

# SECTION E

## INSTRUMENT PANEL—LE SABRE, ESTATE WAGON, WILDCAT AND ELECTRA

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### DIVISION II

### DESCRIPTION AND OPERATION

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 composite wiring harness, this block makes it possible to connect the wiring for the following options quickly and easily:

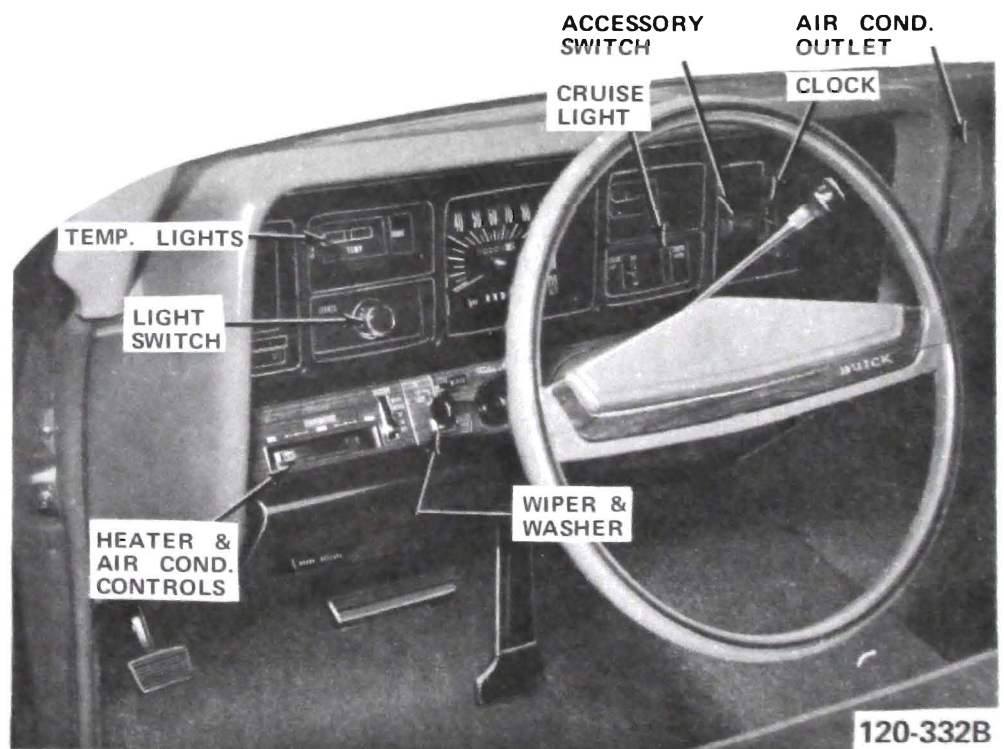
#### 120-21 DESCRIPTION OF INSTRUMENT PANEL - LE SABRE, WILDCAT, ESTATE WAGON, AND ELECTRA

**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 120-18. A rectangular disconnect plug which is part of the instrument panel wiring harness attaches to the printed circuit connector tabs. The disconnect plug has



120-332B

Figure 120-25 Instrument Panel - 45-46-48000 Series

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 120-18. With the ignition switch turned on (engine not running), current flow is through the ignition switch, 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, in 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 120-18. Since battery voltage is present on both sides of the generator light, the light goes out. If the generator light comes on 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 front 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.
2. Switch defective. Replace switch.

#### d. Temperature Indicator

A water temperature switch located in the right front of the intake manifold, controls the operation of a temperature indicator with a red lens. A metal temperature switch located in the rear of the left head controls the operation of a "STOP ENGINE" temperature indicator.

**NOTE:** *LeSabres do not have a 'STOP ENGINE' light.*

If the engine cooling system is not functioning properly and the water temperature should reach approximately 253°F., the "HOT" indicator will be turned on by the water 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 120-18. 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 water temperature switch.*

If the metal temperature of the left cylinder head should reach approximately 265°F., the "STOP ENGINE" indicator will be turned on by the metal temperature switch. This indicator bulb has a separate test circuit to ground in the ignition switch during cranking. See Figure 120-18.

#### e. Trouble Diagnosis - Generator, Oil Pressure Temperature Indicators

Use Figure 120-18 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.

