

SECTION E

INSTRUMENT PANEL—LE SABRE, WILDCAT AND ELECTRA

CONTENTS

Division	Paragraph	Subject	Page
I		SPECIFICATIONS AND ADJUSTMENTS:	
II	120-21	DESCRIPTION AND OPERATION: Description of Instrument Panel - LeSabre, Wildcat & Electra .	120-37
III	120-22	SERVICE PROCEDURES: Removal and Installation of Instrument Panel Parts - LeSabre, Wildcat and Electra	120-41

DIVISION II

DESCRIPTION AND OPERATION

120-21 DESCRIPTION OF INSTRUMENT PANEL—LE SABRE, WILDCAT & ELECTRA

CAUTION: Disconnect battery ground cable before removing any instrument panel unit or wiring.

a. Description of Instrument Cluster Assembly

The instrument cluster assembly contains the speedometer, fuel gage, indicator lights and clock.

A printed circuit is used to complete the circuits for all the lights and instruments in the cluster assembly. See Figure 120-26. 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 in the printed circuit. If the

printed circuit should become defective, it should be replaced as it is not practical to repair it.

An accessory block is an integral part of the instrument panel wiring harness. If the car has a

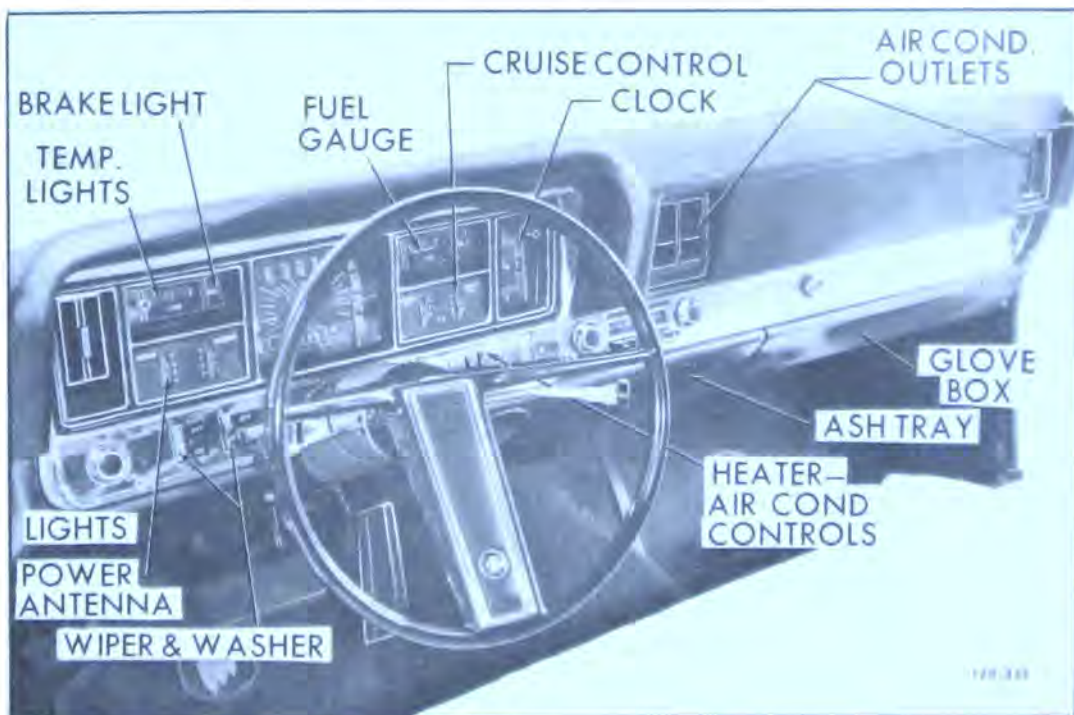


Figure 120-25—Instrument Panel - LeSabre, Wildcat and Electra

composite wiring harness, this block makes it possible to connect the wiring for the following options quickly and easily: cruise control and rear window defroster.

b. Generator Charge Indicator

The red "GEN" warning light should light when the ignition is turned "ON" and before the engine is started; if not lighted, either the bulb is burned out or the indicator light wiring has an open circuit. After the engine is started, the "GEN" light should be out at all times; if the light comes on, the generator belt may be loose or missing, the generator or regulator may be defective, or the charging circuit may be defective. See paragraph 68-6 for trouble-shooting procedures.

