SECTION F

INSTRUMENT PANEL— RIVIERA

CONTENTS

DIVISION II

DESCRIPTION AND OPERATION

120-23 DESCRIPTION OF INSTRUMENT PANEL—RIVIERA

a. Description of Instrument Cluster Assembly

The instrument cluster assembly shown in Figure 120-50 or 51 contains an engine oil pressure gauge, an engine water temperature gauge, a speedometer, a fuel gauge, an ammeter and an electric clock.

A printed circuit is used to complete the circuit for all lights, instruments and gauges in the cluster assembly. See Figure 120-53 for the cluster gauge circuits. A rectangular disconnect plug, which is part of the instrument panel wiring harness, attaches to the printed circuit connector tabs. The disconnect plug has two retaining fingers of different widths to insure correct assembly of the plug to the printed circuit. See Figure 120-52. If the Electro-Cruise option is specified, the standard instrument panel wiring harness will be replaced with a composite harness which provides special connections to the cruise engagement

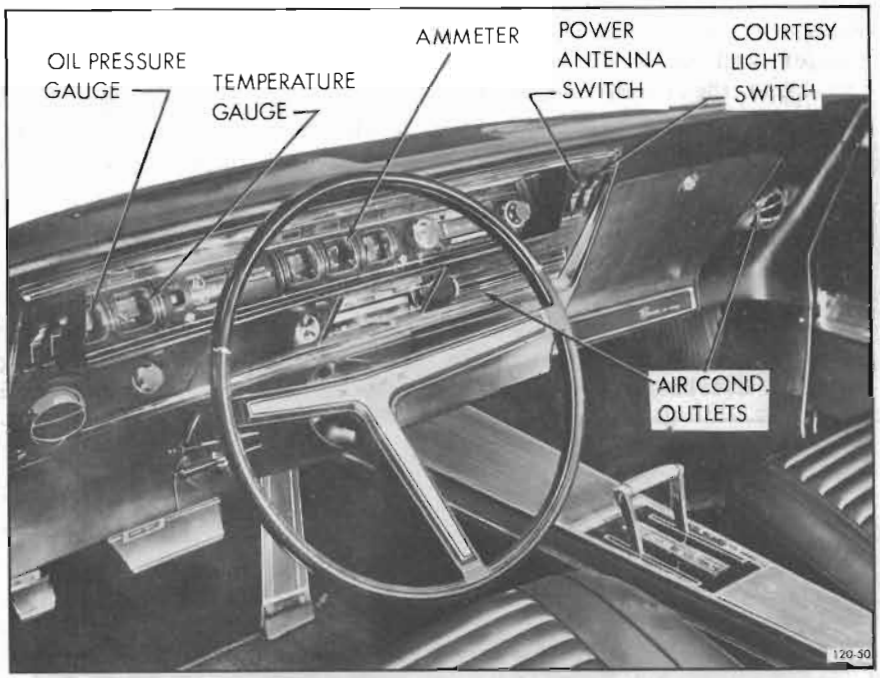

Figure 120-50—Instrument Panel - Riviera

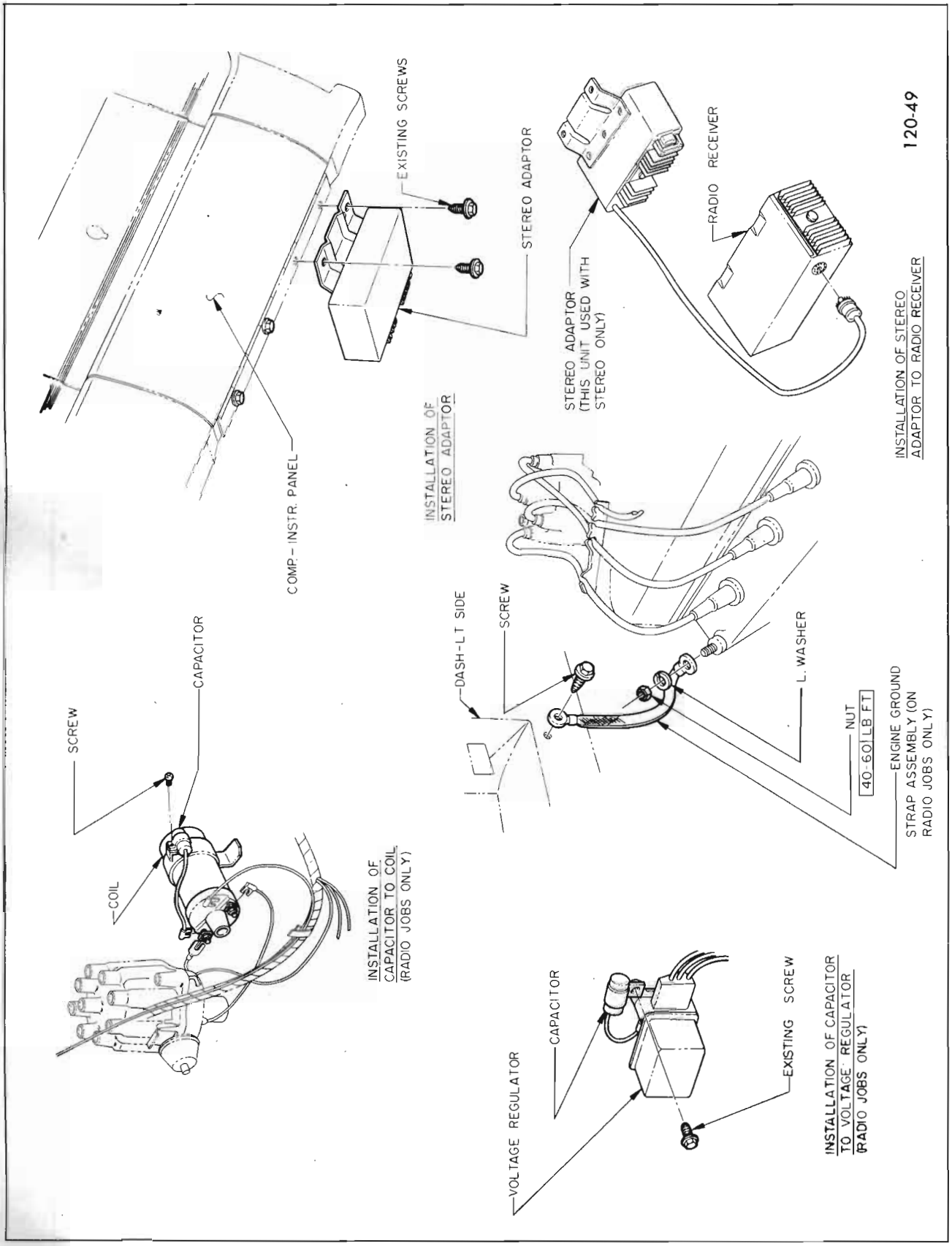

Figure 120-49—Radio Installation - LeSabre, Wildcat and Electra

SECTION F

INSTRUMENT PANEL— RIVIERA

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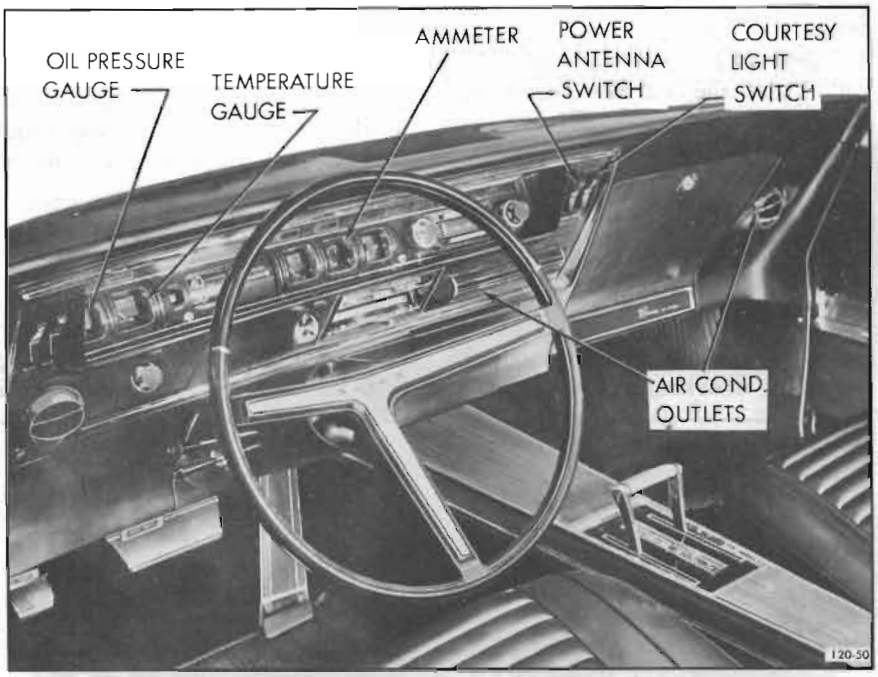

Figure 120-50—Instrument Panel - Riviera

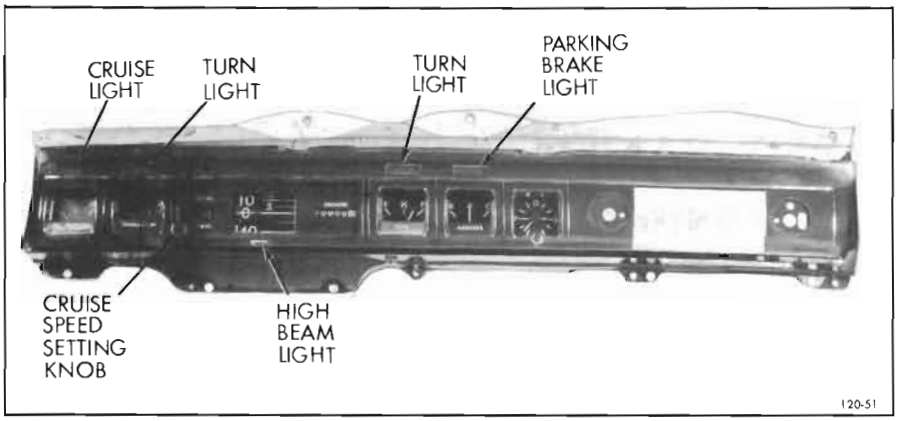

Figure 120-51—Instrument Cluster Assembly - Riviera

switch, the speedometer, and to the amplifier-relay mounting block.

b. Water Temperature Gauge

This gauge registers the temperature of the coolant in the engine. When the engine is cold, the pointer will be at or just below the C; if the engine should become too hot, the pointer will rise to the H. As the engine warms up, the pointer will rise above the C; this indicates that the heater can be used effectively and the car speed can be gradually increased. If the pointer ever rises to the H, the engine should be stopped immediately and the cause of overheating determined.

c. Oil Pressure Gauge

