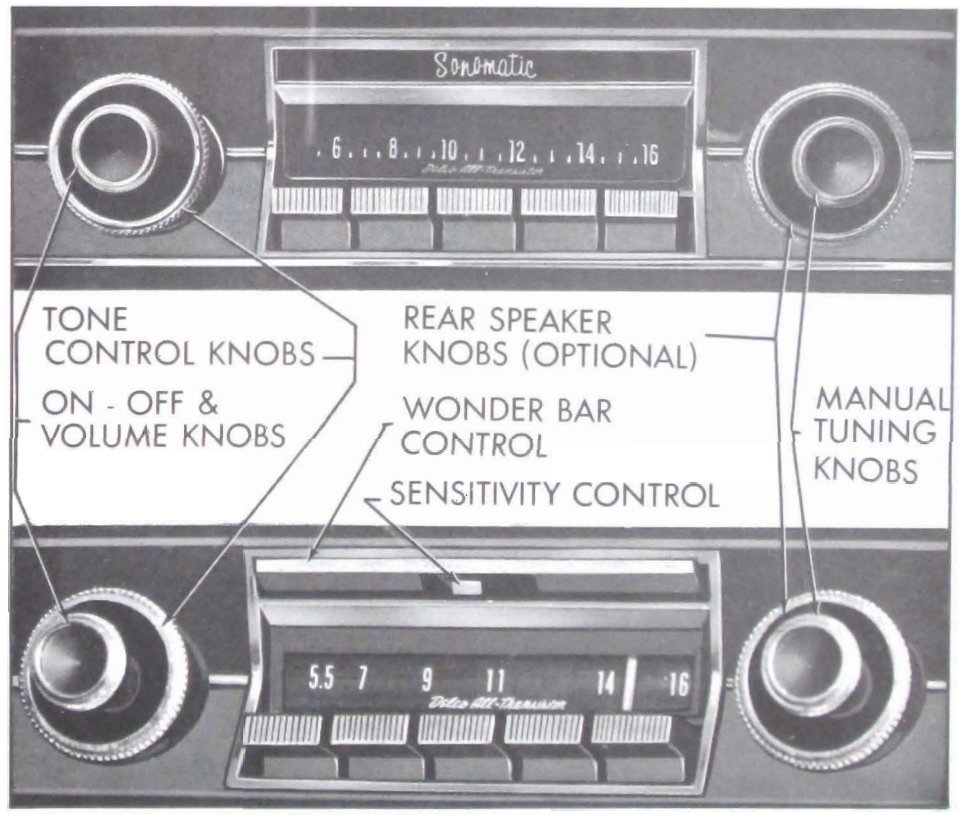


Figure 11-1—Sonomatic and Wonderbar Radio Receivers - 45000, 46000 and 48000 Series

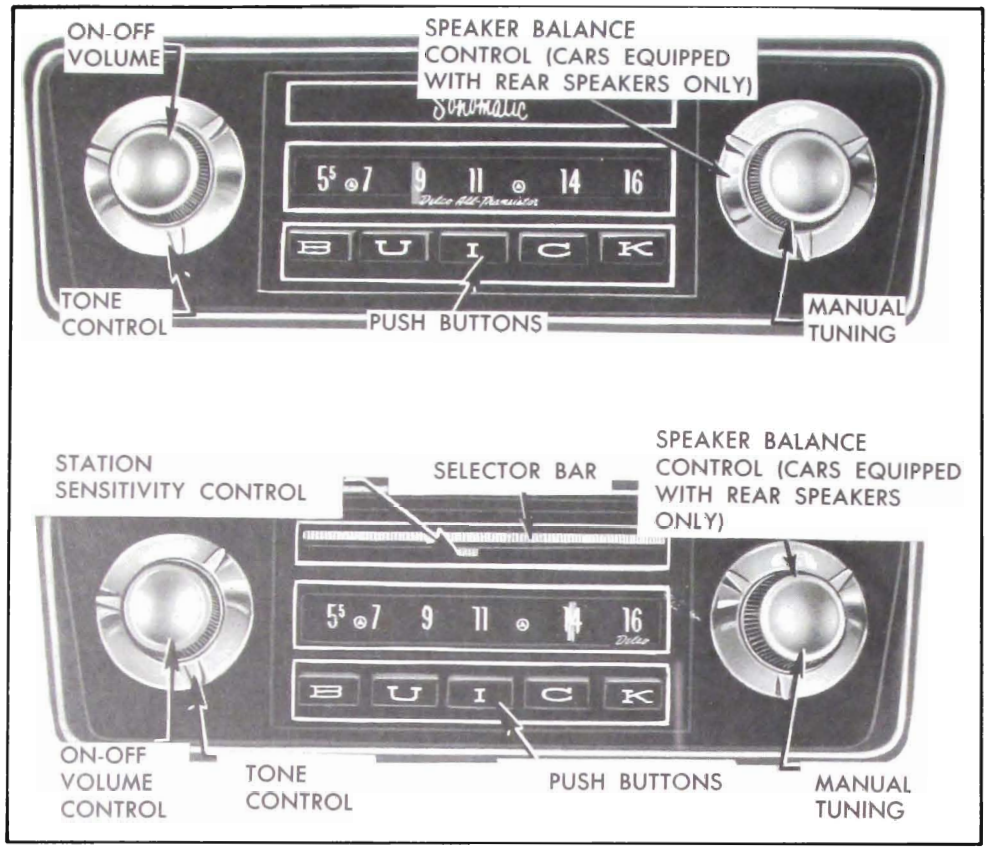


Figure 11-2—Sonomatic and Wonderbar Radio Receivers - 49000 Series

control knob permits manual selection of other stations.

The Wonderbar radio receiver also contains an automatic signal-seeking tuner by which the operator can change stations by merely depressing the selector bar on the receiver. The signal seeking tuner (Wonderbar radio only) sweeps the broadcast band from low to high frequency until a signal of sufficient strength is found. The tuning mechanism is driven by a spring loaded mechanical motor which is stopped on station by a triggering circuit actuated by voltage developed from the incoming signal. The number of stations on which the tuner will stop can be regulated by use of sensitivity control on the receiver.

Both radios use a sectional manual or electric antenna mounted on the right front fender.

The manual antenna, which may be extended and retracted by hand, is standard equipment. The electrically operated antenna is available as optional equipment. In the electric antenna, a motor drives a nylon reed attached to the upper section of the antenna. A 3-position switch on the accessory panel above the radio controls the antenna motor, which will run in either direction. Pushing the switch to the front lowers the antenna, and pulling to the rear raises the antenna. When the switch is released, it returns to center off position.

CAUTION: Never attempt to force an electric antenna up or down by hand. This will cause permanent damage to the operating mechanism.

Radio noise interference is reduced by use of noise suppressor capacitors (see Figure 11-3) and also the inherent resistance of the wiring. The built-in resistance of each spark plug wire approximates 4,000 ohms per foot. The ignition coil noise suppressor capacitor (0.3 MF) is mounted on the coil bracket and the lead is connected to the positive battery (+) terminal of ignition coil. If this polarity is not observed, excessive pitting of distributor contact points will result. The voltage regulator and delcotron noise suppressors are both rated at 0.5 MF and each is mounted on the exterior of their respective units.

A static collector is installed in each front wheel hub cup. For good results the cup and the center of steering knuckle spindle must be clean and free from grease. The center of static collector is made of self-lubricating material. In addition to the items mentioned above, bond or ground straps are connected between the cowl and the rear corners of the engine.

### b. Switch, Volume, and Tone Control Operation

Clockwise rotation of the switch knob to the left of dial, turns the radio on, and further rotation increases the volume.

High fidelity (true tone) is provided when the tone control knob, behind the switch knob, is at the mid-position of the tone control range. A detent in the circuit provides a method of quick location of this position. Rotation clockwise of the tone control knob will diminish bass tones. Rotation counterclockwise will diminish treble tones.

The rear speaker for the 45000, 46000, 48000 and 49000 Series may be optionally installed at the factory or by the dealer. When the rear speaker is installed, the inner knob located behind the radio manual tuning knob, serves as the speaker balance control (see Figures 11-1 and 11-2).

The clockwise rotation of the control turns on the rear speaker only, the midway position blends

front and rear speakers together, and the counterclockwise position turns on the front speaker only. After the volume has been set by the radio volume control, it will remain constant regardless of the position of the rear speaker control.

### c. Push Button Tuning Operation—Wonderbar or Sonomatic

To tune in the station for which the push button is set, simply push the button in as far as possible. The button will move easily at the start, then a slightly harder push is required to complete the travel. At end of button travel the tuner will rest at the station for which the button has previously been set as described in paragraph 11-4 (b).

### d. Selective Tuning Operation—Wonderbar Radio

NOTE: To insure adequate sensitivity for selective tuning of the Wonderbar radio it is best to have antenna extended at least half way.

With the radio turned on and warmed-up, selective tuning of available stations is accomplished by depressing the selector bar above the dial.

When the bar switch is fully depressed and released the tuner will automatically move to the right and stop accurately tuned, as it reaches the next station having adequate strength to stop it. The tuner will stop at a station having adequate strength even though the volume control is not turned up high enough for the station to be audible.

When the tuner reaches the right end of the dial it flies back to the left end and again starts moving to the right until it again reaches a station having sufficient strength to stop it. By holding the selector bar down, unwanted stations or areas of the dial can be quickly passed over.

The number of stations on which the tuner will stop in selective tuning is regulated by manual setting of the sensitivity control (see Figures 11-1 and 11-2). This is a step control having three positions. This control is in the circuit only while the tuner is seeking and does not affect the "on station" sensitivity of the receiver.

Moving the sensitivity control lever to the right position increases the number of stations that can be received. Moving the control lever to the left decreases the number of stations by eliminating those having weak signal strength in the area where the car is located. In the full left position of the control, the tuner will usually stop only on strong local stations.

If the Wonderbar tuner is operated in certain shielded localities or around buildings where an adequate signal is not available, the tuner may automatically search the band from one end to the other without stopping. The sensitivity control should be moved to the full right position and the antenna fully extended when this condition is encountered, or manual tuning should be used.

### e. Manual Tuning Operation

The manual tuning knob is to the right of the dial. This knob may be used to tune in stations other than those for which the push buttons are set; it is also used when tuning to set the buttons for selected stations. On the Wonderbar radio, the tuning knob may also be used to tune in stations that are too weak to stop the electronic signal seeking section of the tuner.

When tuning manually, and particularly when setting a station on one of the push buttons, careful adjustment of the tuning knob is essential in good radio reception.

On push button selection, if the program sounds unnatural or distorted, it is probably caused by improper tuning and can be corrected by adjusting the tuning knob slightly. Since the low notes are more affected by improper tuning than the high ones, it is desirable to tune the set to a point where the low notes are heard best and high notes are clear and undistorted. This point may be most readily found by listening to the background noise and tuning for the lowest volume and pitch of this noise. Turning the control knob back and forth until the station is almost lost on either side will enable the operator to hear the difference in reception and select the intermediate position giving best results.