## DIVISION III

### SERVICE PROCEDURES

#### 120-22 REMOVAL AND INSTALLATION OF INSTRUMENT PANEL PARTS - 45-46-48000 SERIES

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

##### a. R and I Instrument Cluster Assembly

**CAUTION:** *If equipped with cruise control, upper speedo cable must be disconnected from transducer to prevent damage when cluster housing is pulled back.*

Complaint	Possible Cause
<b>1. GENERATOR INDICATOR</b> Light on, ignition "Off". Light not lit, ignition "On" and engine not running.  Light on, engine running above idle speed.	Positive diode shorted. Locate and replace. Bulb burned out. Replace. Open in light circuit. Locate and correct. Positive diode shorted. Locate and replace.  No generator output. Check output, paragraph 68-9. Negative diode shorted. Loose or broken generator belt. Resistance or open in field circuit. Defective field-light relay.
<b>2. OIL PRESSURE INDICATOR</b> Light not lit, ignition "On" and engine not running.  Light on, engine running above idle speed.	Bulb burned out. Replace. Open in light circuit. Locate and correct. Oil pressure switch defective. Replace. Wiring between light and switch grounded. Locate and correct. Oil pressure switch defective. Replace. Oil pressure below 2 lbs. Locate cause and correct.
<b>3. TEMPERATURE INDICATORS</b> (a) Hot Indicator Light not lit when cranking engine.  Light on, engine running.   (b) Cold Indicator Light not lit, ignition "On" and engine cold.  Light on, after normal engine warm-up period.	Bulb burned out. Replace. Open in light circuit. Locate and correct. Ignition switch defective. Replace. 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.  Bulb burned out. Replace. Open in light circuit. Locate and correct. Water temperature switch defective. Replace. Wiring between light and switch grounded. Locate and correct. Water temperature switch defective. Replace. Thermostat in cooling system defective. Replace.

1. Remove lower instrument panel filler by removing 4 screws, then sliding filler forward and down.

2. Remove glove box by removing 5 screws.

**NOTE:** *Do Not remove glove box door as it comes off with cover, along with ash tray assembly.*

3. Remove instrument panel cover by removing 2 nuts located above the glove box opening, removing 3 screws through cluster housing, and removing all screws across the bottom edge of the cover.

**NOTE:** *Both courtesy lights also come off at this time.*

4. Lower steering column by removing 2 nuts and disconnecting shift indicator link.

5. Pad steering column to avoid marring paint.

6. Pull instrument cluster housing back after removing 8 screws. Rest housing on steering column and rotate so that back of housing is visible.

7. Disconnect speedo cable by depressing "quick-connect" retainer spring.

8. Disconnect heater-air conditioner control panel by removing 2 captive nuts.

**NOTE:** *Do not disturb cables and vacuum hoses or adjustment will be required after reassembly.*

9. Disconnect cluster wiring connector.

10. Disconnect buzzer connector.

11. Remove instrument cluster by removing 6 cluster to housing screws.

12. Install instrument cluster by reversing above steps.

#### **b. R and I Speedometer**

1. To remove a speedometer, first

remove instrument cluster as described in subparagraph a, above.

2. Remove speed alert knob and remove knob end of cable from cluster (leave opposite end attached to cluster).

3. Remove 2 speedometer retaining screws from back of cluster.

4. Remove 8 clips from cluster face and remove face and bezel.

5. Remove speedometer, being careful not to disturb loose cluster parts.

**NOTE:** *When reassembling speedo, make sure speedo cable spring retainer is correctly positioned so that tang will be down.*

6. Install speedometer by reversing above steps.

#### **c. R and I Printed Circuit**

1. To remove a printed circuit, first remove instrument cluster as described in subparagraph a, above.

2. Remove 13 cluster light bulb sockets.

3. Unsnap speedometer end of speed alert cable.

4. Remove gas gauge unit by removing 4 screws.

5. Remove 2 screws from speedo ground strap and remove strap.

6. Remove one printed circuit ground screw.

7. Remove speed alert terminal screw. Remove printed circuit ground screw and remove printed circuit.

8. Install printed circuit by reversing above steps.

#### **d. R and I Light Switch**

1. Pull switch knob out to last notch, then depress latch button and remove knob and rod assembly from switch.

2. Remove switch retainer nut.

3. Pull switch down and unplug from connector.

4. Install light switch by reversing above steps.

#### **e. R and I Rear Window Defroster, Convertible Top, and Tailgate Window Switch**

1. Pry cover plate switch assembly from front of cluster housing.

2. Unplug switch connector from switch.

3. Remove switch by removing 2 retaining screws.

4. Install switch by reversing above steps.

#### **f. R and I Windshield Wiper-Washer Switch Assembly**

1. Remove lower instrument panel filler by removing four screws, then sliding filler forward and down.

2. Lower steering column by removing two nuts and disconnecting shift indicator link.

3. Unplug electrical connector from switch.

4. Remove wiper knob.

5. Remove switch by removing two retaining screws.

6. Install switch by reversing above steps.

#### **g. R and I Courtesy Light Switch**

1. Pry switch cover plate from front of cluster housing.

2. Remove switch by removing 2 retaining screws.

3. Install switch by reversing above steps.

#### **h. R and I Clock**

1. Remove ash tray. Remove ash tray

slide mechanism by removing 4 screws.