This gauge registers the pressure of the oil in your engine. Before the engine is started, the pointer will be at or just below the L to indicate low (or no) oil pressure. When the engine is started, the pointer should rise above the L immediately. Sometimes while idling with a hot engine, the pointer may be near the L; however, if the pointer ever drops to the L while driving, the engine should be stopped immediately and the oil level checked.

d. Ammeter

The ammeter registers the electrical current going into (charging) the battery, or coming from (discharging) the battery. When there is no current flow, the pointer will be at or near the 0 (zero); this is the normal position when the engine is not running and all accessories are turned off. Immediately after starting the engine, the pointer will move toward the C (charge); as the current used by the starter is replaced, the pointer will drop back to just above the 0. Sometimes while idling with many accessories turned on, the pointer will drop toward the D (discharge); however, if the ammeter ever shows discharge while driving at highway speeds, the charging system should be checked as soon as possible to prevent the battery from becoming discharged.

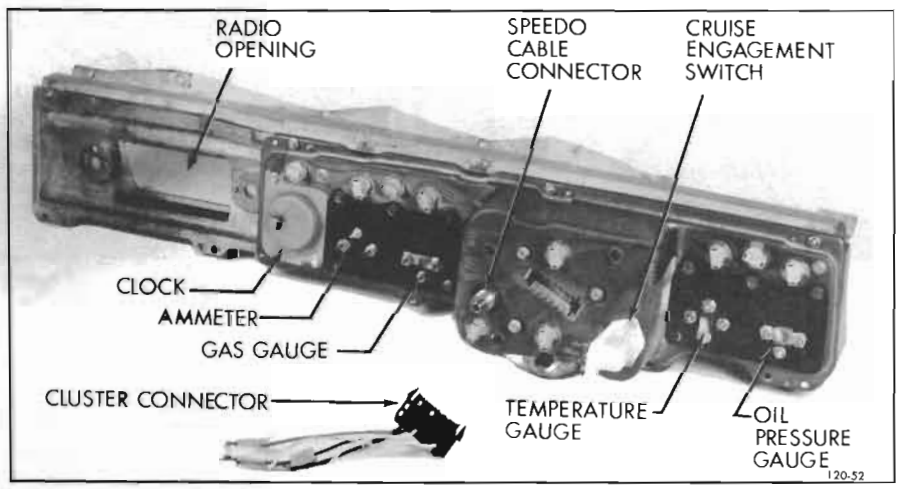

Figure 120-52—Back of Instrument Cluster Assembly - Riviera

e. Trouble Diagnosis—Ammeter, Water Temperature and Oil Pressure Gauges

Use Figure 120-53 to trace the wiring circuits to the gauges. The ammeter is of the shunt type and is connected across a long section of No. 10 wire which functions as a calibrated resistance. The ammeter is connected in such a location that all current going into or coming out of the battery (except main starter current) will register. Current supplied from the generator directly to accessories will not register.

The water temperature gauge is of the electrical type in which the temperature reading varies according to the resistance in a water temperature sending unit in the cylinder head. When the engine is cold, the resistance of the sending unit is high, resulting in a cold reading on the gauge; if the engine becomes overheated, the resistance of the sending unit will become low, resulting in a hot reading on the gauge.

The oil pressure gauge is of the electrical type in which the pressure reading varies according to the resistance in an oil pressure