### f. AM-FM Radio

This radio is identical to the Sonomatic or Wonderbar radios as far as the operation of the on-off and volume control, tone control, manual tuning control and push buttons are concerned. The AM-FM Selector bar is located directly above the dial face. Movement of the bar to the left exposes the letters "FM" and switches the radio to FM mode of operation. Movement of the bar to the right provides AM radio operation. An automatic frequency control circuit is incorporated in the radio and acts to automatically adjust the receiver to select the strongest of the incoming signals if the tuner is adjusted to a point where more than one incoming signal is being received. In general the FM mode of operation will provide greater reception fidelity and freedom from static and other atmospheric disturbances. The FM signal is very susceptible to interference due to tall buildings,

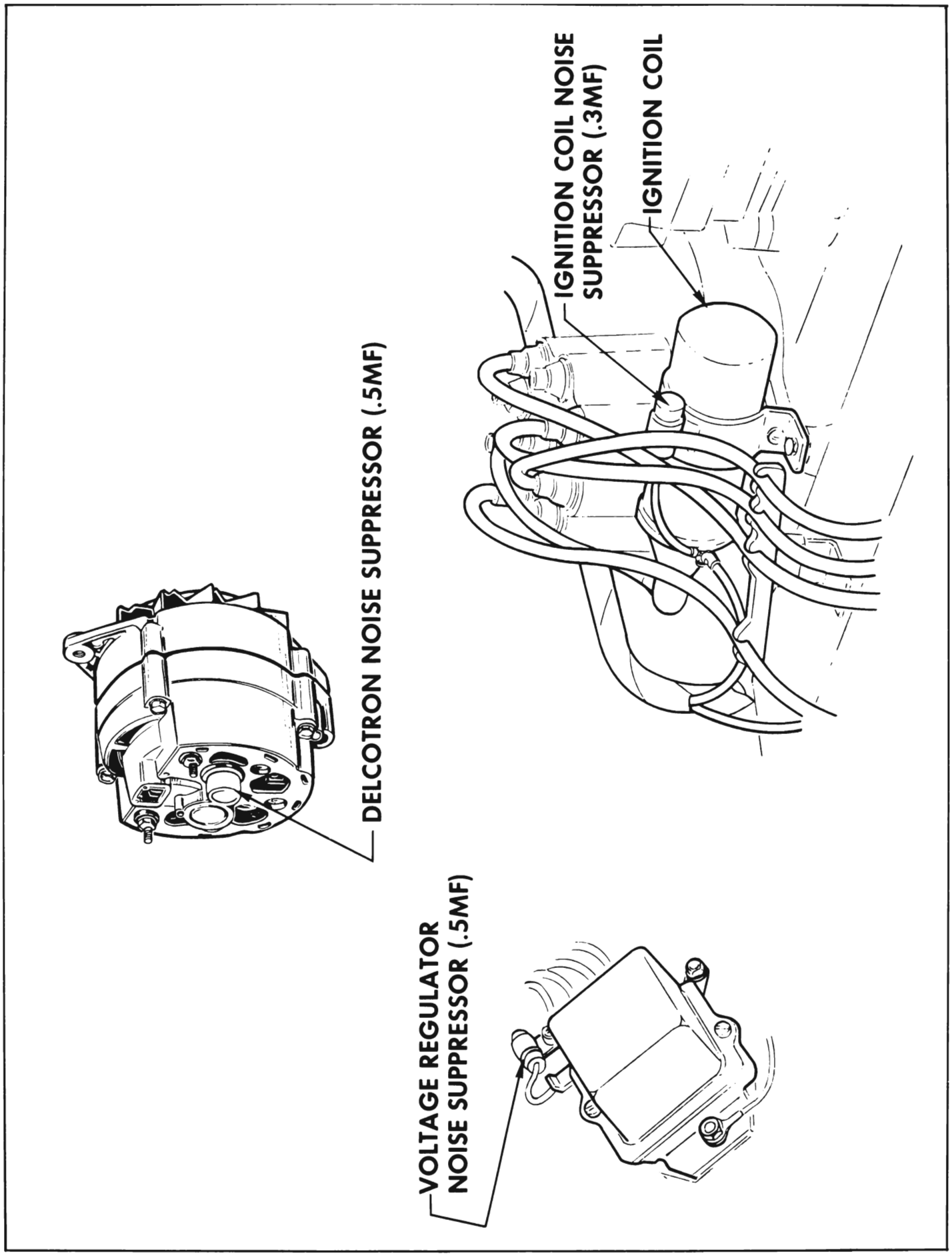


Figure 11-3—Noise Suppressors

hills, etc. In these cases reception may be partially or totally blanked out until the car has moved around or away from the interfering object. In fringe areas where radio reception (FM) is weakest, the station sound may flutter or vary up and down and interference from passing cars may be picked up by your FM radio. In these cases the receiver should be readjusted to a stronger station.

Servicing of this radio is identical to Sonomatic or Wonderbar radios and the following instructions contained herein are also applicable to the AM-FM radio.

## 11-2 RADIO TROUBLE DIAGNOSIS— ON CAR

The trouble diagnosis information in this paragraph is of elementary nature. It is intended as an aid in locating minor faults which can be corrected without a specialized knowledge of radio and without special radio test equipment. The following information applies to the Sonomatic as well as the Wonderbar radio. If the suggestions given here do not affect a correction, further testing should be done only by a radio technician.

CAUTION: Never turn radio on with speaker disconnected.

NOTE: Because radio service problems are generally corrected by United Motors Service repair shops, there is a tendency for many dealer servicemen to remove a set when a problem is reported. The irritation to an owner of having his radio sent out can frequently be avoided if the following quick checks are used to eliminate any problems which are external to the receiver or involve antenna trimming.

### RADIO TROUBLE DIAGNOSIS

| CONDITION | QUICK CHECK | POSSIBLE CAUSE AND CORRECTION |
|---|---|---|
| Radio Inoperative. | Turn radio on and listen for thump in speaker. If no thump is heard see opposite causes. | |
| | | Defective Fuse - Replace with known good fuse. |
| | | Defective Power, Receiver or Speaker Connectors - Repair or replace as necessary. |
| | If no thump is heard substitute a known good speaker. | Defective Speaker - Replace speaker. |
| | NOTE: If car is equipped with a rear speaker, rotate the rear speaker knob fully clockwise instead of substituting a test speaker. | |
| | If a thump is heard plug in a known good antenna and hold antenna outside car. | Defective Antenna - Repair or replace antenna. |
| Radio Operation Intermittent. | Attempt to reproduce failure by tapping antenna and speaker. Also move connectors. | Loose Antenna Connections. |
| | | Loose Speaker or Power Supply Connectors. |
| | | Defective Speaker. |
| | | Defective Antenna Lead. |
| Weak Radio Signal. | Check antenna height. | Antenna Not Properly Extended - Extend antenna 31 inches. |

## RADIO TROUBLE DIAGNOSIS (Cont'd)

| CONDITION | QUICK CHECK | POSSIBLE CAUSE AND CORRECTION |
|---|---|---|
| Weak Radio Signal (Cont.) | Tune radio to weak station, adjust for maximum volume and remove inner and outer knobs. Rotate trimmer screw to check for maximum volume. | Incorrect Radio Trim Adjustment - Trim radio (Refer to subparagraph 11-4, "a"). |
| | Substitute a known good antenna and hold antenna outside car. | Corroded Antenna Connections or Defective Antenna - Repair or replace as required. |
| Radio Noisy.<br>Brake Light, Turn Signal or Window Lift Noise. | Check that antenna connections are tight. | Loose Antenna Connections and Mounting - Tighten.<br>Defective Antenna Lead - Repair or replace as necessary. |
| Static When Driving. | Visually inspect static collectors. | Dirty or Defective Static Collectors - Clean or replace as required. |
| Engine Ignition Noise. | Substitute new noise suppressors. | Ignition Coil, Regulator or Delcotron Noise Suppressors Loose or Defective - Replace. |
| Poor Tone. | Substitute speaker with known good speaker.<br>NOTE: If car is equipped with a rear speaker, rotate the rear speaker knob fully clockwise instead of substituting a test speaker. | Defective Speaker - Replace. |
| Electric Antenna Operates Improperly. | Operate antenna from full up to full down position and note that full travel time does not exceed 12 seconds. If time exceeds 12 seconds see opposite causes. | Dirty, Corroded or Bent Antenna Sections - Repair as required and lubricate sections using light machine oil.<br>Faulty Wiring, Poor Ground Connection, or Defective Control Switch - Repair or replace components as required.<br>Defective Tube and Nylon Assembly or Defective Antenna Motor- Disassemble, inspect and repair antenna (refer to paragraph 11-3, "d"). |

## RADIO TROUBLE DIAGNOSIS (Cont'd)

| CONDITION | QUICK CHECK | POSSIBLE CAUSE AND CORRECTION |
|---|---|---|
| Electric Antenna Inoperative. | Check fuse. | Blown or Defective Fuse - Replace fuse with known good fuse. |
| | Substitute with good antenna switch. | Defective Switch - Replace switch. |
| | Check wiring and ground connections. | Defective Wiring - Repair as required. |
| | Check for defective antenna by substituting a know good antenna assembly. | Defective Antenna Motor - Repair or replace as required (refer to paragraph 11-3, "d"). |