To trace the generator indicator light circuit, see Figure 120-26. With the ignition switch turned on (engine not running), current flow is through the ignition switch, out the "IGN" terminal, through the generator light in the instrument cluster, to the "4" terminal of the regulator, through the lower

contacts of the voltage regulator (held closed by the spring), out the "F" terminal of the generator, through the brush and slip ring, through the field, through another brush and slip ring to ground.

Before the engine is started, the generator light should glow at about 1/2 brightness. This is because the voltage in the circuit before the light is about 12 volts, but the voltage at the "4" terminal after the light is about 5 volts. This makes the effective voltage across the generator light approximately 7 volts for about 1/2 brightness.

After the engine is started, the voltage put-out by the generator immediately closes the field relay. This causes battery voltage from the "3" terminal to be present at the "4" terminal. See Figure 120-28. Since battery voltage is present on both sides of the generator light, the light goes out. If the generator light comes with the engine running, the charging circuit should be tested at the first opportunity to determine the cause of the trouble. See paragraph 68-6.

c. Oil Pressure Indicator

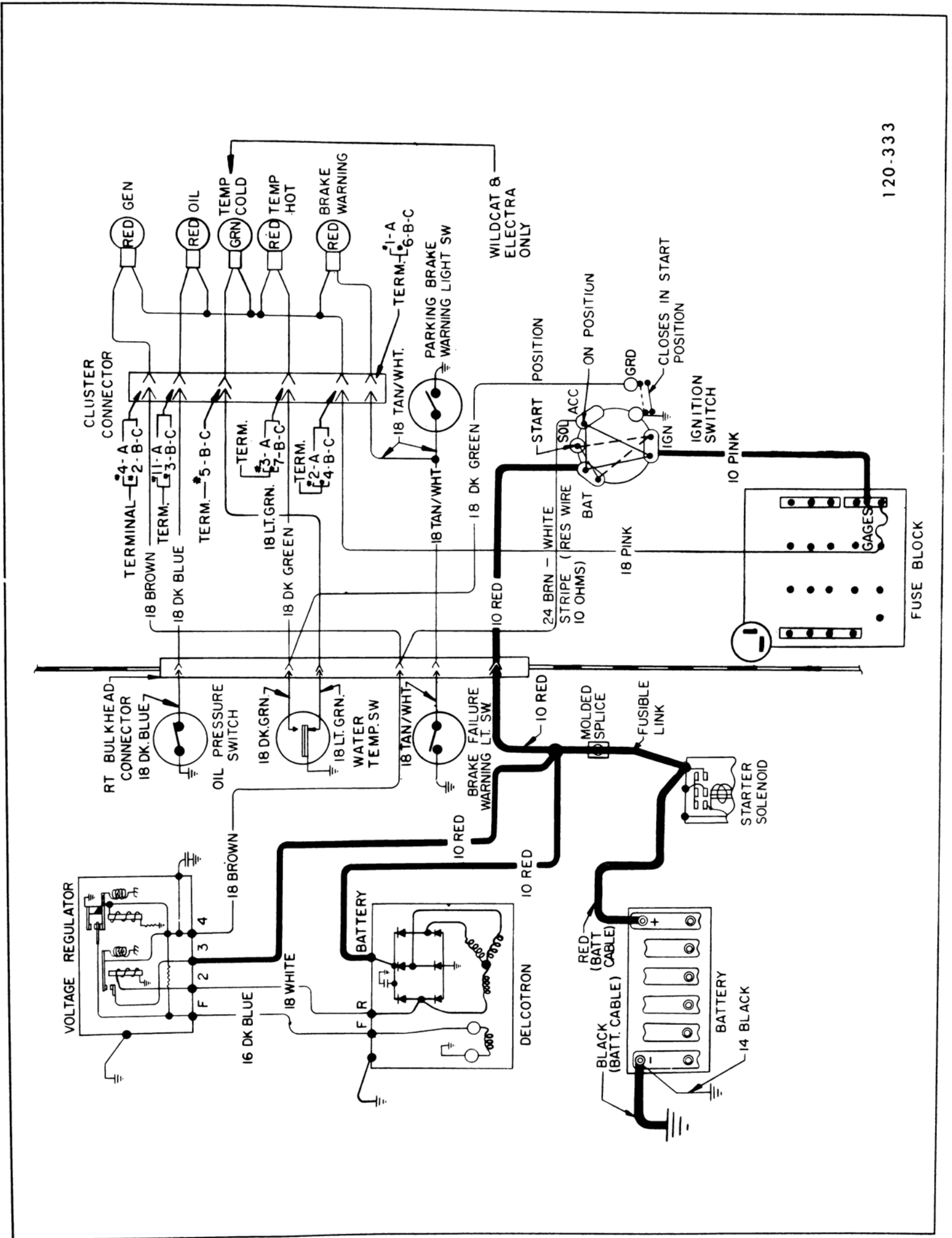
The engine oil pressure indicator light is controlled by a pressure operated switch located in the main oil gallery at the right rear of the engine.