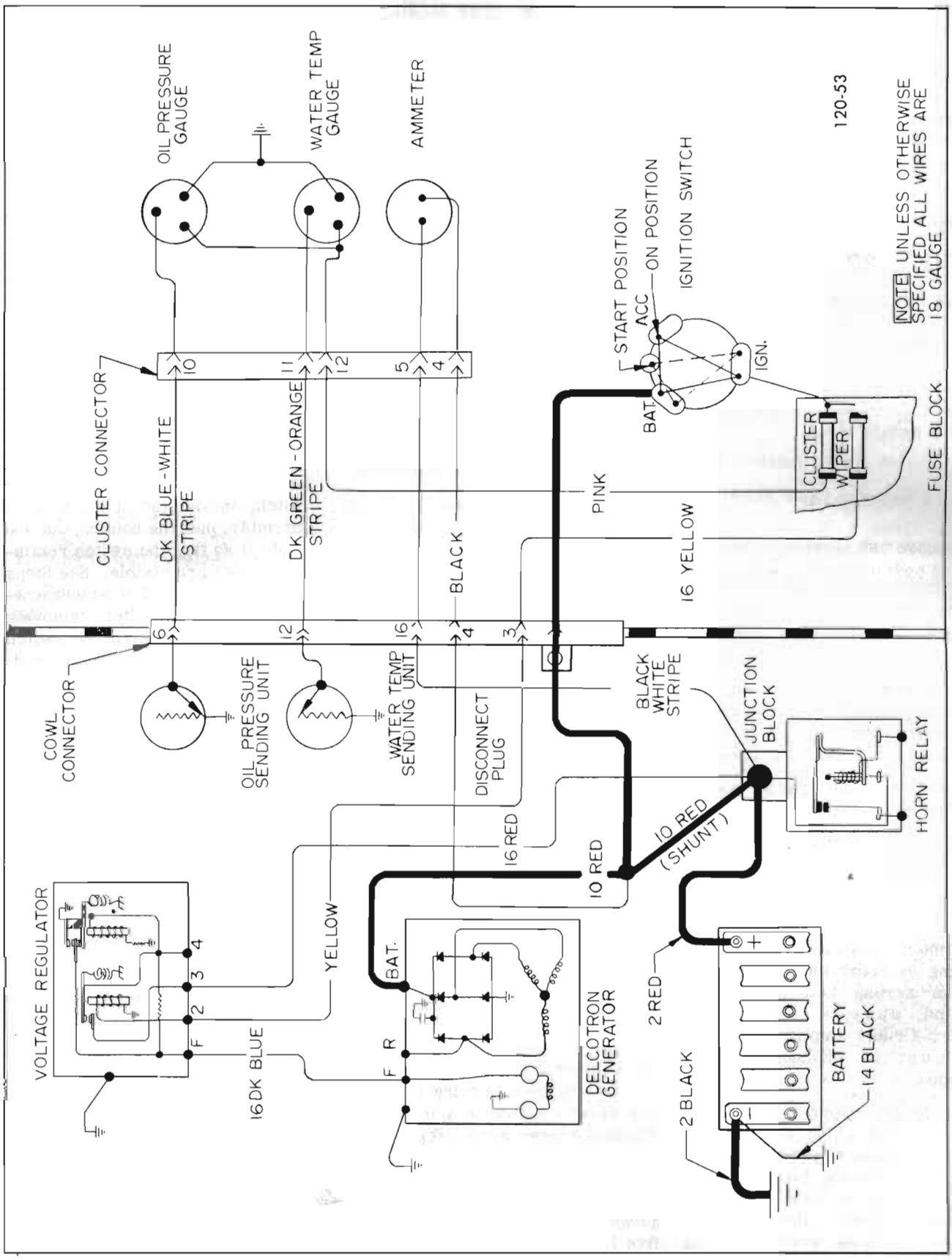

Figure 120-53—Instrument Cluster Gauge Diagram - Riviera

sending unit in the block. When there is no engine oil pressure, the resistance of the sending unit is low, resulting in a low reading on the gauge; when engine oil pressure is high, the resistance of the sending unit is high, resulting in a high reading on the gauge.

DIVISION III SERVICE PROCEDURES

120-24 REMOVAL AND INSTALLATION OF INSTRUMENT PANEL PARTS—RIVIERA

Before starting any instrument panel repair, always disconnect battery ground strap.

a. R. & I. Instrument Cluster Assembly

1. Remove ash receiver assembly.

2. Remove center air outlet and duct.

3. Remove radio. See subparagraph f.

4. Remove upper cover assembly by removing three Philips screws at cluster housing and two 3/8 hex nuts at glove box opening.

5. Remove instrument panel molding by prying.

6. Remove steering column lower cover.

7. Remove two 11/16 hex nuts and lower steering column.

8. Remove instrument panel lower housing by removing five 1/4 hex screws across bottom and six Phillips screws across top. Electro-Cruise amplifier connector must be unplugged, if so equipped.

9. To loosen upper housing assembly, first place a pad over steering column to protect it from damage. Remove two 3/8 hex nuts from below (one from each end of housing). Remove four 1/4 hex screws across top of housing. Pull upper housing assembly out to rest on steering column and knees.

10. Rotate upper housing assembly so that cluster retaining screws can be seen. Disconnect speedometer cable, unplug cluster connector, cruise connector, courtesy light connector and clock connector. Remove two 1/4 hex wiring harness clamp screws.

11. Remove five 1/4 hex screws across bottom of cluster and five 3/8 hex nuts across top of cluster. Remove instrument cluster assembly.

12. Install instrument cluster by reversing above steps.

b. R. & I. Speedometer or Printed Circuit

Before a speedometer or a printed circuit can be removed, instrument cluster assembly must be removed from car. Speedometer can then be removed on the bench. See subparagraph a above for instrument cluster removal and installation.

c. Removal and Installation of Gauges

1. Oil Pressure or Temperature Gauge.

(a) Disconnect battery ground cable.

(b) Remove instrument panel molding by prying.

(c) Remove steering column lower cover.

(d) Lower steering column.

(e) Remove ash receiver.

(f) Remove instrument panel lower housing by removing five 1/4 hex screws across bottom and six Phillips screws across top.

(g) Remove light switch.

(h) Remove oil and temperature gauge assembly after removing five 1/4 hex screws.

(i) Remove defective gauge from assembly.

2. Fuel or Amperes Gauge.

(a) Disconnect battery ground cable.

(b) Remove ash receiver.

(c) Remove center air outlet and duct.

(d) Remove radio assembly (subparagraph f).

(e) Remove fuel and amperes gauge assembly.

(f) Remove defective gauge from assembly.

d. R. & I. Cruise Engagement Switch

To remove the cruise engagement switch, unbolt the upper housing assembly, pull the housing out and rotate it so that the switch retaining screws are visible. See Steps 1, 2 and 4 through 9 in subparagraph a above. After removing the retaining screws, the switch will slide from the switch rod.

e. R. & I. Clock

1. Remove ash receiver assembly.

2. Remove center air outlet and duct.

3. Remove heater-air conditioner control panel and pull out. Do not disconnect.

4. Remove clock reset knob by loosening center set screw using a 1/16 Allen wrench.

5. Unplug clock connector.

6. Remove two 1/4 hex screws and remove clock.

f. R. & I. Radio

1. Remove ash receiver assembly.

2. Remove center air outlet and duct.

3. Remove brace from underside of radio.

4. Remove radio knobs and escutcheons. Remove two 5/8 inch hex nuts.

5. Unplug feed and speaker wire connector and antenna cable from radio.

6. Remove radio through ash receiver opening.

g. R. & I. Front Radio Speaker

1. Remove radio (subparagraph f).

2. Remove four 3/8 inch hex nuts from right corners of speaker grille.

3. Remove grille and speaker assembly. Remove speaker from grille on bench.

h. R. & I. Ignition Switch

1. Remove ash receiver assembly.

2. Remove instrument panel molding.

3. Remove steering column lower cover.

4. Lower steering column.

5. Remove instrument panel lower housing.

6. Remove ignition switch lock cylinder (in accessory position).

7. Remove switch retaining nut.

8. Lower switch and unplug connector.

i. R. & I. Light Switch

1. Remove ash receiver assembly.

2. Remove instrument panel molding.

3. Remove steering column lower cover.

4. Lower steering column.

5. Remove instrument panel lower housing.

6. Pull switch knob out to last notch, then depress latch button while pulling knob and rod assembly out of switch.

7. Remove switch escutcheon.

8. Lower switch and unplug connector.

j. R. & I. Windshield Wiper or Washer Switch

The windshield wiper and washer switches are removed together by prying with a small screwdriver in a notch at the bottom edge of the switch housing. The faulty switch can then be disconnected and removed from the assembly.

k. R. & I. Courtesy Light or Power Antenna Switch

The courtesy light and power antenna switches are removed together by prying with a small screwdriver in a notch at the bottom edge of the switch housing. The faulty switch can then be disconnected and removed from the assembly.