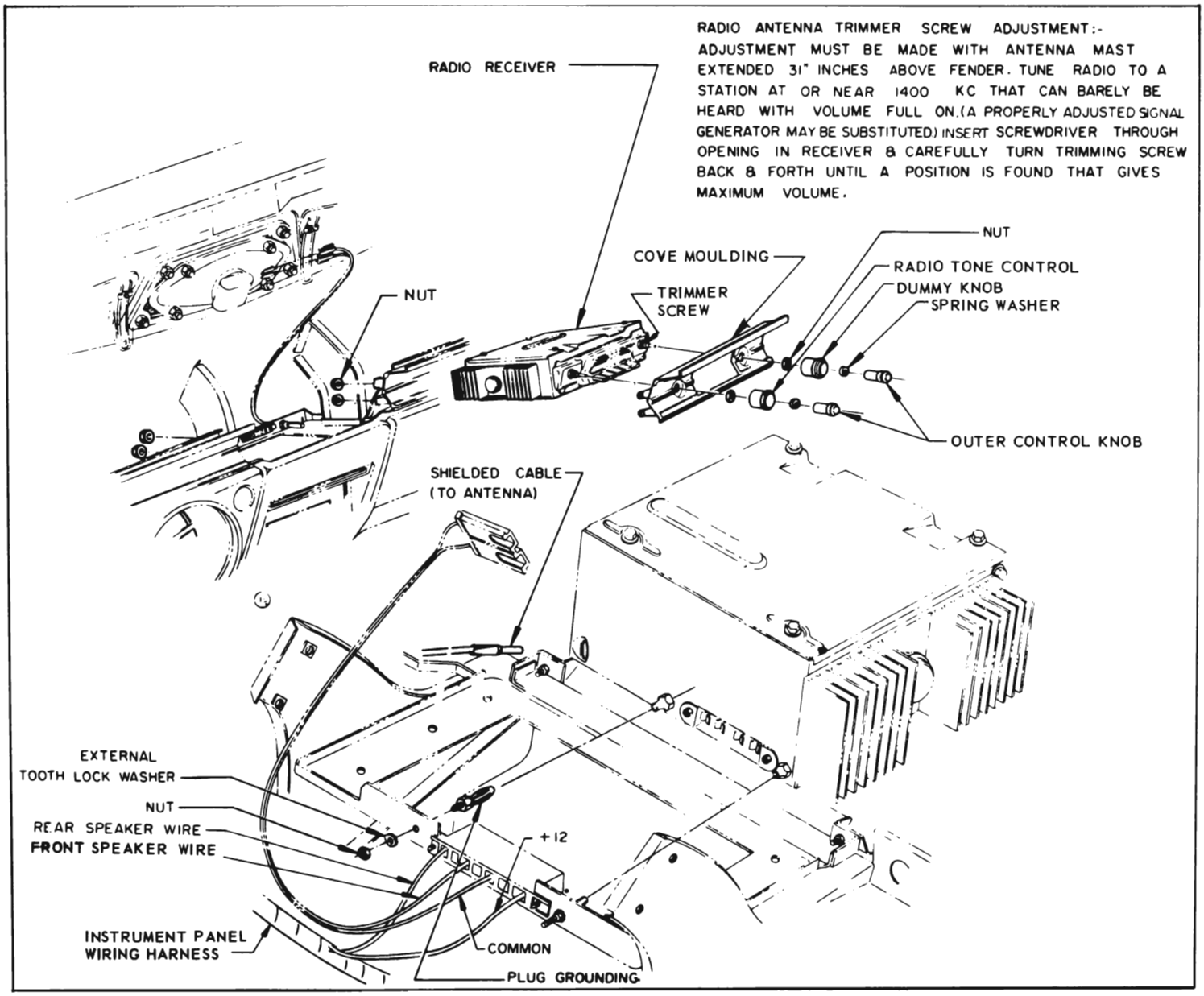


Figure 11-4—Radio Receiver Installation - 45000, 46000 and 48000 Series

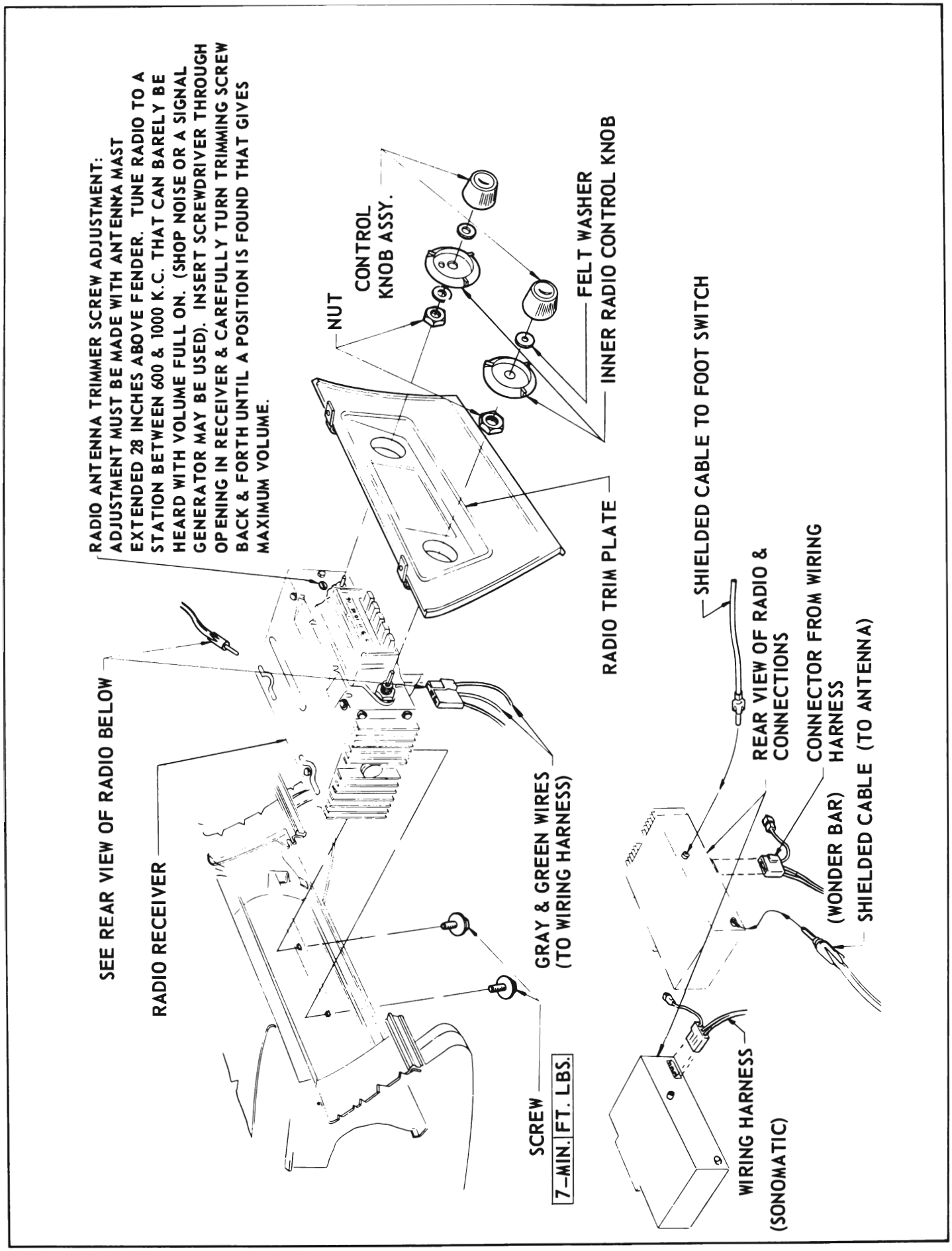


Figure 11-5—Radio Receiver Installation - 49000 Series

## 11-3 SERVICING RADIO COMPONENTS

### a. Removal and Installation of Radio 45000, 46000 and 48000 Series)

REMOVAL

1. Remove six screws from instrument panel cover and tilt cover upward.

2. Remove four nuts holding cove molding to instrument panel and withdraw receiver and molding as an assembly (see Figure 11-4).

3. Further disassembly will be obvious upon inspection.

INSTALLATION

4. Install receiver reverse of removal and perform antenna trimmer adjustment (ref. subpar. 11-4, "a").

### b. Removal and Installation of Radio (49000 Series)

REMOVAL

1. Remove two screws from center console front trim plate assembly (see Figure 11-6) and partially lift up front trim plate.

2. Disconnect lamp socket and lighter lead connector and complete removal of front trim plate.

3. If car is air conditioned, remove two screws holding air conditioner center outlet assembly to radio trim plate (see Figure 11-5) and left off center outlet assembly, and also center outlet duct.

4. Remove four screws and lower air conditioner control assembly (see Figure 11-6).

5. Remove two screws from lower corners of radio trim plate and two screws securing underside of receiver to cross support, and partially withdraw receiver and radio trim plate.

6. Remove all lead connectors attached to receiver and complete removal of receiver and radio trim plate.

7. Further disassembly of radio trim plate from receiver will be obvious upon inspection.

INSTALLATION

8. Install receiver reverse of removal and perform antenna trimmer adjustment (ref. subpar. 11-4, "a").

### c. Removal and Installation of Manual and Electric Antenna (45000, 46000 and 48000 Series)

Removal and installation of antenna will be obvious upon inspection (see Figures 11-7 and 11-8).

### d. Removal and Installation of Manual and Electric Antenna (49000 Series)

REMOVAL

1. Turn front wheels full right and remove antenna access hole cover from right fender outer skirt (see Figure 11-9).

2. Loosen pinch clamp around lower portion of adapter assembly.

3. Disconnect lead-in wire from antenna. On electric antenna also disconnect motor wire connector.

4. Remove antenna assembly through access hole in skirt.

INSTALLATION

5. Position antenna rod toward rear of car 1 to 2 degrees and install antenna reverse of removal procedure.

NOTE: Be sure that the adapter assembly fits into the slots of the antenna assembly. Be sure grounding tab is placed between the adapter assembly and pinch clamp (see Figure 11-9).

IMPORTANT: The Buick antennas are matched to the receiver within the range of the trimmer adjustment. Use of other than authorized replacement antennas is not recommended.

### e. Disassembly and Reassembly of Electric Antenna

IMPORTANT: Before work is started on the antenna, determine if the antenna is in the warranty period which is 24,000 miles or two years, whichever occurs first. If the antenna is in warranty do not attempt service on components of the antenna drive (see Figure 11-13) as it will void the warranty.

DISASSEMBLY OF BODY AND UPPER INSULATOR

1. Remove the 3 screws holding the body and upper insulator assembly to support tube (see Figure 11-11).

2. While applying a back and forth rotary motion, carefully pull the body upper insulator assembly out of the support tube and partially slide it over the 0.40 inch diameter section of the mast until the solder joint is accessible.

3. Unsolder hook-up wire from 0.40 inch diameter section of the mast (see Figure 11-12).

4. Complete removal of the body and upper insulator from the mast.

DISASSEMBLY OF SUPPORT TUBE AND MAST

5. Remove the 3 screws which hold the support tube to antenna drive.

6. Holding antenna drive in one hand and support tube in other hand, pull with a rotary motion until the support tube is removed.

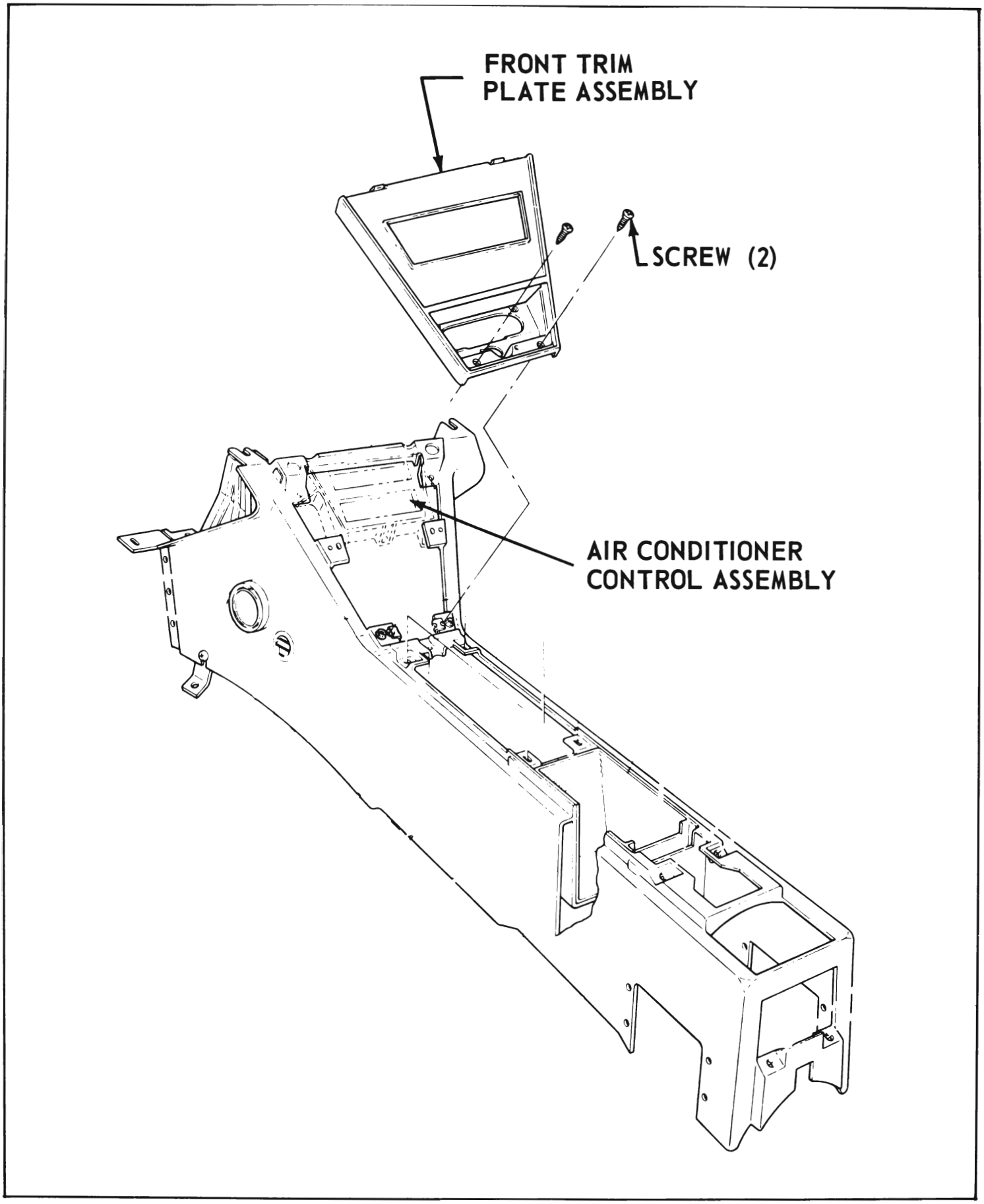


Figure 11-6—Center Console Front Trim Plate and Air Conditioner Control Assembly - 49000 Series