2. Unplug clock connector and 2 clock light bulbs. (In A/C cars, remove center distributor duct for clearance.)

3. Remove clock by removing retaining screws.

**NOTE:** *Removal of cover plate to left of clock will provide access hole for other hand.*

4. Install clock by reversing above steps.

**i. R and I Gas Gauge DASH Unit**

1. Remove cover plate to right of gas gauge unit to provide access hole.

2. Remove gas gauge unit through hole after removing 4 screws.

3. Install gas gauge dash unit by reversing above steps.

**j. R and I Radio**

1. Remove instrument panel lower filler by removing 4 screws, then sliding filler forward and down.

2. Remove radio ground strap screws.

3. Remove radio knobs, escutcheons, 5/8 hex nuts and lower radio downward. (In A/C cars, remove center distributor duct for clearance.)

4. Disconnect antenna lead and wiring connector and remove radio.

5. Install radio by reversing above steps.

**k. R and I Front Radio Speaker**

1. Remove front radio speaker by removing 1 retaining screw.

2. Unplug speaker connector. (In A/C cars, remove center distributor duct.)

3. Install front speaker by reversing above steps.

**l. R and I Horn Relay - Buzzer Assembly**

1. Remove ash tray. Remove ash tray slide mechanism by removing 4 screws.

2. Find relay mounted on vertical support to right of ash tray opening. Remove relay by removing 2 screws. Unplug wiring connector.