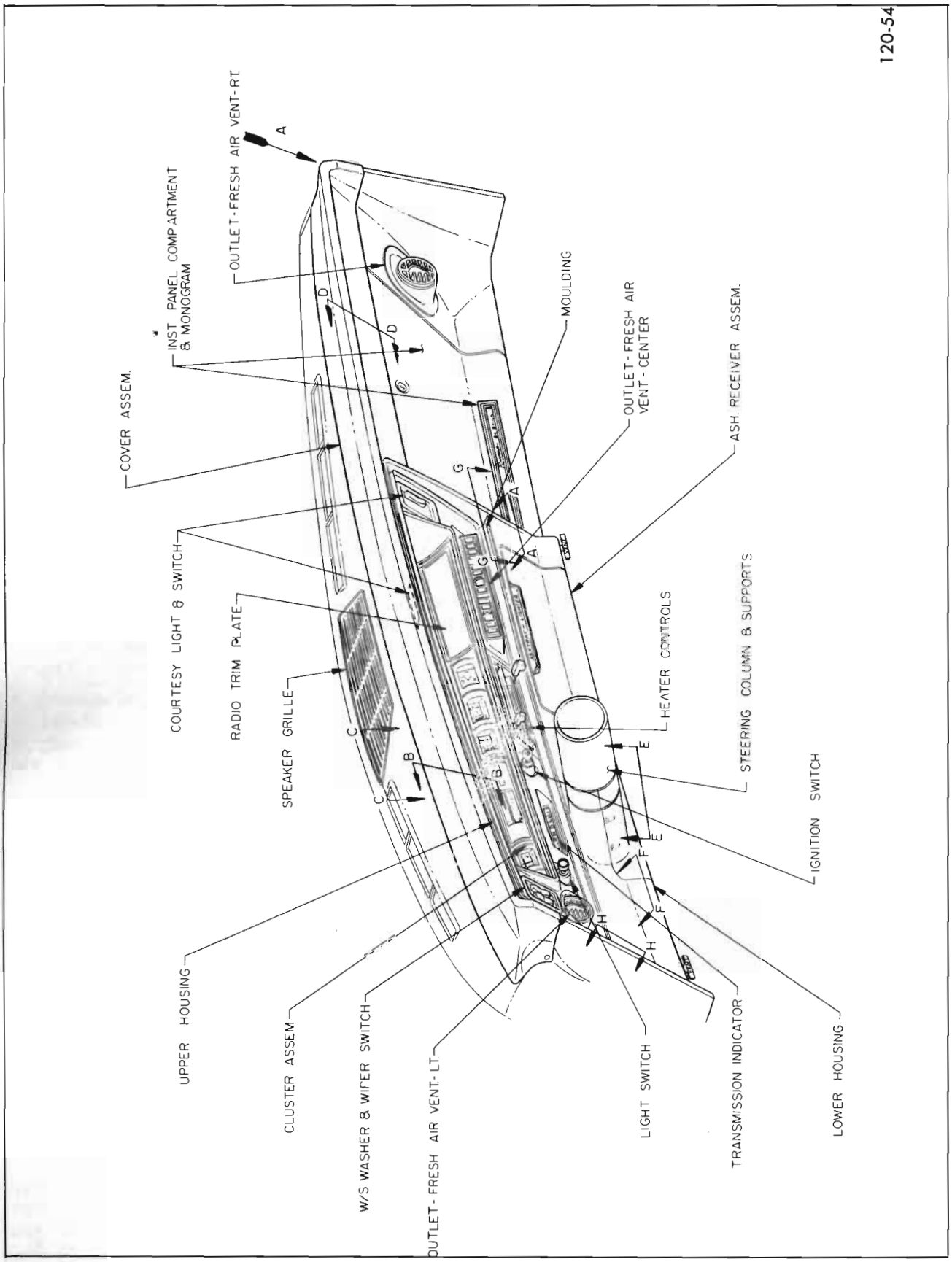

Figure 120-54—Instrument Panel Installation - Riviera

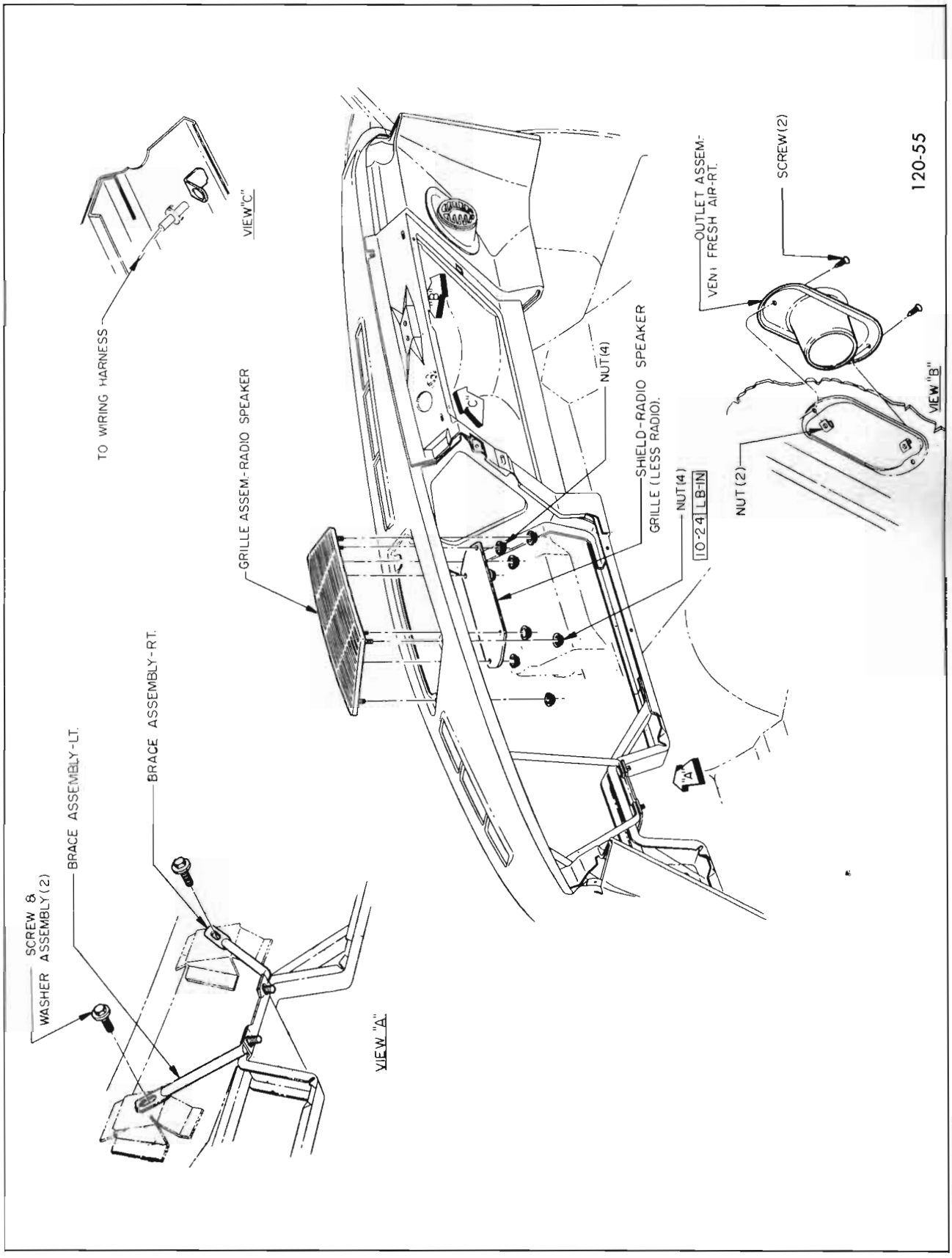

Figure 120-55—Radio Speaker Installation Riviera