This light should come on when the ignition is turned "On" and the engine is not running. If not lit, either the bulb is burned out, the wiring has an open or the oil switch is defective.

If the engine oil pressure drops below a safe level during operation, the circuit is completed through the pressure switch to ground, and the "Oil" indicator light in the cluster will be turned on.

If the "Oil" indicator stays on or comes on when the engine is running at speeds above idle, the following may be the cause, rather than low oil pressure:

1. Wiring circuit between oil pressure switch and light grounded. Remove connector from pressure switch, if light stays on trouble is in wiring.



120-333

Figure 120-26—Instrument Warning Light Wiring Diagram - LeSabre, Wildcat and Electra

2. Switch defective. Replace switch.

d. Temperature Indicator

A temperature switch located in right cylinder head controls the operation of a "Cold" temperature indicator with a green lens and a "Hot" temperature indicator with a red lens.

NOTE: LeSabres do not have a "Cold" light.

When the cooling system water temperature is below approximately 110 degrees F., the temperature switch grounds the "Cold" indicator circuit and the "Cold" on the instrument cluster is lit. When the "Cold" light

goes out, the water temperature is high enough so that the heater can be turned on and be effective. The car should never be subjected to full throttle accelerations or high speeds until after the "Cold" light has gone out.

If the engine cooling system is not functioning properly and the water temperature should reach approximately 248 degrees F., the "Hot" indicator will be turned on by the temperature switch. As a test circuit to check whether the "Hot" indicator bulb is functioning properly, a wire which leads to the "GND" terminal of the ignition switch is connected in to its circuit. See Figure 120-38 or 39. When the ignition is in the

"Start" position (engine cranking), the "GND" terminal is grounded inside the switch and the "Hot" indicator bulb will be lit. When the engine is started and the ignition switch is in the "On" position, the test circuit is opened and the bulb is then controlled by the temperature switch.

e. Trouble Diagnosis—Generator, Oil Pressure Temperature Indicators

Use Figure 120-26 to trace wiring circuits for indicator lights. To determine if there is a ground in the indicator light circuit, remove connector from control switch, if light stays on, trouble is in circuit.