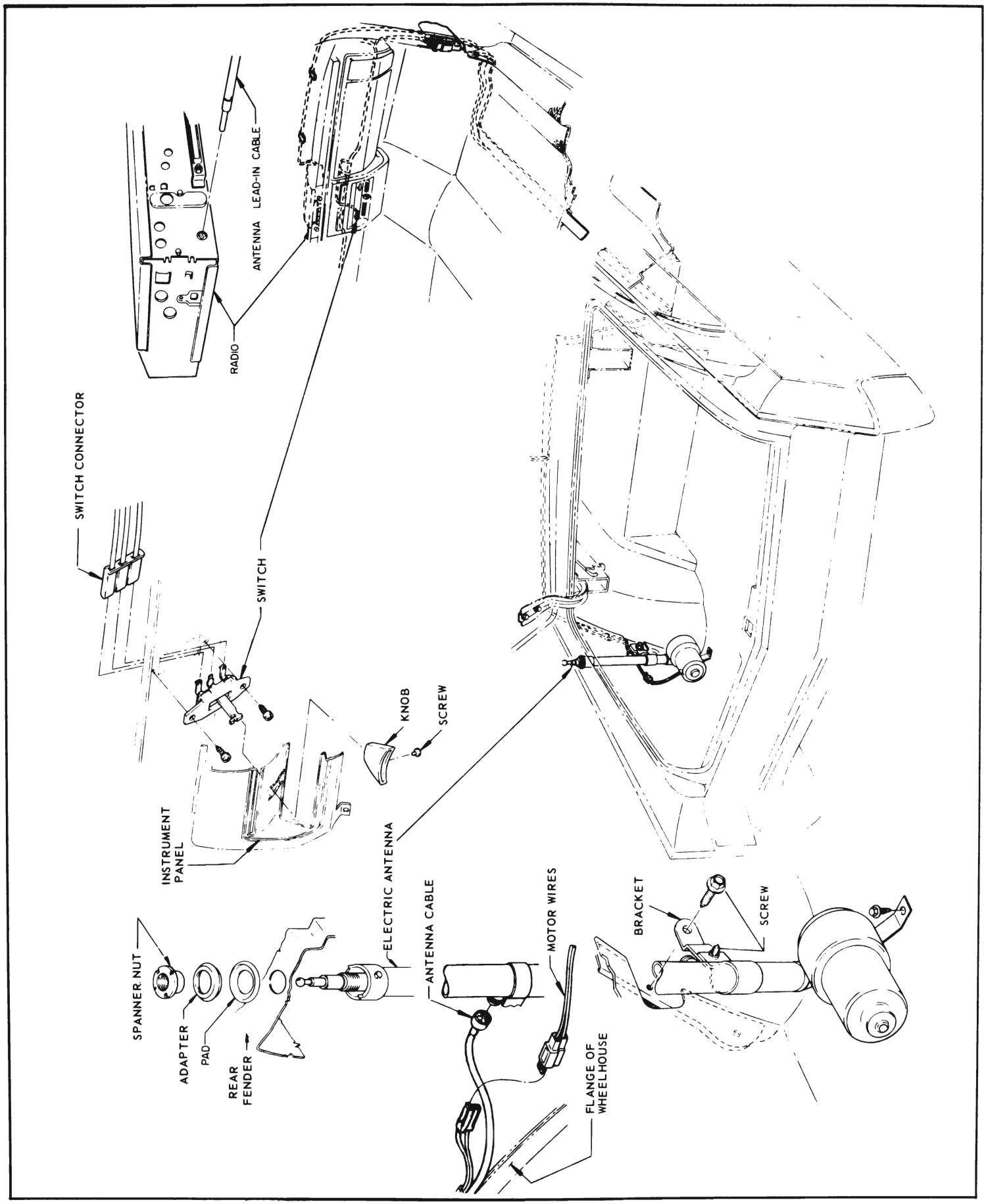


Figure 11-7—Electric Antenna Installation - 45000, 46000 and 48000 Series

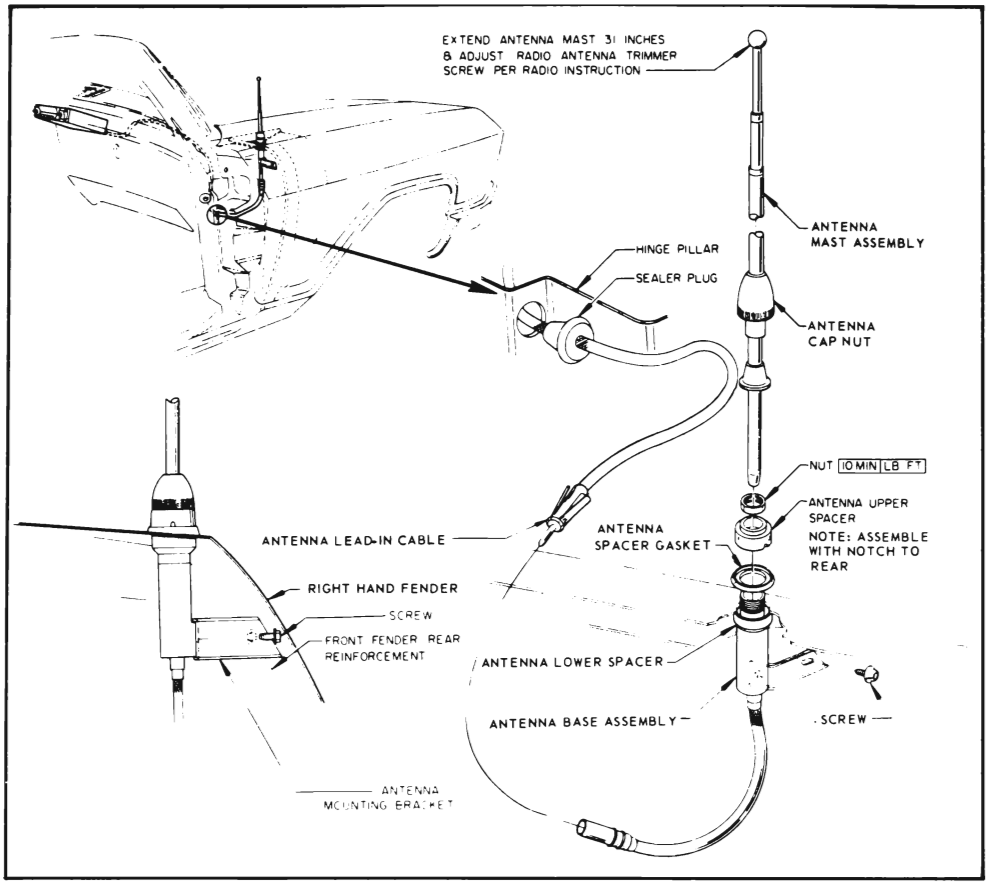


Figure 11-8—Manual Antenna Installation - 45000, 46000 and 48000 Series

7. Holding antenna drive in one hand and the mast in other hand, pull with a rocking motion, until the insulator bushing and mast are free from the tabular fitting of antenna drive (see Figure 11-13).

8. Apply 12 volts D.C. to the green wire of the antenna drive until the entire length of nylon reed has been expelled, and remove mast. Pull on the mast to keep the nylon taut.

NOTE: If the antenna drive is inoperative, it will be necessary to manually remove the nylon reed. Place the assembly in a vise so that the normal plane of the nylon reed is parallel with the floor. Using both hands, pull on the 0.30 inch diameter section of the mast until the reed is completely removed.

9. Using a wire hook or long nose pliers remove bottom insulator and water seal washer from tubular fitting of antenna drive.

NOTE: IF THE ANTENNA IS IN WARRANTY DO NOT DISASSEMBLE BEYOND THIS POINT AS IT WILL VOID THE WARRANTY AGREEMENT.

## DISASSEMBLY OF ANTENNA DRIVE (UNIT NOT IN WARRANTY)

If the antenna drive is no longer covered by the manufacturer's warranty and it is necessary to repair the antenna drive, proceed as follows:

10. Remove drive cover.

11. Hold the 7/16" hex nut on the output gear assembly shaft, remove the 3/8" hex nut (see Figure 11-14).

12. Remove the 7/16" hex nut and washer.

13. Lift antenna pressure adjuster spring off shaft (see Figure 11-11).

NOTE: When removing any of the following parts, observe their locations and positions to facilitate reassembly.

14. Remove drive pin retainer.

15. Remove the drive pressure beam.

16. Slide the drive pin from hole in the shaft and take off drive beam.

NOTE: Do not lose the 2 steel balls in the holes at the ends of the drive beam.

17. Remove the 2 steel balls.

18. Remove the drive disc from the shaft.

NOTE: Exercise care not to bend the drive disc or burr the edges of the channel. If it is necessary to remove drive body from motor of motor drive unit to take out a broken nylon reed from storage cup, care must be used to prevent pinion gears (see Figure 11-15) from falling loose. If for any reason the gears fall out or have been removed, it will be necessary to realign them. This is done by positioning the right and left pinion gears so that the mark on each one points at the center of the pinion shaft of the drive gear which receives the motor pinion.

## REASSEMBLY OF ANTENNA DRIVE

Reassemble antenna drive components reverse of disassembly procedures. The following notes apply to assembly steps on which special emphasis is placed.

19. Reassemble the spring on the output gear assembly shaft with the largest diameter toward the drive pin retainer.

20. Screw on the 7/16" hex nut 1 full turn after it touches the spring.

NOTE: Do not reassemble the 3/8" hex nut on the shaft or snap the drive cover in place until antenna is adjusted.