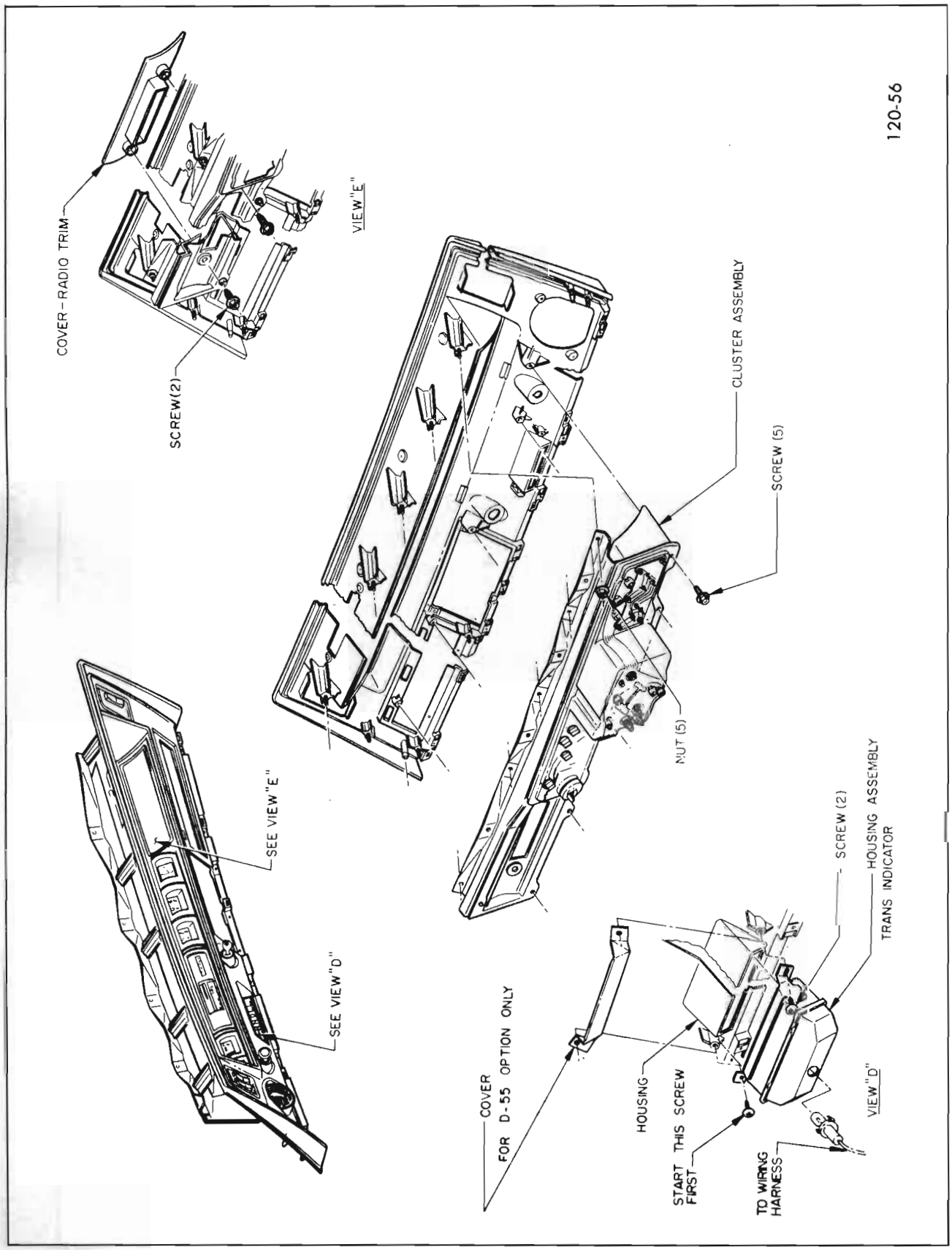

Figure 120-56—Cluster Installation - Riviera

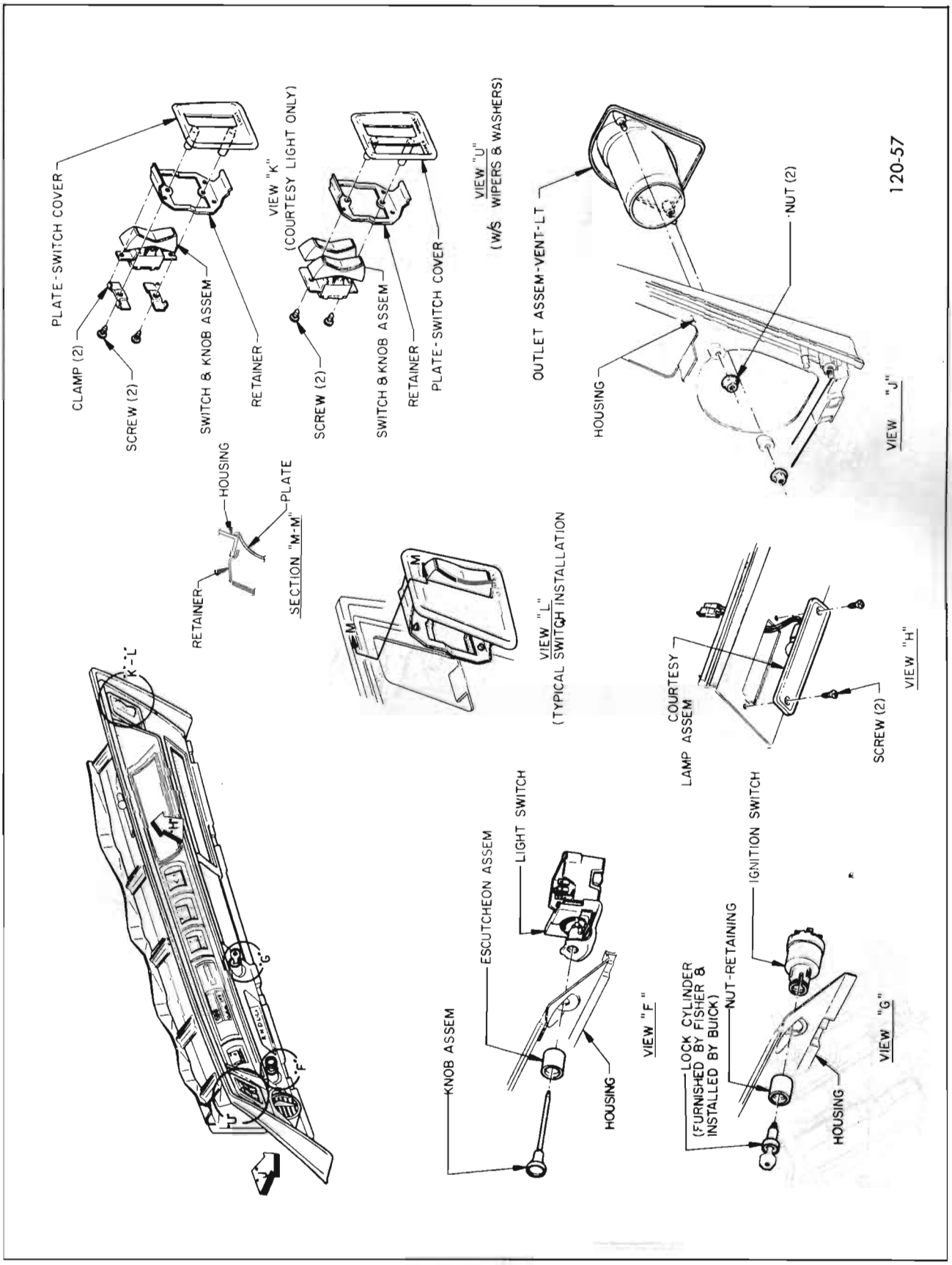

Figure 120-57—Switch Installation - Riviera