3. Install horn relay-buzzer assembly by reversing above steps.

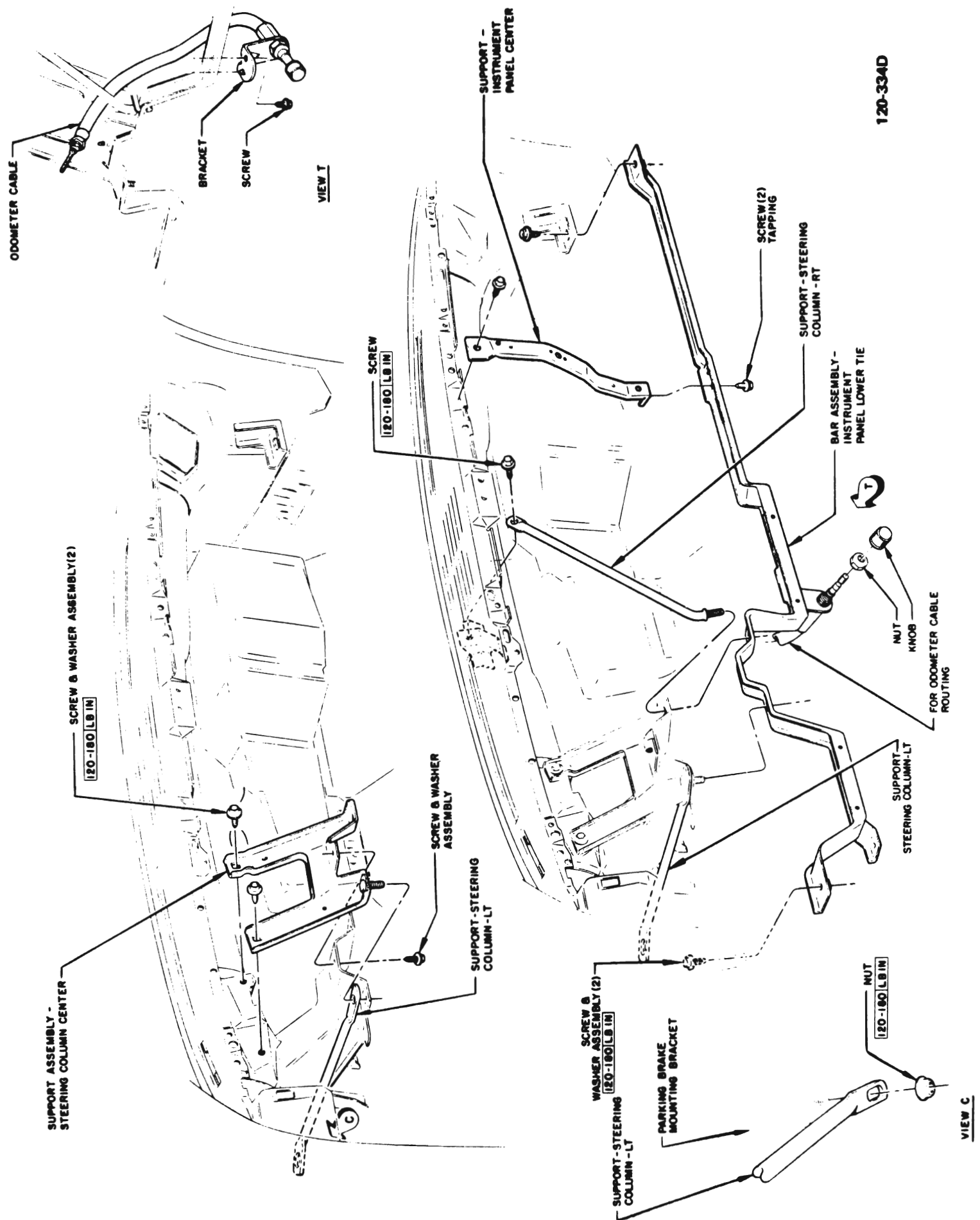


Figure 120-27 Instrument Panel Support Installation · 45-46-48000 Series

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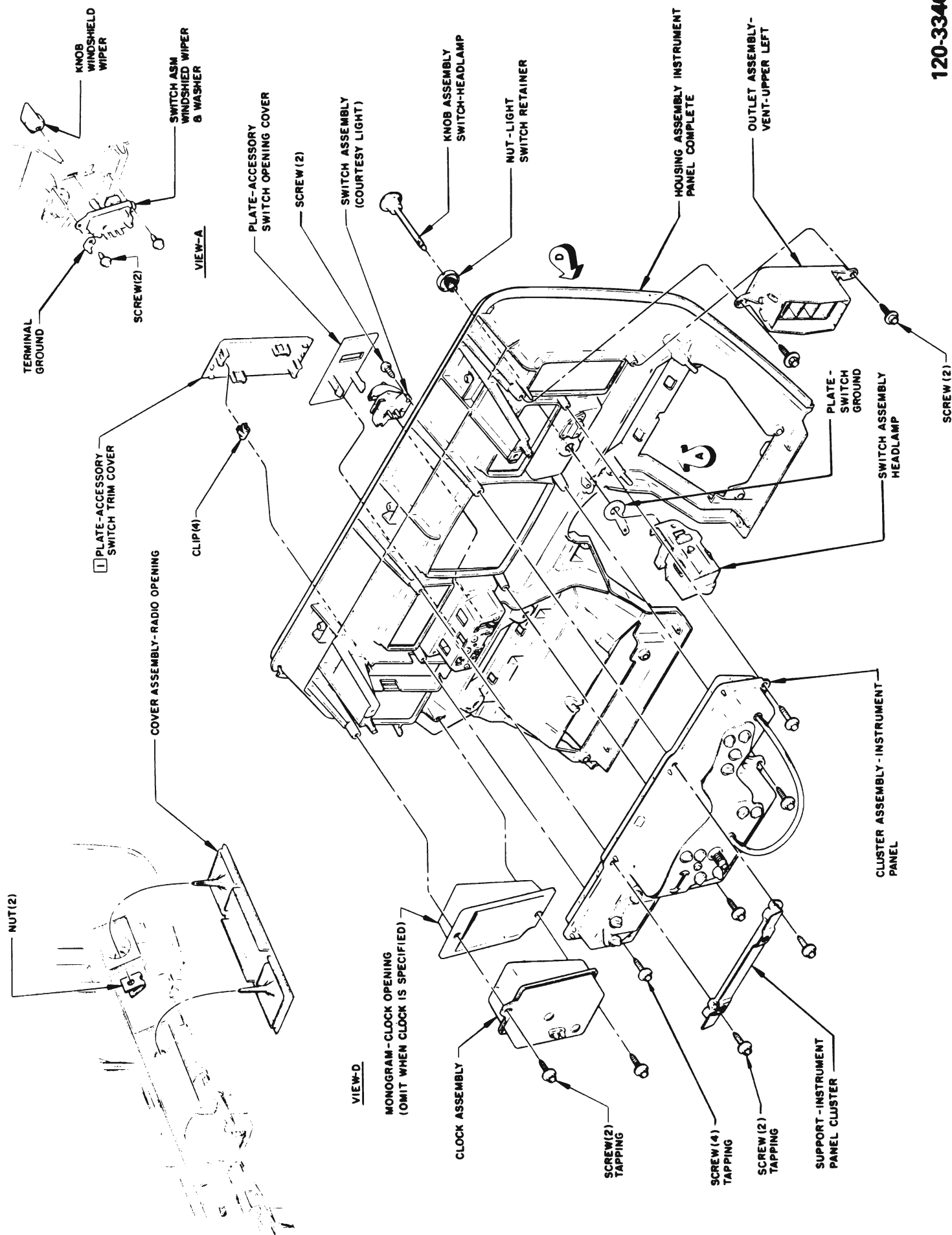