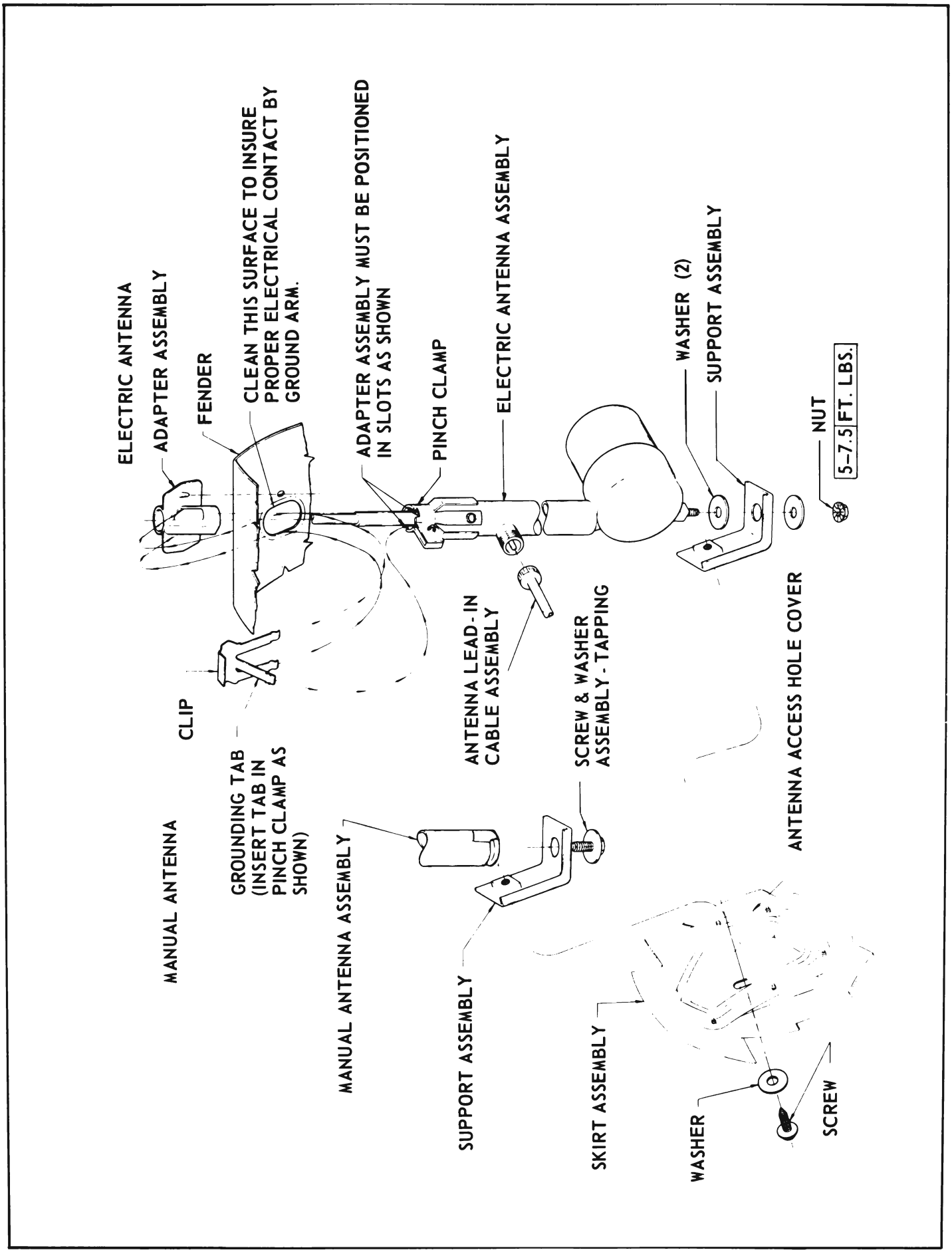


Figure 11-9—Manual and Electric Antenna Installation - 49000 Series

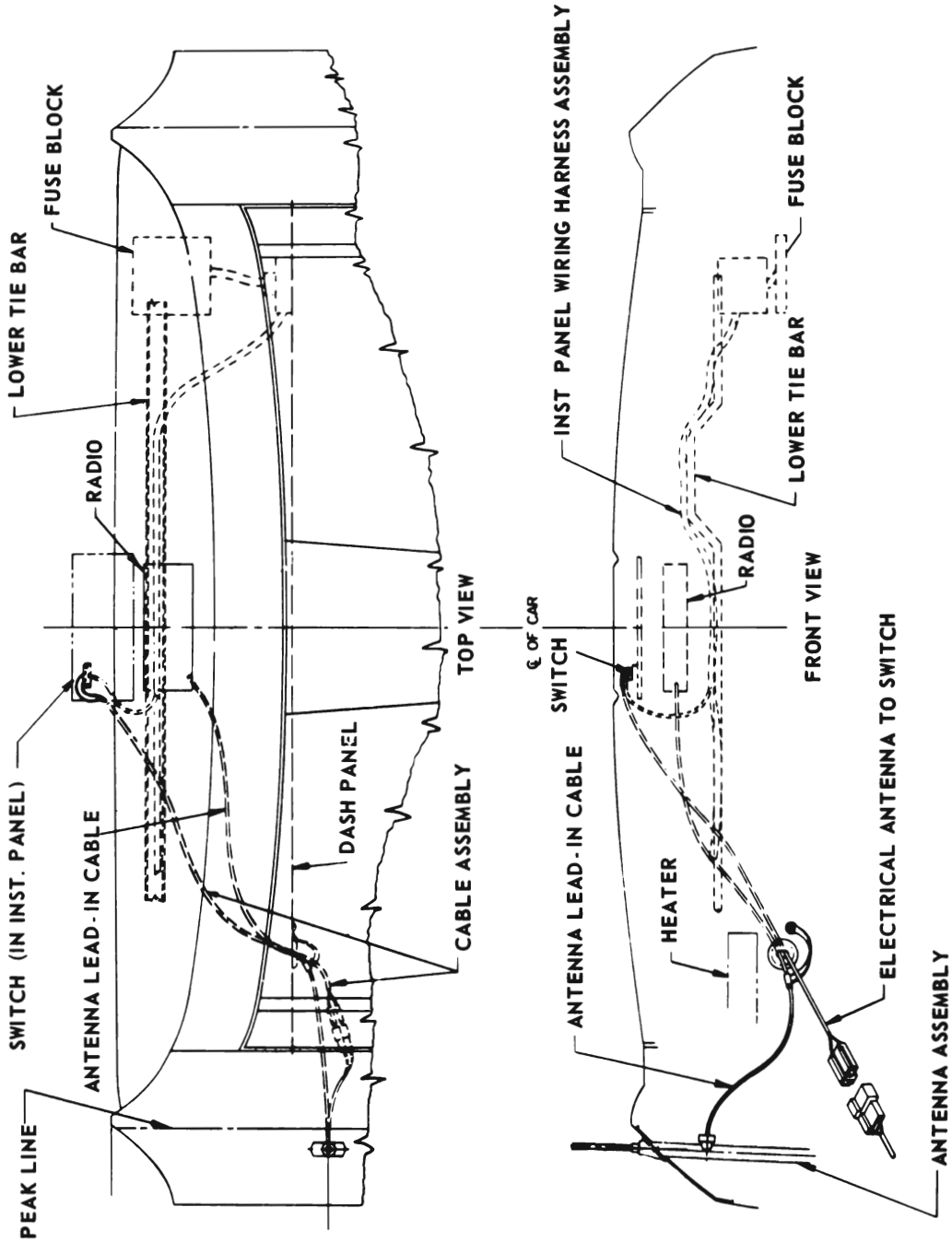


Figure 11-10—Antenna Lead-In Wire and Motor Control Wire - 49000 Series

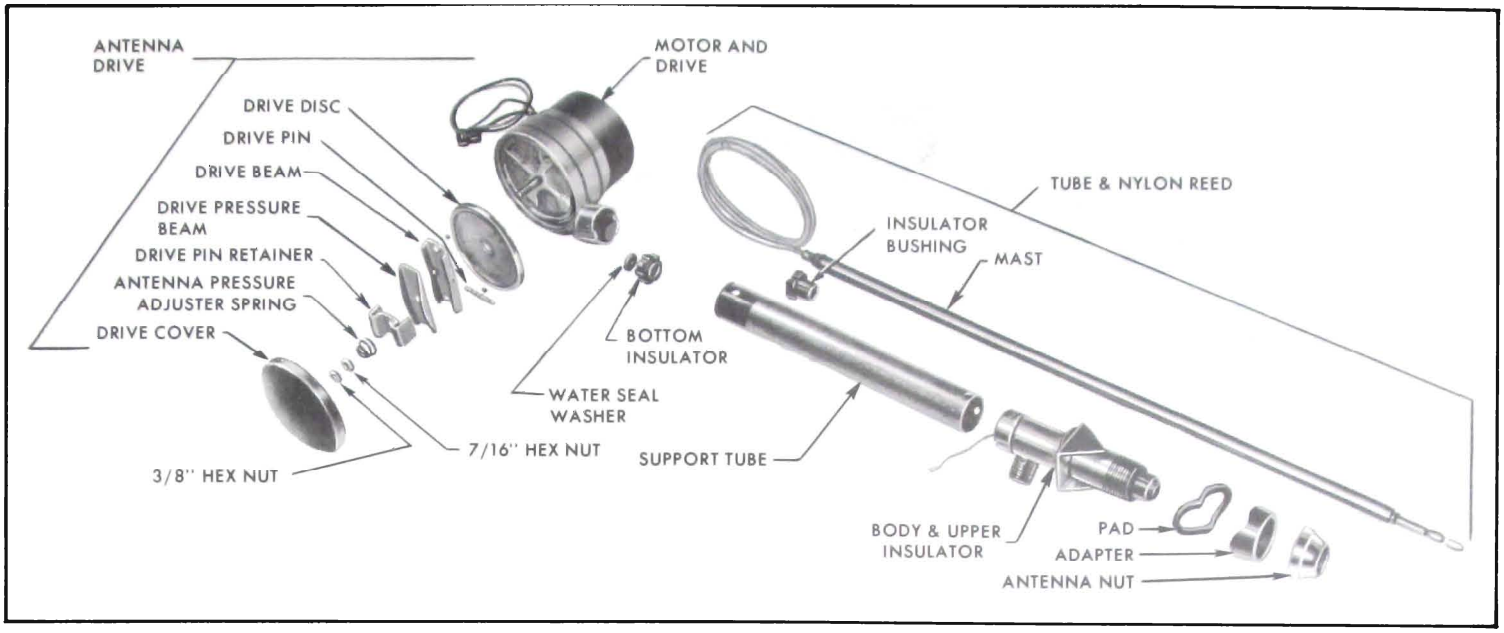


Figure 11-11—Electric Antenna (Exploded View)

## REASSEMBLY OF MAST SUPPORT TUBE AND MAST, AND BODY AND UPPER INSULATOR

21. Thread nylon reed into antenna drive. Make sure that bottom insulator and water seal washer are in place and that the small diameter end of the bottom insulator is downward. Apply 12 volts D.C. to blue power lead to assist feeding operation. Keep nylon reed straight to avoid kinking.

NOTE: Position water seal washer and bottom insulator in the tubular fitting of antenna drive before the nylon reed completely disappears in drive assembly.

22. Push 0.40 inch diameter section of mast and insulator bushing into tubular fitting (see Figure 11-13). Make sure that the upper edge of insulator bushing flange is below the 3 holes in the tubular fitting of antenna drive.

23. Install support tube.

24. Slip body and upper insulator assembly over the 0.40 inch section of mast, but do not connect to support tube. Make sure that the free-end of the hook-up wire extends below the lower edge of the body and upper insulator assembly.

25. Solder the free-end of the hook-up wire to the 0.40 inch diameter section of the mast section, using rosin flux solder (see Figure 11-12).

26. Position and reassemble body and upper insulator to support tube.

27. Perform antenna adjustment procedure (ref. subpar. "f").

28. Reassemble 3/8" hex nut and drive cover onto antenna drive and make sure that the vent hole in the drive cover is at the top when the antenna is installed in the car.

29. Reseal the antenna drive with body sealer and make sure that neither the vent hole in the drive cover, nor the drain hole in the antenna drive is plugged.

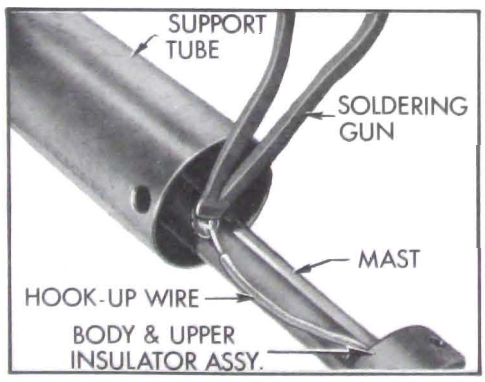


Figure 11-12—Hook-Up Wire to Mast Connection

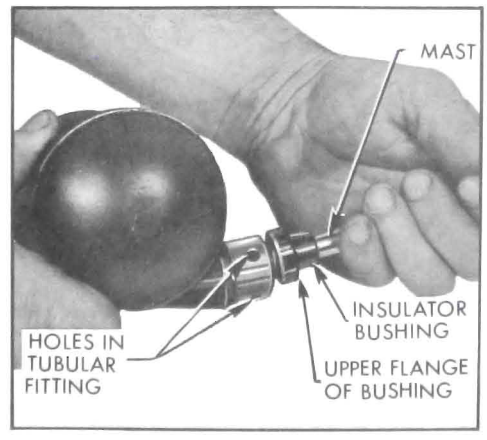


Figure 11-13—Removing and Installing Mast and Insulator Bushing

### f. Adjustment of Antenna

1. Remove the drive cover and 3/8 inch hex nut from the antenna drive.

2. Place antenna drive in a vise so that the center line of antenna drive is parallel to the bench top.

3. Using 12 volts D.C.—adjust mast tip approximately 6 inches from the extreme down position.

4. Connect one end of a wire securely to the mast just below the tip and the other end to a 25 lb.

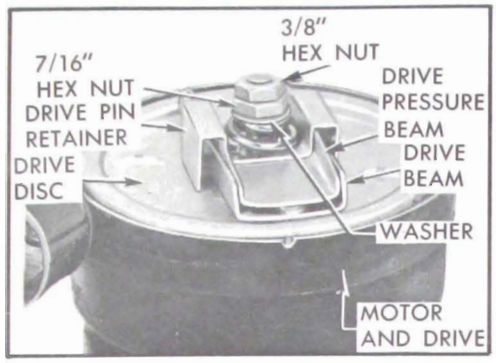


Figure 11-14—Antenna Drive (Cover Removed)

capacity spring scale. Secure the spring scale to the bench so that the center line of the scale is in line with that of the mast assembly (see Figure 11-16).

5. Attach the 12 volt D.C. power leads to the antenna drive housing and touch the other power lead to the blue (down) terminal to jog the antenna drive to the point of maximum pull before the clutch balls override the ridges of the drive disc. If the maximum pull is less than 15 lbs. turn the 7/16" hex nut clockwise a slight amount, and recheck the maximum pull. If the pull is greater than 15 lbs., turn the 7/16" hex nut counterclockwise a slight amount, and recheck pull. Repeat until the pull is set at 15 lbs.

6. Holding the 7/16" hex nut so it cannot turn, tighten the 3/8" hex nut against the 7/16" nut to lock it in place.

7. Disconnect spring scale and apply power to the green (up) terminal. Run the mast all the way out and allow the motor to continue running until the clutch has made a minimum of 15 engagements or clicks.

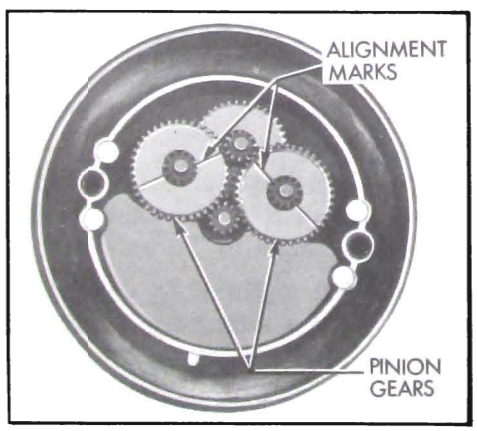


Figure 11-15—Alignment of Gears

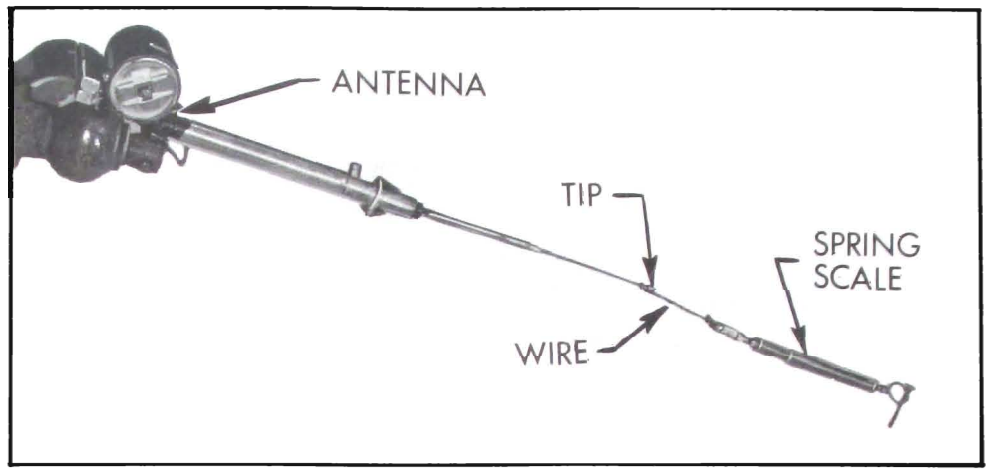


Figure 11-16—Antenna Adjusting Test

8. Do the same in the down position.

9. Run antenna up and down for a 3 minute period, then reassemble spring scale to mast and recheck for maximum pull. Adjust as necessary.