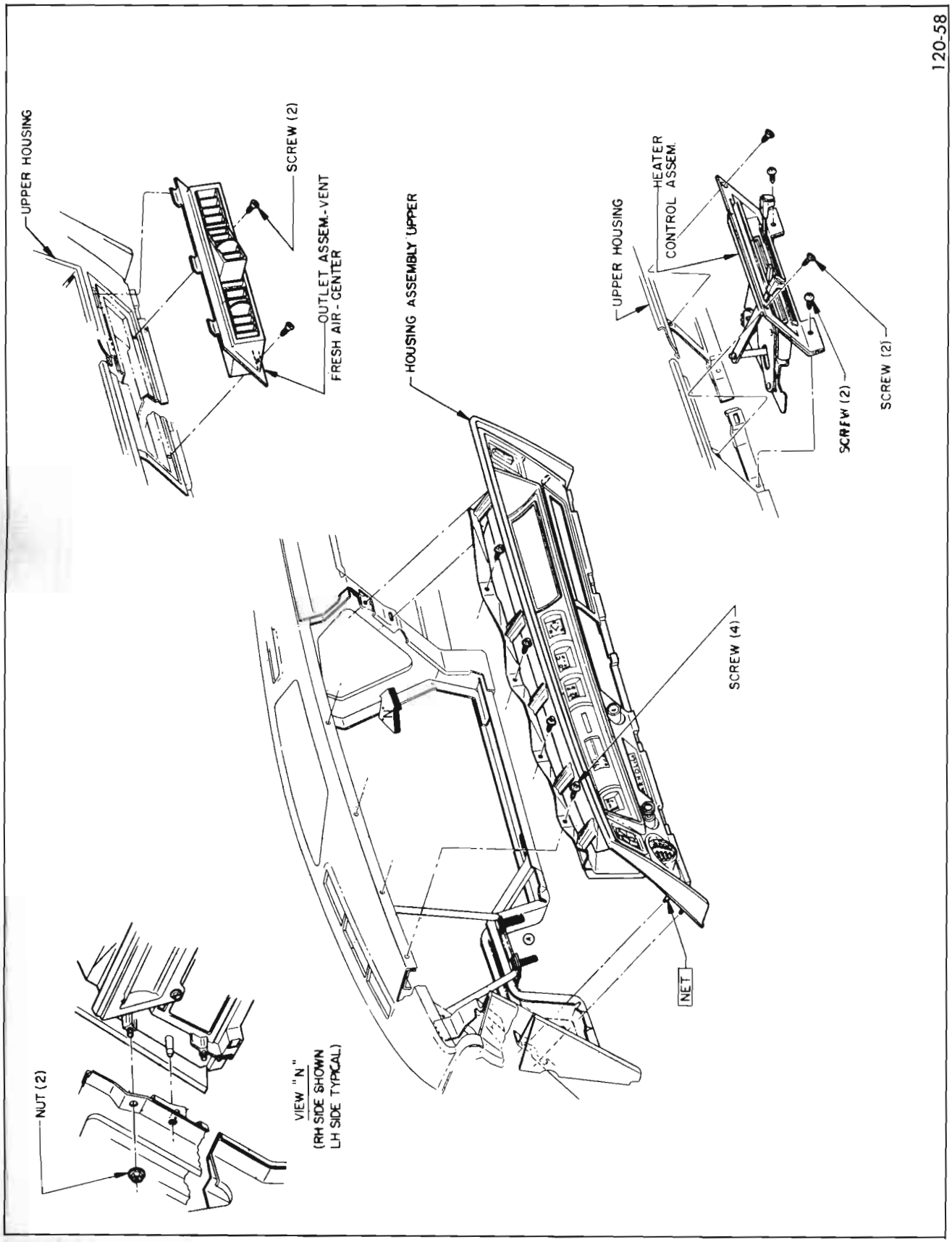

Figure 120-58—Upper Housing Installation - Riviera

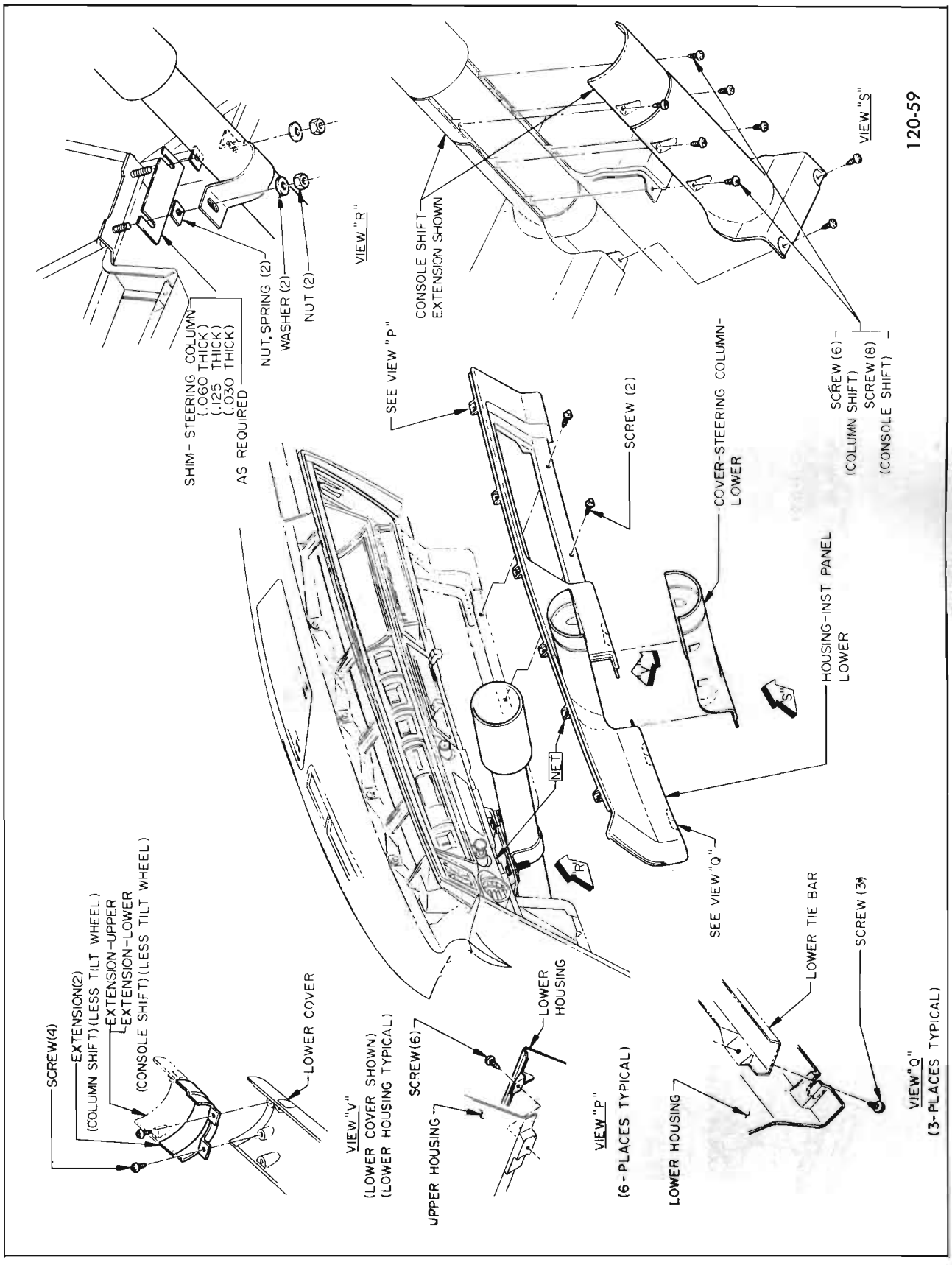

Figure 120-59—Lower Housing and Steering Column Installation - Riviera