COMPLAINT	POSSIBLE CAUSE
<p>1. GENERATOR INDICATOR</p> <p>Light on, ignition "Off".</p> <p>Light not lit, ignition "On" and engine not running.</p> <p>Light on, engine running above idle speed.</p>	<p>Positive diode shorted. Locate and replace.</p> <p>Bulb burned out. Replace</p> <p>Open in light circuit. Locate and correct.</p> <p>Positive diode shorted. Locate and replace.</p> <p>No generator output. Check output, paragraph 68-9.</p> <p>Negative diode shorted.</p> <p>Loose or broken generator belt.</p> <p>Resistance or open in field circuit.</p> <p>Defective field-light relay.</p>
<p>2. OIL PRESSURE INDICATOR</p> <p>Light not lit, ignition "On" and engine not running.</p> <p>Light on, engine running above idle speed.</p>	<p>Bulb burned out. Replace.</p> <p>Open in light circuit. Locate and correct.</p> <p>Oil pressure switch defective. Replace.</p> <p>Wiring between light and switch grounded. Locate and correct.</p> <p>Oil pressure switch defective. Replace.</p> <p>Oil pressure below 2 lbs. Locate cause and correct.</p>

COMPLAINT	POSSIBLE CAUSE
3. TEMPERATURE INDICATORS	
(a) Hot Indicator	
Light not lit when cranking engine.	Bulb burned out. Replace. Open in light circuit. Locate and correct. Ignition switch defective. Replace.
Light on, engine running.	Wiring between light and switch grounded. Locate and correct. Temperature switch defective. Replace. Cooling system water temperature above 248°F. Find cause and correct. Ignition switch defective. Replace.
(b) Cold Indicator	
Light not lit, ignition "On" and engine cold.	Bulb burned out. Replace. Open in light circuit. Locate and correct. Water temperature switch defective. Replace.
Light on, after normal engine warm-up period.	Wiring between light and switch grounded. Locate and correct. Water temperature switch defective. Replace. Thermostat in cooling system defective. Replace.

DIVISION III

SERVICE PROCEDURES

120-22 REMOVAL AND INSTALLATION OF INSTRUMENT PANEL PARTS— LE SABRE, WILDCAT AND ELECTRA

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

a. R. & I. Instrument Cluster Assembly

CAUTION: If equipped with cruise control, upper speedo cable must be disconnected from transducer before cluster housing is pulled back.

1. Remove eight screws from instrument panel compartment body assembly and remove assembly.

2. Remove three 3/8 hex nuts at top underside of dash assembly and four screws at instrument panel housing assembly. Pull instrument panel upper cover rearward to remove.

3. Remove two screws from steering column filler and remove filler. Disconnect shift quadrant link wire at steering column. Remove two 3/8 hex nuts from steering column mounting bracket and one 3/8 hex bolt from column wedge. Lower steering column.

4. Remove two nuts from lower edge of instrument panel housing at steering column.

5. Remove four screws across upper edge of instrument panel housing.

6. Remove two screws at heater

control installation and separate from instrument panel housing.

7. Remove four screws at ash receiver assembly and remove assembly.

8. Remove one 3/8 hex nut at lower right side of the instrument housing.

9. Remove head light switch from instrument panel housing; do not unplug connector.

10. Remove one 3/8 hex nut at lower left side of instrument housing.

11. Protect steering column so that instrument panel housing will not mar column when housing is tilted back.

12. Remove two screws at center AC distribution duct (lower) and remove duct.

13. Disconnect from instrument cluster:

- a. Speedometer cable (from below).
- b. Printed circuit connector (from above).
- c. Wiring harness clip (from below).
- d. Clock connector and two clock bulbs (from above).
- e. Cruise switch connector (from above).
- f. Courtesy light connector (from above).
- g. Windshield wiper/washer switch connector (from below).
- h. Antenna and accessory switch connectors (from above).
- i. Cluster ground wire (from above).