10. Snap front cover onto antenna drive and make sure that the vent hole is at the top when the mast is installed in car.

11. Reseal the assembly with body sealer and make sure that neither the vent hole in the drive cover, or the drain hole in the antenna drive is plugged.

### g. Removal and Installation of Front Speaker (45000, 46000, 48000 and 49000 Series)

REMOVAL

1. Remove four screws from front underside of instrument panel cover assembly and partially remove cover assembly by pulling assembly rearward until edge of upper tie bar is cleared,

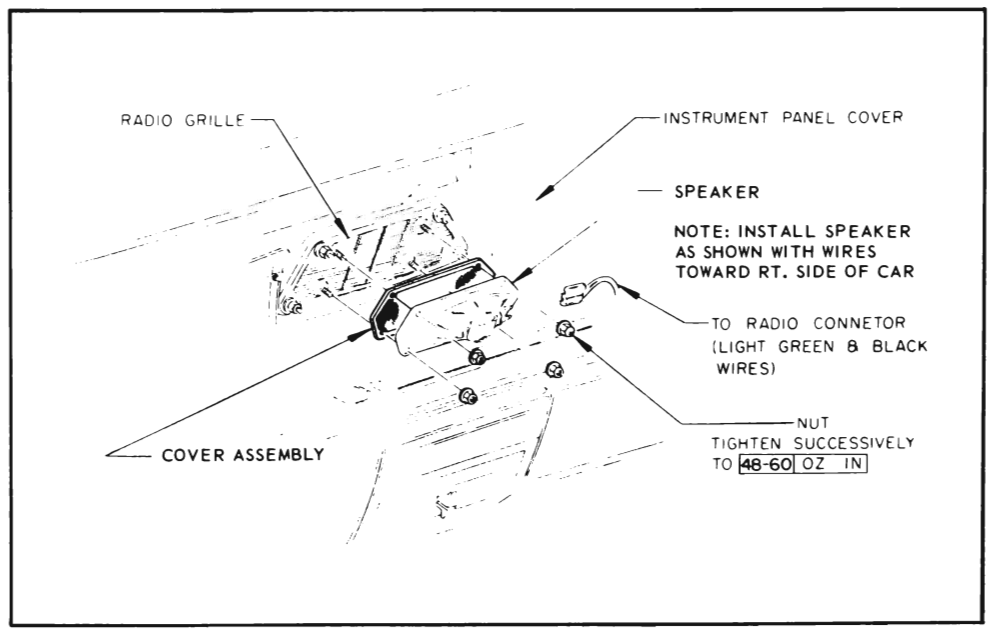


Figure 11-17—Front Radio Speaker Installation - 45000, 46000 and 49000 Series

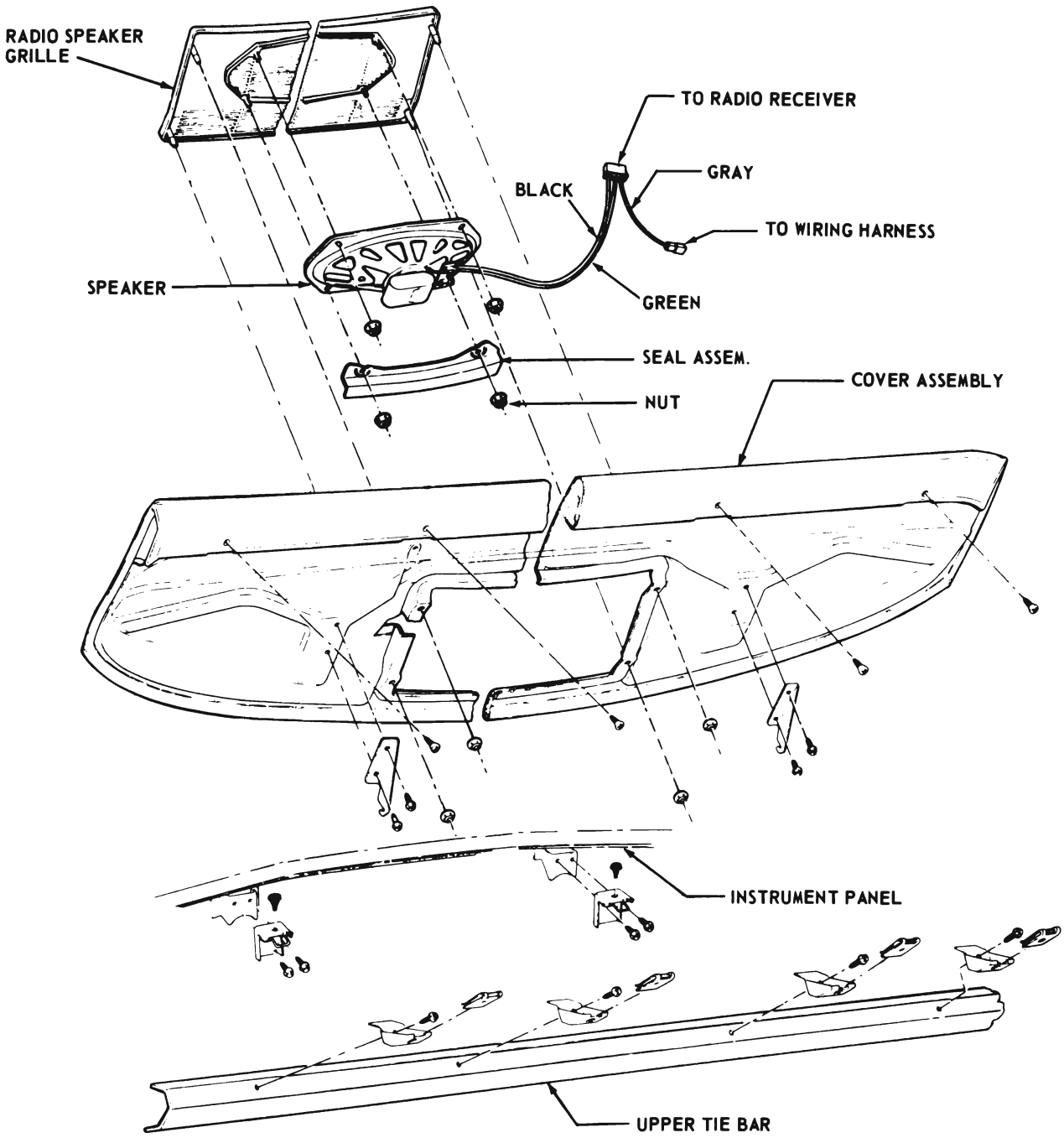


Figure 11-18—Front Radio Speaker Installation - 49000 Series

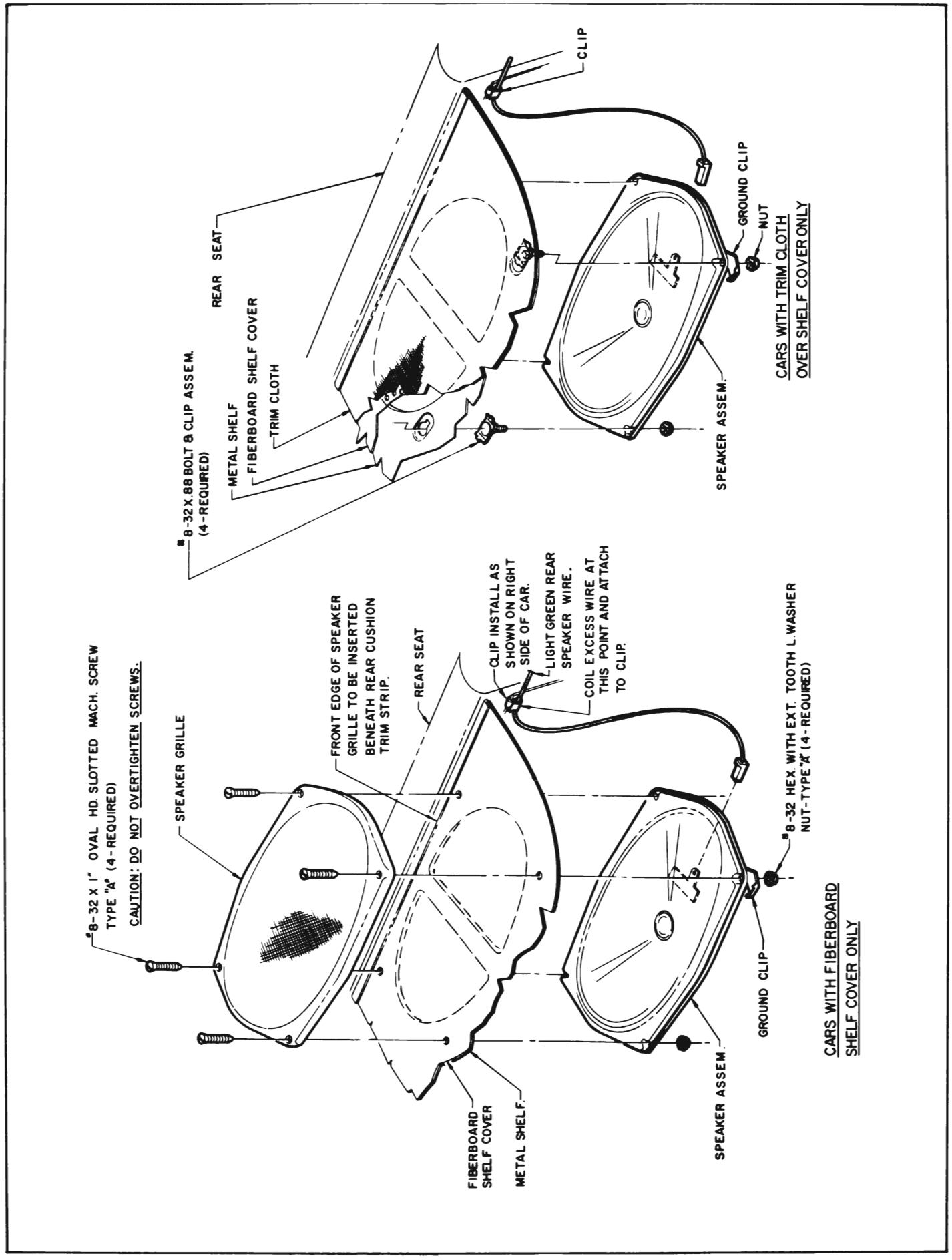


Figure 11-19—Rear Speaker Installation - 45000, 46000 and 49000 Series

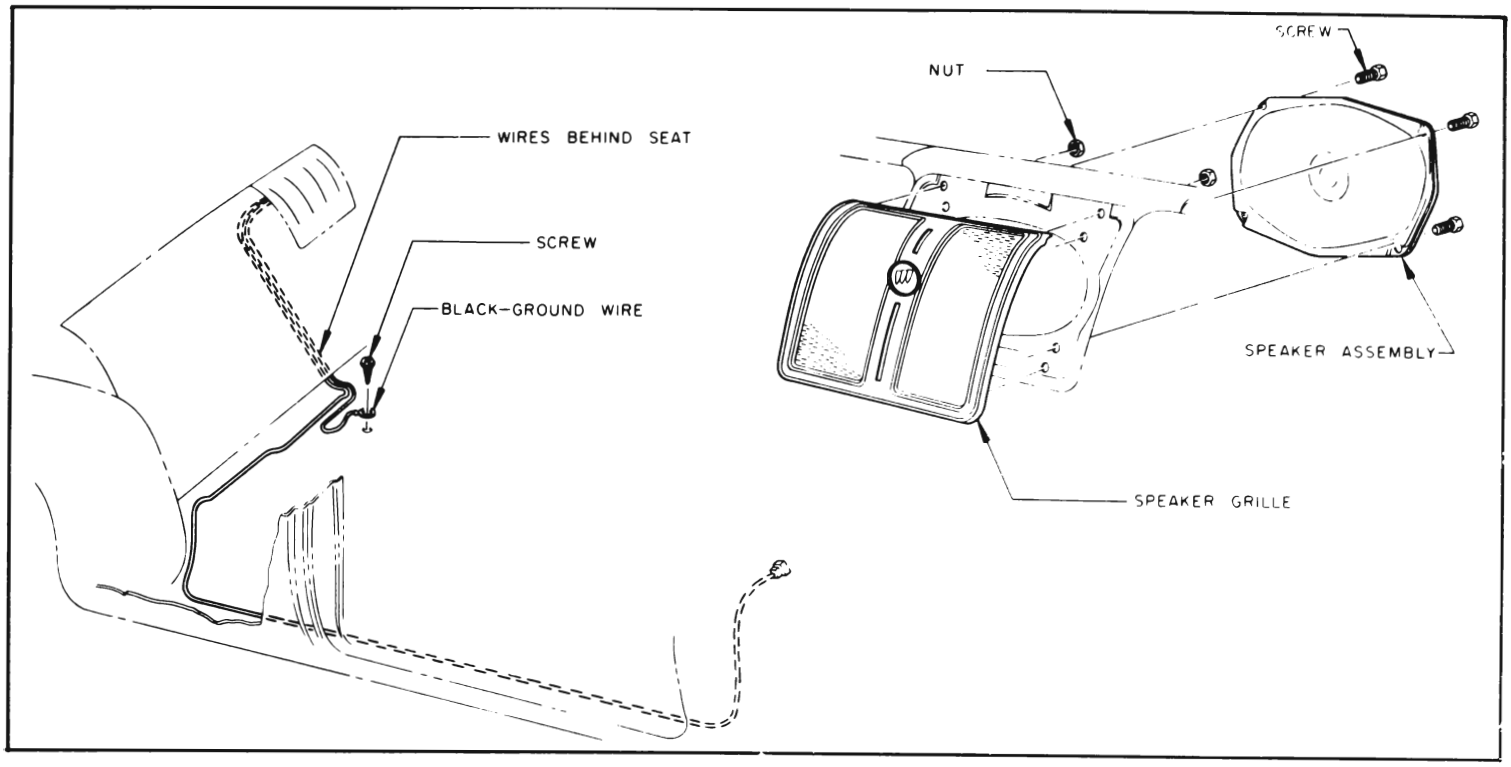


Figure 11-20—Rear Speaker Installation - Convertible - 45000, 46000 and 48000 Series

and then raising cover as far as possible.

2. Remove speaker connector and any other connectors attached to components on underside of cover assembly.

3. Complete removal of cover assembly and speaker grille.

CAUTION: Due to limited space, some difficulty may be encountered in removing cover assembly. Exercise care not to damage speaker magnet.

4. Further disassembly of cover and speaker grille will be obvious on inspection.

INSTALLATION

5. Install front speaker reverse of removal.

### h. Removal and Installation of Rear Speaker (45000 46000 and 48000 Series)

Removal and installation of rear speaker will be evident on inspection (see Figures 11-19 through 11-20).