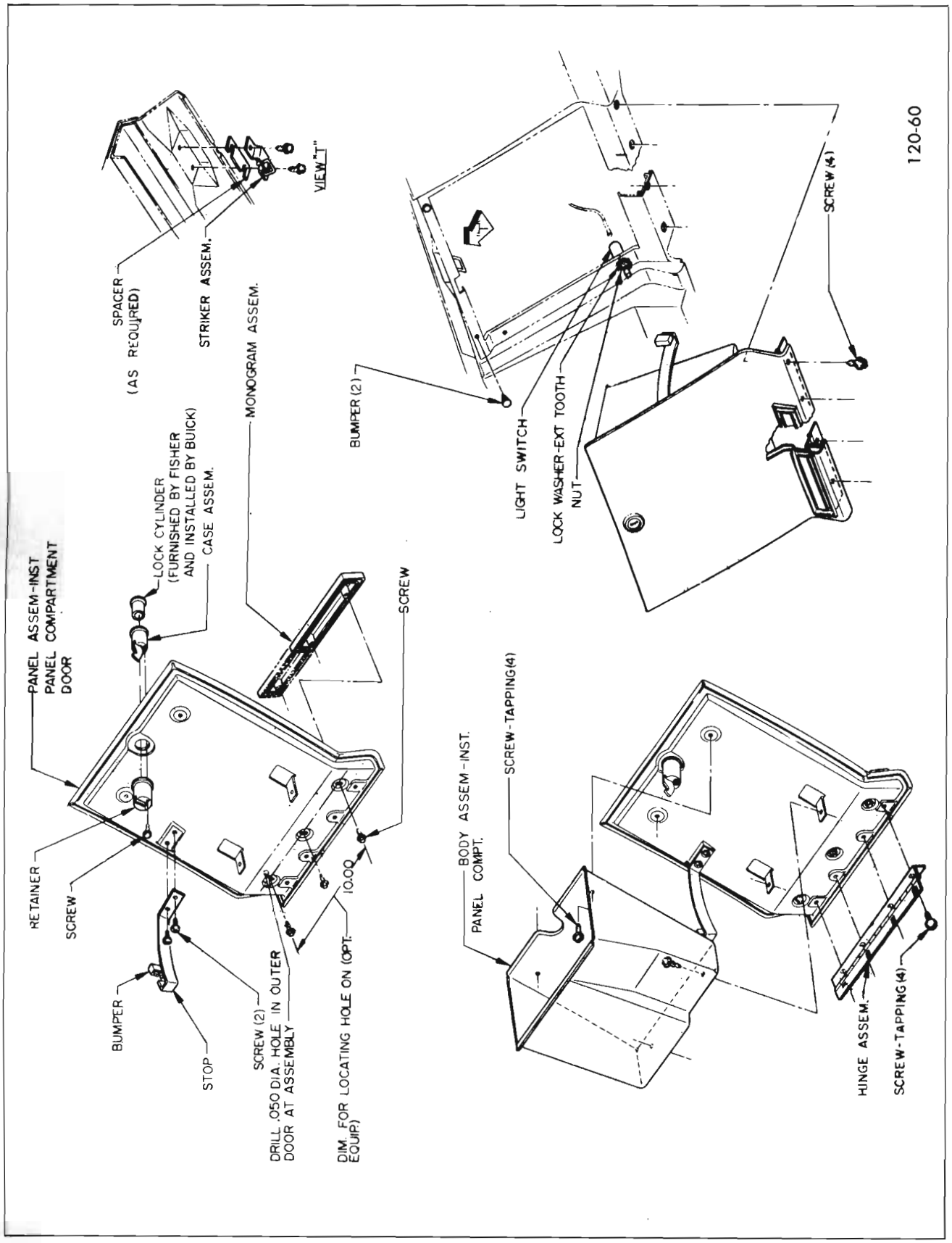

Figure 120-60—Glove Box Installation - Riviera

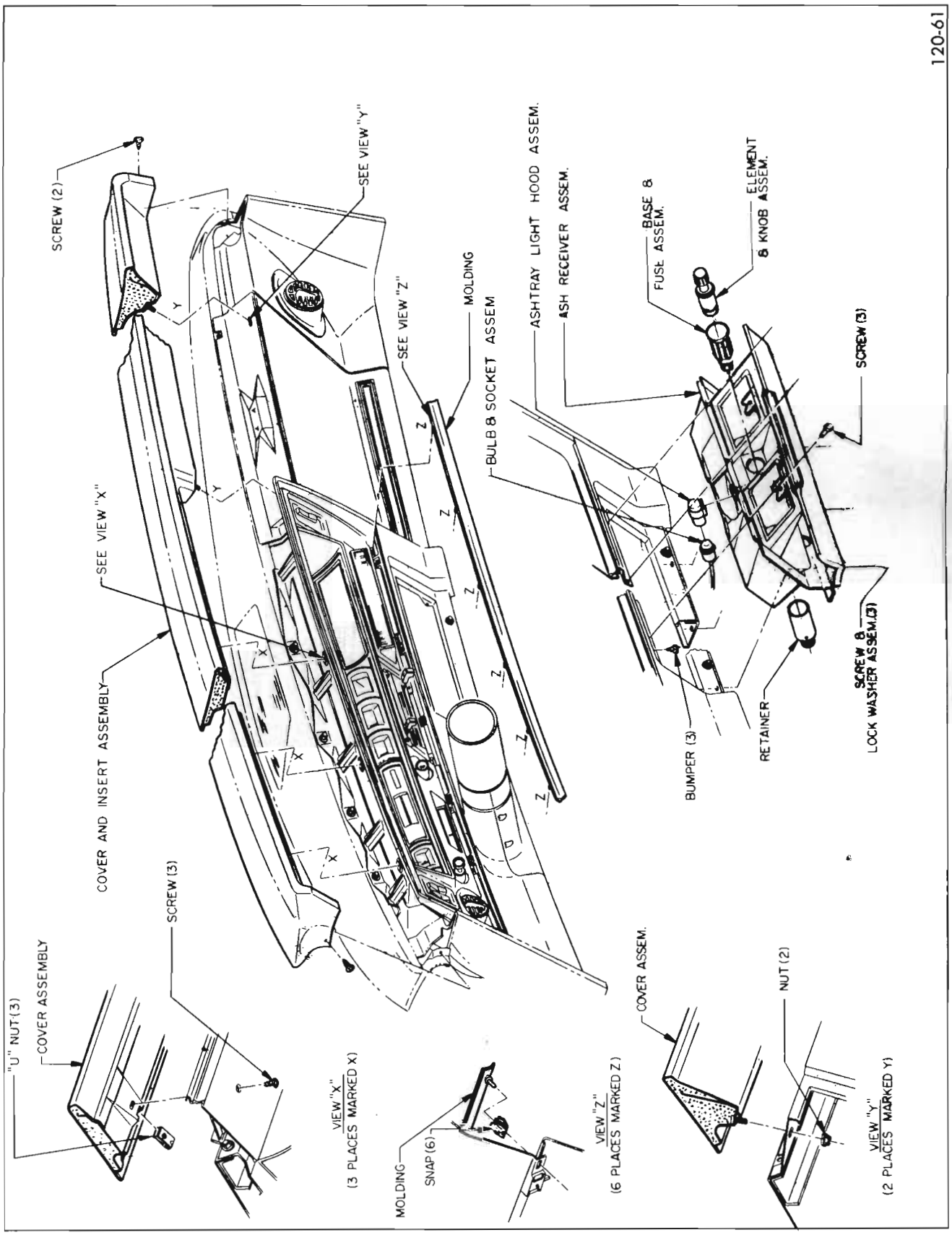

Figure 120-61—Upper Cover and Ash Tray Installation - Riviera