14. Remove complete instrument panel housing assembly to work bench.

15. Remove six 1/4 hex screws and remove instrument panel cluster from instrument panel housing.

16. Install instrument cluster by reversing above steps.

b. R. & I. Speedometer

1. To remove a speedometer, first remove the instrument cluster. See subparagraph a. above for instrument cluster removal and installation.
2. Remove speed alert knob and remove speed alert cable from cluster (leave opposite end attached to cluster).
3. Remove eight clips from cluster face and remove face.
4. Remove four 1/4 hex screws from speedometer back and remove speedometer from cluster.
5. Install speedometer by reversing above steps.

c. R. & I. Printed Circuit

1. To remove a printed circuit, first remove instrument housing. See subparagraph a. above for instrument housing removal.
2. The printed circuit is removed by first removing the 13 cluster light bulbs.
3. Remove speed alert knob and cable.
4. Remove four 1/4 hex screws from gas gage dash unit and remove unit.
5. Remove two 1/4 hex screws at speedometer ground strap and remove strap.
6. Remove one 1/4 hex screw from printed circuit and remove circuit.
7. Install printed circuit by reversing above steps.

NOTE: If car is equipped with a speed alert, remove speed alert wire connector screw to remove printed circuit. Also, remove speed alert cable and cluster face as described in subparagraph b. above to install speed alert wire after the circuit is installed.

d. R. & I. Light Switch

1. Pull switch knob out to last notch, then depress latch button and pull knob and rod assembly out of switch.
2. Remove switch escutcheon.
3. Pull switch down and unplug from connector.
4. Install light switch by reversing above steps.

e. R. & I. Rear Window Defroster or Power Antenna Switch

1. Remove two screws from steering column filler and remove filler.
2. Pry switch cover plate from front of cluster assembly.

3. Remove two switch retaining screws and unplug switch from connector.

4. Install switch by reversing above steps.

f. R. & I. Windshield Wiper/Washer Switches

1. Remove two screws from steering column filler and remove filler.
2. Disconnect shift quadrant link wire at steering column. Remove two 3/8 hex nuts from steering column mounting bracket and one 3/8 hex bolt from column wedge. Lower steering column to see switch attaching screw.
3. Unplug connectors from switches.
4. Remove two 1/4 hex screws from switches and pull switches down.
5. Install switches by reversing above steps.

g. R. & I. Courtesy Light or Cruise Control Switch

1. Pry switch cover plate from front of cluster assembly.
2. Remove two switch retaining screws and unplug switch from connector.
3. Install switch by reversing above steps.

h. R. & I. Clock

1. If AC, remove two screws at center AC distribution duct and remove duct.
2. Unplug clock connector and two clock bulbs.
3. Remove three 1/4 hex head screws and pull clock out.
4. Install clock by reversing above steps.

i. R. & I. Gas Gauge Dash Unit

1. If AC, remove two screws at center AC distribution duct and remove duct.
2. Remove four 1/4 hex head retaining screws and remove gas gage from instrument cluster.
3. Install gas gage by reversing above steps.

j. R. & I. Ignition Switch

1. If AC, remove two screws at center AC distribution duct and remove duct.
2. Remove ignition switch lock cylinder (in accessory position).
3. Remove switch retaining nut.
4. Lower switch and unplug from connector by depressing retainer tabs.
5. Install ignition switch by reversing above steps.

k. R. & I. Instrument Cluster Light Bulbs

Any light bulb in the instrument cluster is accessible from below without removing any other part.

NOTE: If car is equipped with an air conditioner, center distribution duct must be removed.

l. R. & I. Radio

1. Remove four screws at ash receiver assembly and remove assembly.
2. If AC, remove two screws at center AC distribution duct and remove duct.
3. Remove radio knobs and escutcheons. Remove two 5/8 hex nuts.
4. Unplug antenna lead from radio receiver.
5. Unplug three wire and single

wire connector from radio receiver.

6. Remove radio downward.
7. Install radio by reversing above steps.

m. R. & I. Front Radio Speaker

1. Remove eight screws from instrument panel compartment body assembly and remove assembly.
2. If AC, remove two screws at center AC distribution duct and remove duct.
3. Unplug three wire and single wire connector from radio receiver.
4. Remove one 7/16 hex head retaining screw from speaker and slide radio speaker to the right and remove.
5. Install radio speaker by reversing above steps.