### i. Removal and Installation of Rear Speaker (49000 Series)

REMOVAL

1. Remove cover plate (see Figure 11-25) located directly under the rear speaker grille by grasping lower edges and firmly pulling rearward. Cover plate is wedged between rear seat cushions.

2. Remove two screws from lower end of rear speaker grille and partially remove grille by pulling lower end of grille outward and sliding grille down and out.

3. Disconnect speaker connector and complete removal of speaker and grille.

4. Further disassembly of speaker and grille will be evident on inspection.

INSTALLATION

5. Install rear speaker reverse of removal.

## 11-4 RADIO ADJUSTMENTS—ON CAR

When making the adjustments covered in this paragraph, it is essential to have the car in a location that is as free as possible from outside interference.

### a. Antenna Trimmer Adjustment

An antenna trimmer adjustment is provided for matching the antenna to the receiver. This adjustment must always be made after installation of receiver and antenna, or after any repairs of these units. The adjustment should also be checked whenever the radio reception is unsatisfactory.

1. Raise antenna to 31 inches.

2. Tune radio to a station between 600 to 1000 KC that can barely be heard with volume turned full on.

3. Remove right inner and outer knobs and insert a screwdriver

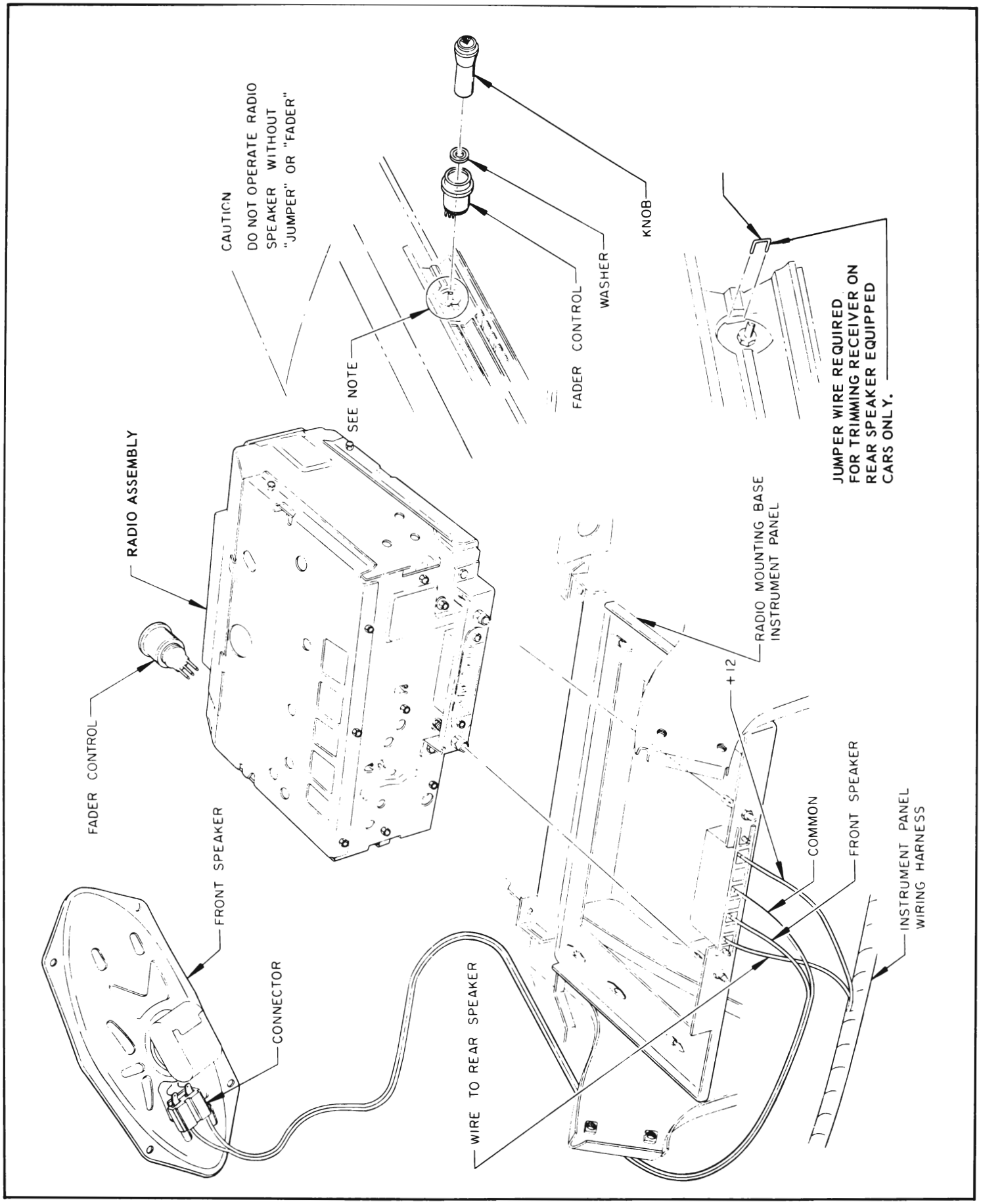


Figure 11-21—Rear Speaker Fader Control Switch Installation - 45000, 46000 and 48000 Series

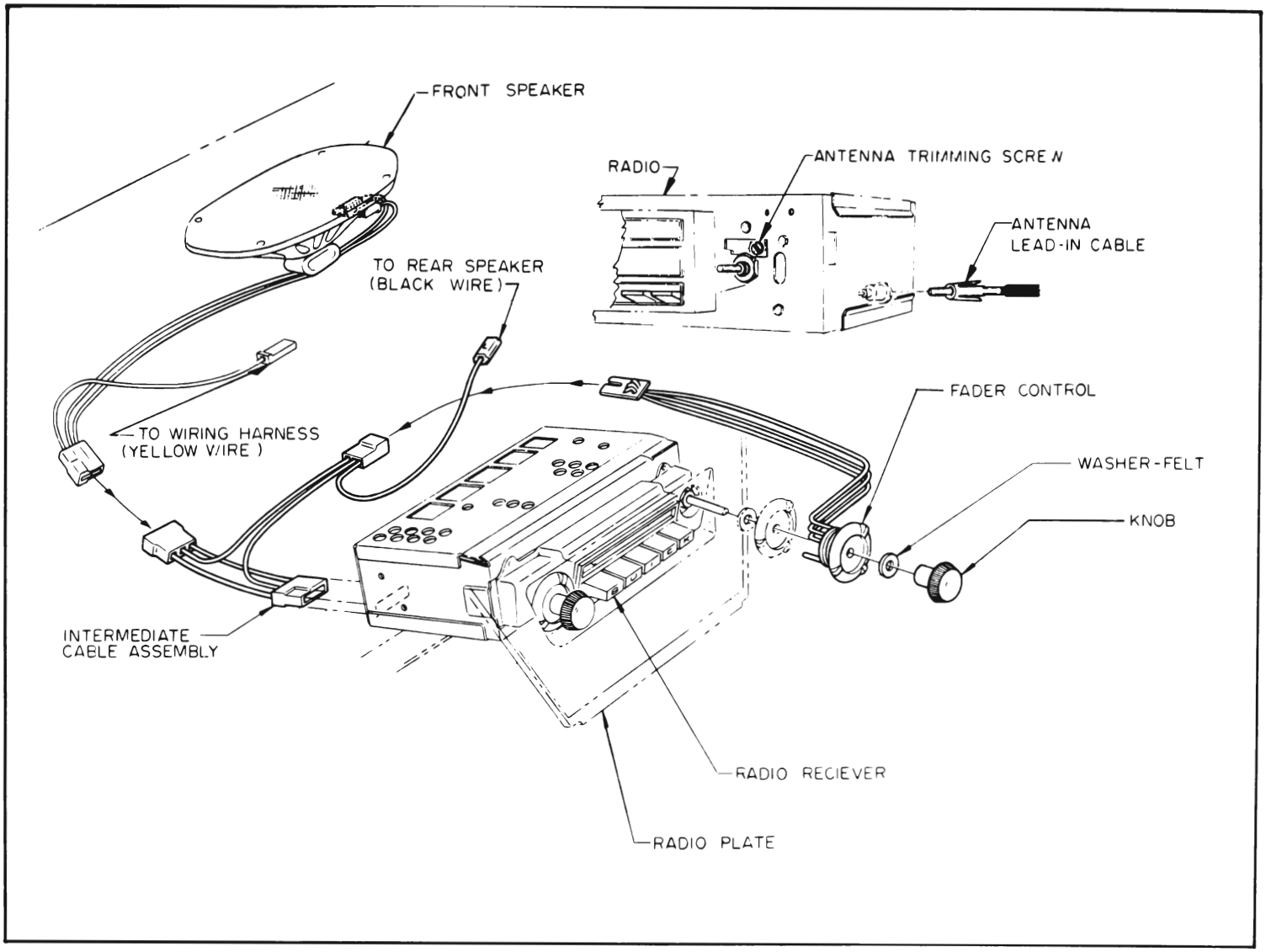


Figure 11-22—Rear Speaker Fader Control Installation - 49000 Series

in the trimmer screw (see Figures 11-4 and 11-5). Rotate trimmer screw until maximum volume is achieved.