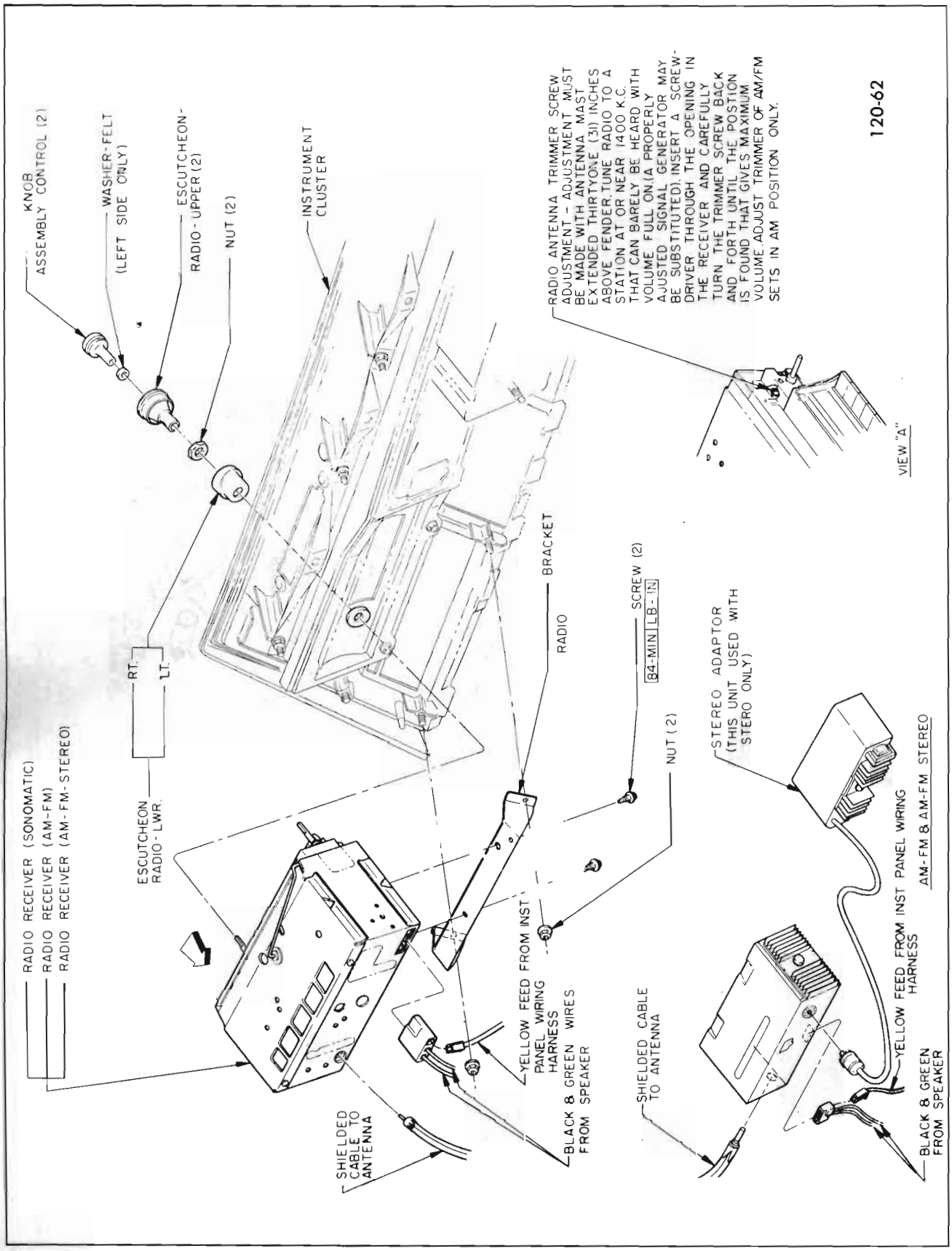

Figure 120-62—Radio Installation - Riviera

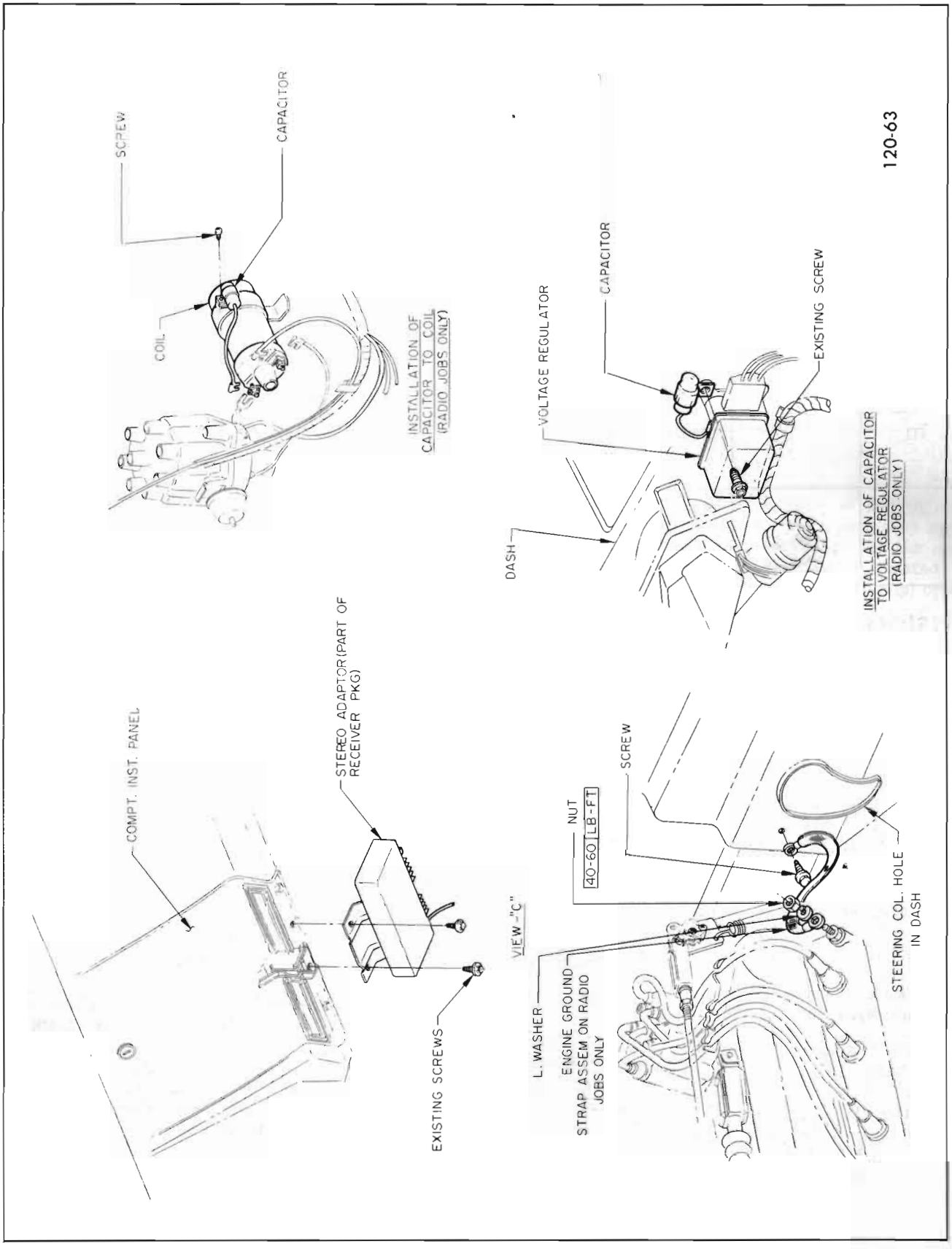

Figure 120-63—Radio Installation - Riviera