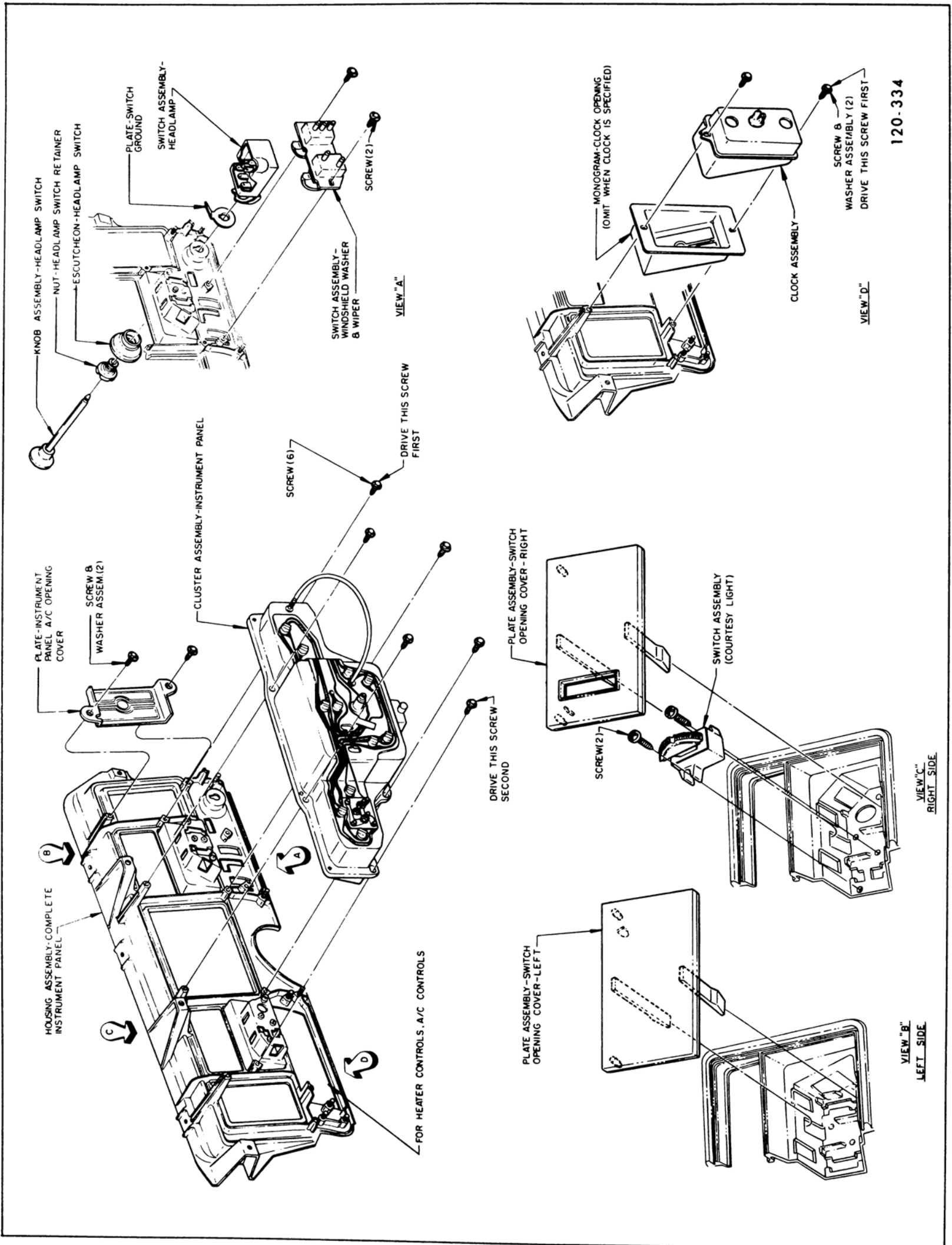


Figure 120-27—Clock and Cluster Installation - LeSabre, Wildcat and Electra

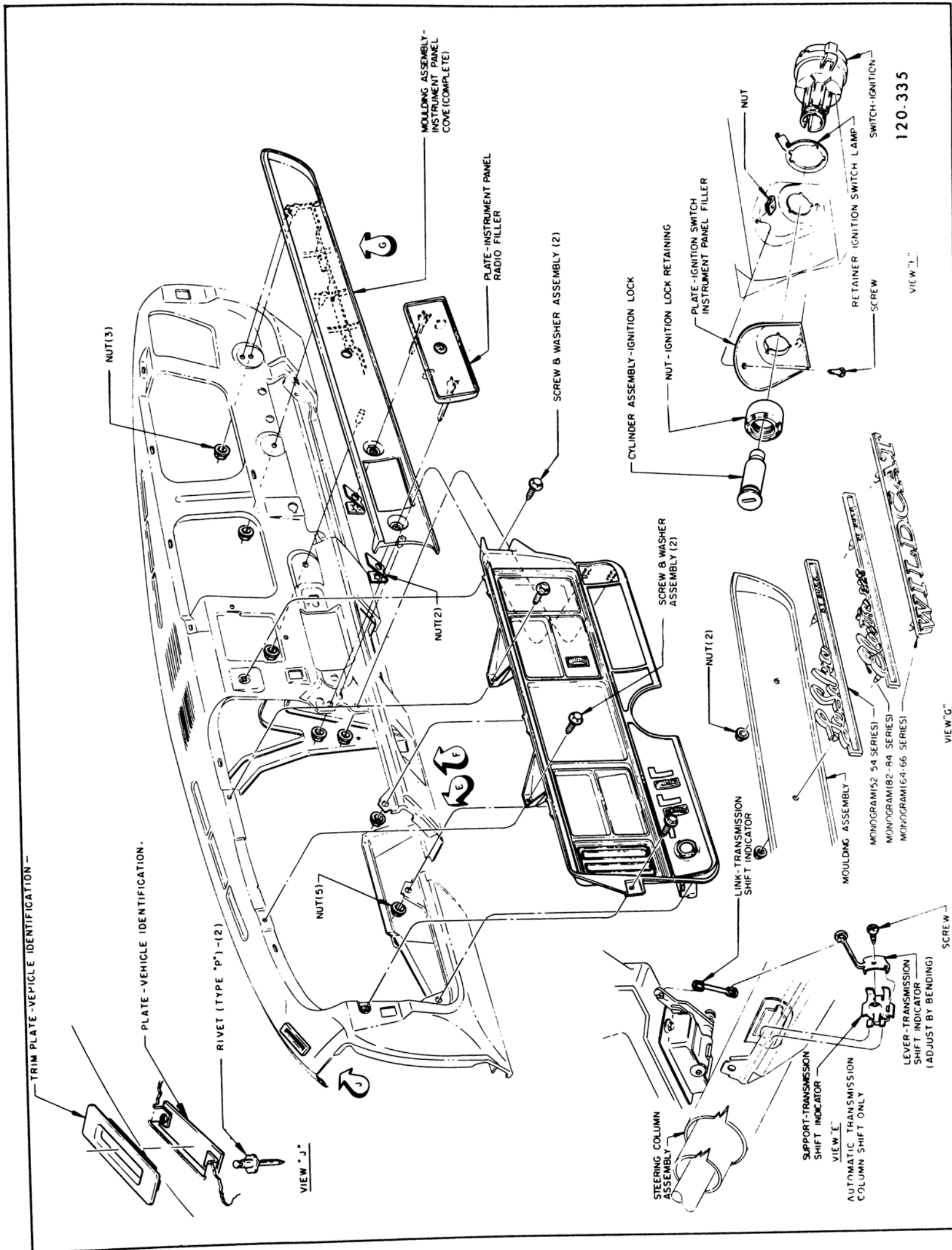


Figure 120-28—Instrument Housing Installation - LeSabre, Wildcat and Electra



Figure 120-29—Upper Cover Installation - LeSabre, Wildcat and Electra