NOTE: On 45000, 46000 and 48000 Series cars equipped with rear speakers, it will be necessary to insert a jumper wire into top and center holes behind inner knob (see Figure 8-21).

4. Install right inner and outer knobs.

### b. Setting Push Buttons to Desired Stations

1. Turn on the radio.

2. Pull push buttons outward. It is desirable to set up the push buttons in logical sequence. For example - lowest frequency of desired station on first button, next higher frequency station on second button, etc.

3. Carefully tune in the desired station manually, then push the button all the way in.

4. Move dial pointer away from the selected station and push the button to make certain the station will be properly tuned in.

5. Turn tuning knob back and forth to make certain that best tuning is obtained with the push button. If best tuning is not obtained, repeat Steps 2, 3 and 4.

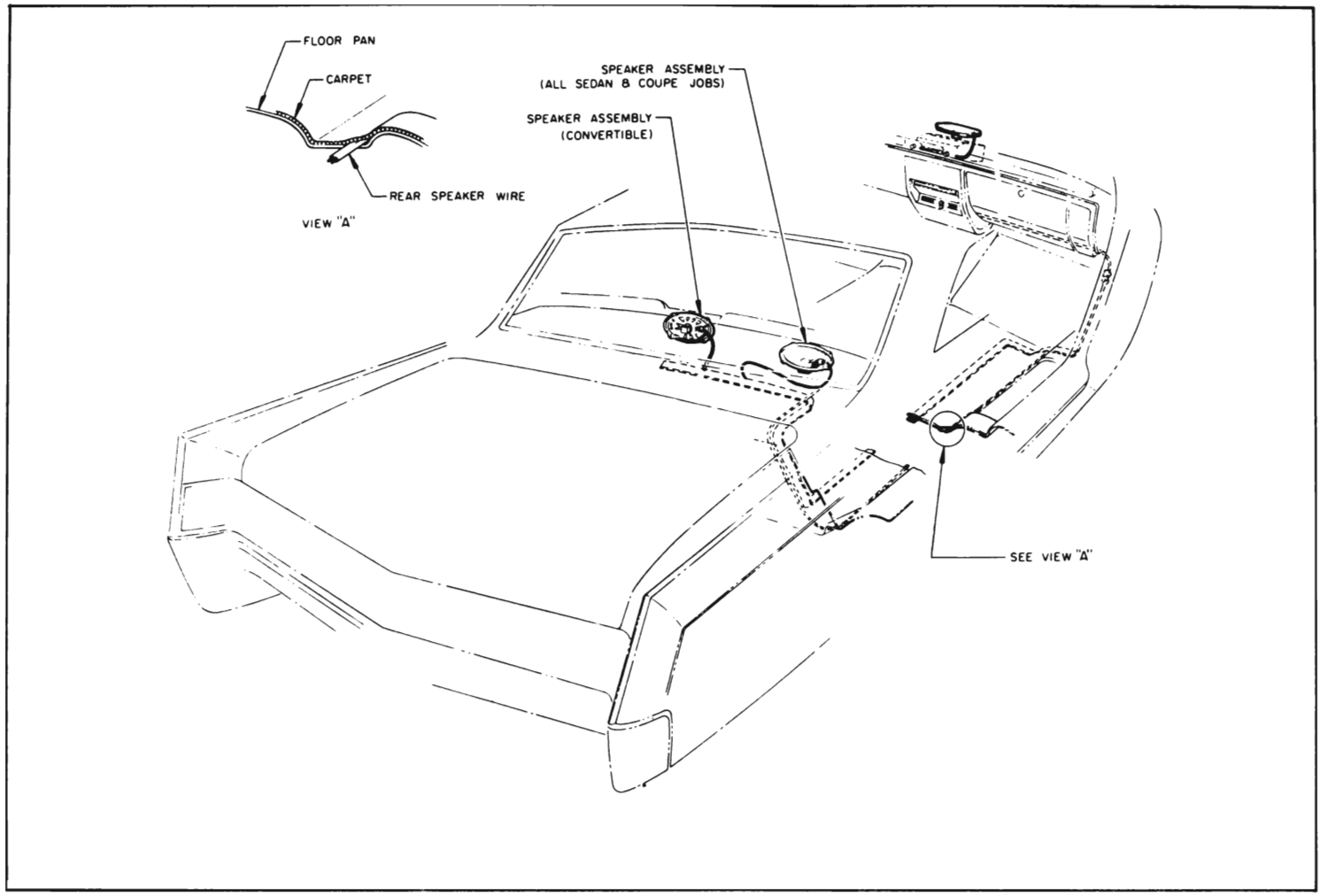


Figure 11-23—Rear Speaker Wiring - 45000, 46000 and 48000 Series

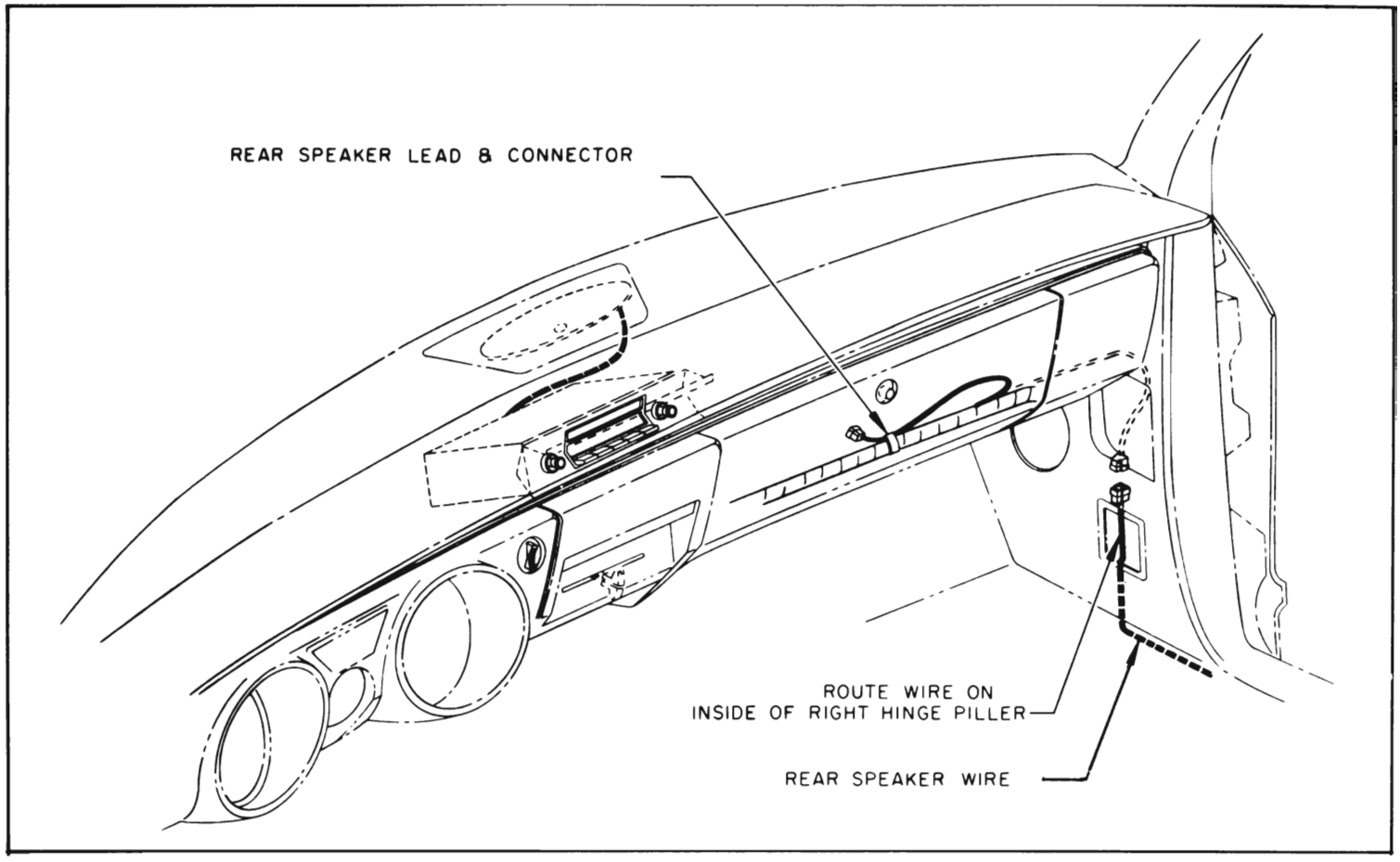


Figure 11-24—Rear Speaker Wire Routing - 45000, 46000 and 48000 Series

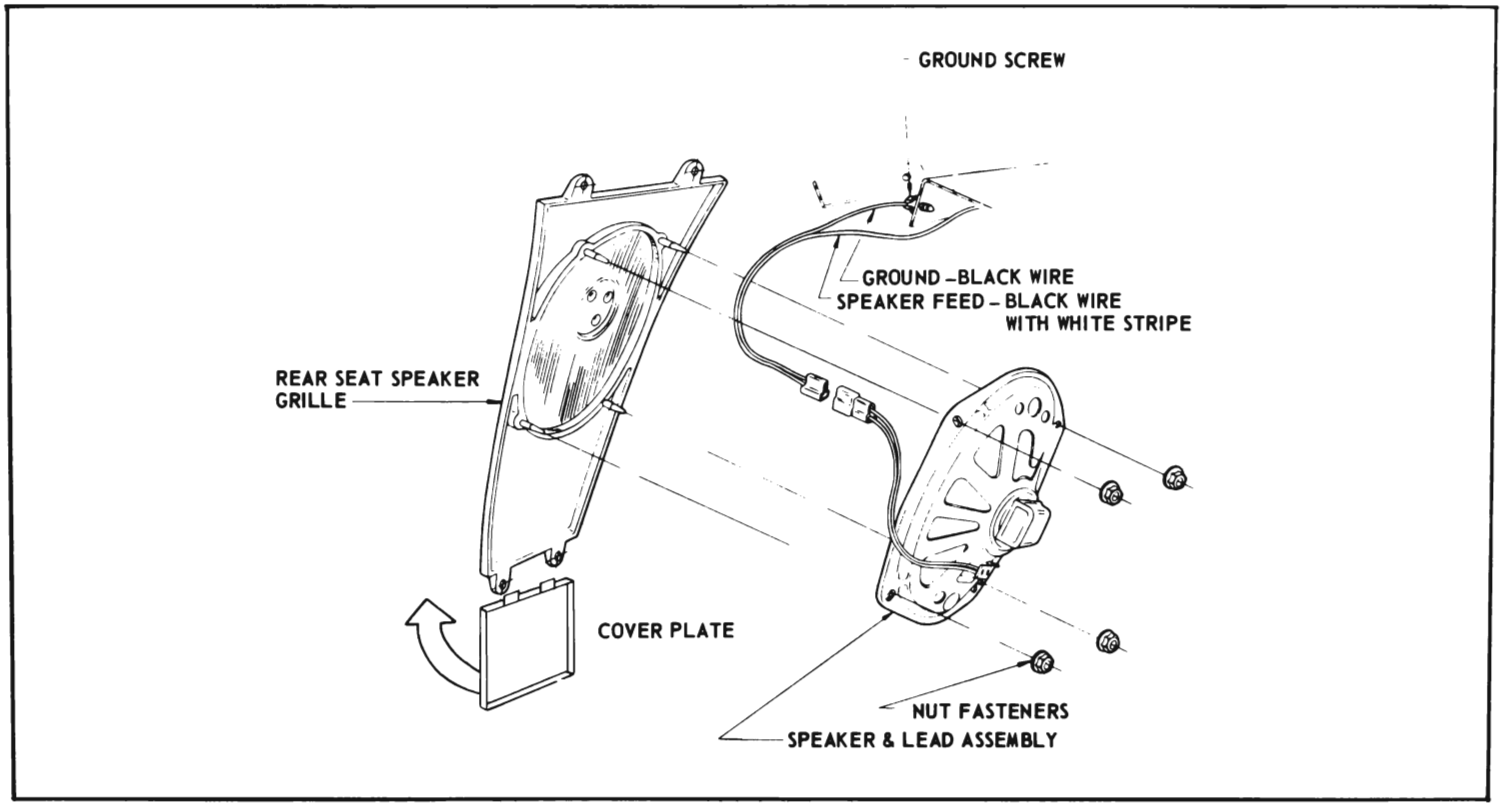


Figure 11-25—Rear Speaker Installation - 49000 Series