Figure 120-28 Clock and Cluster Installation - 45-46-48000 Series



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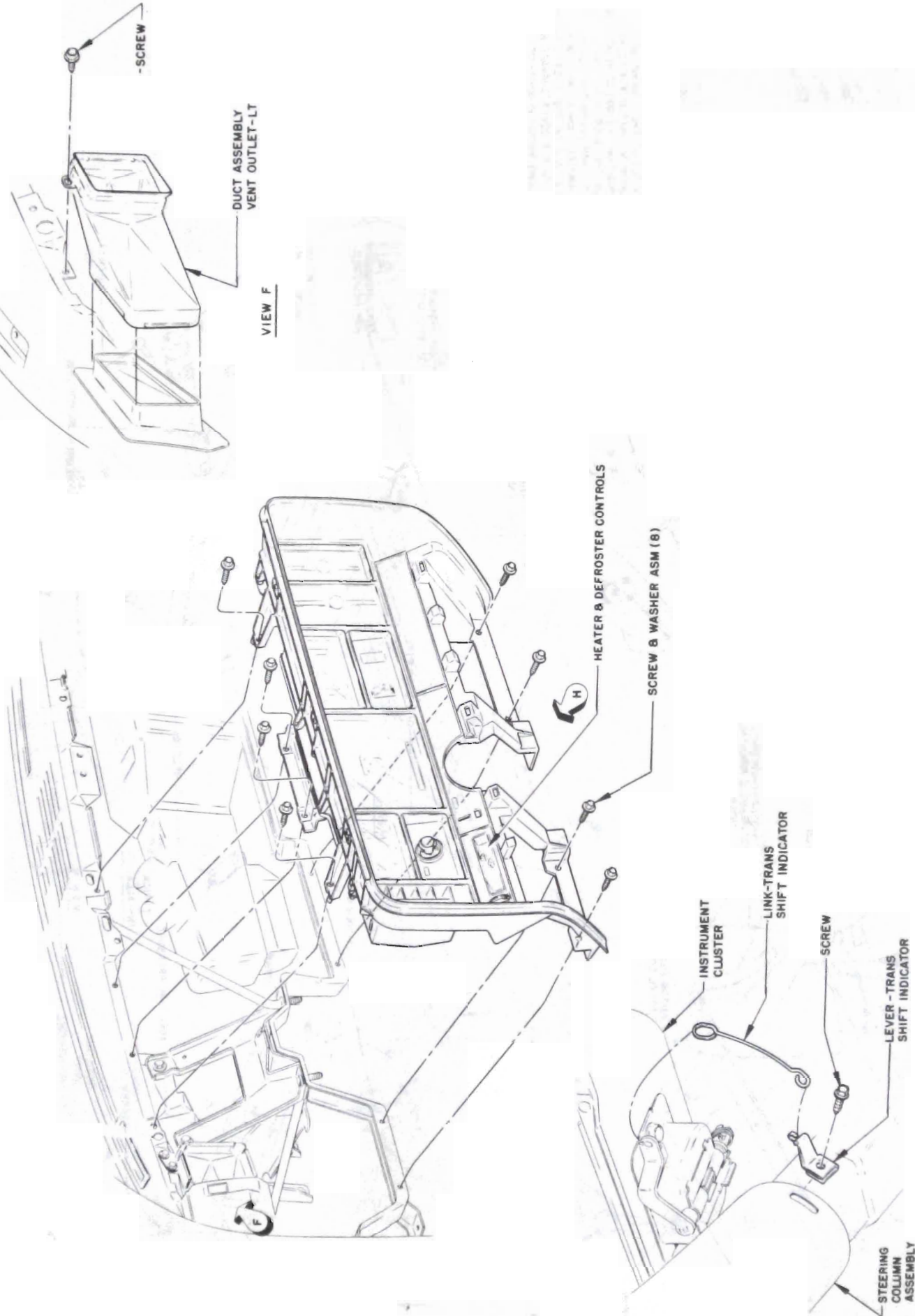
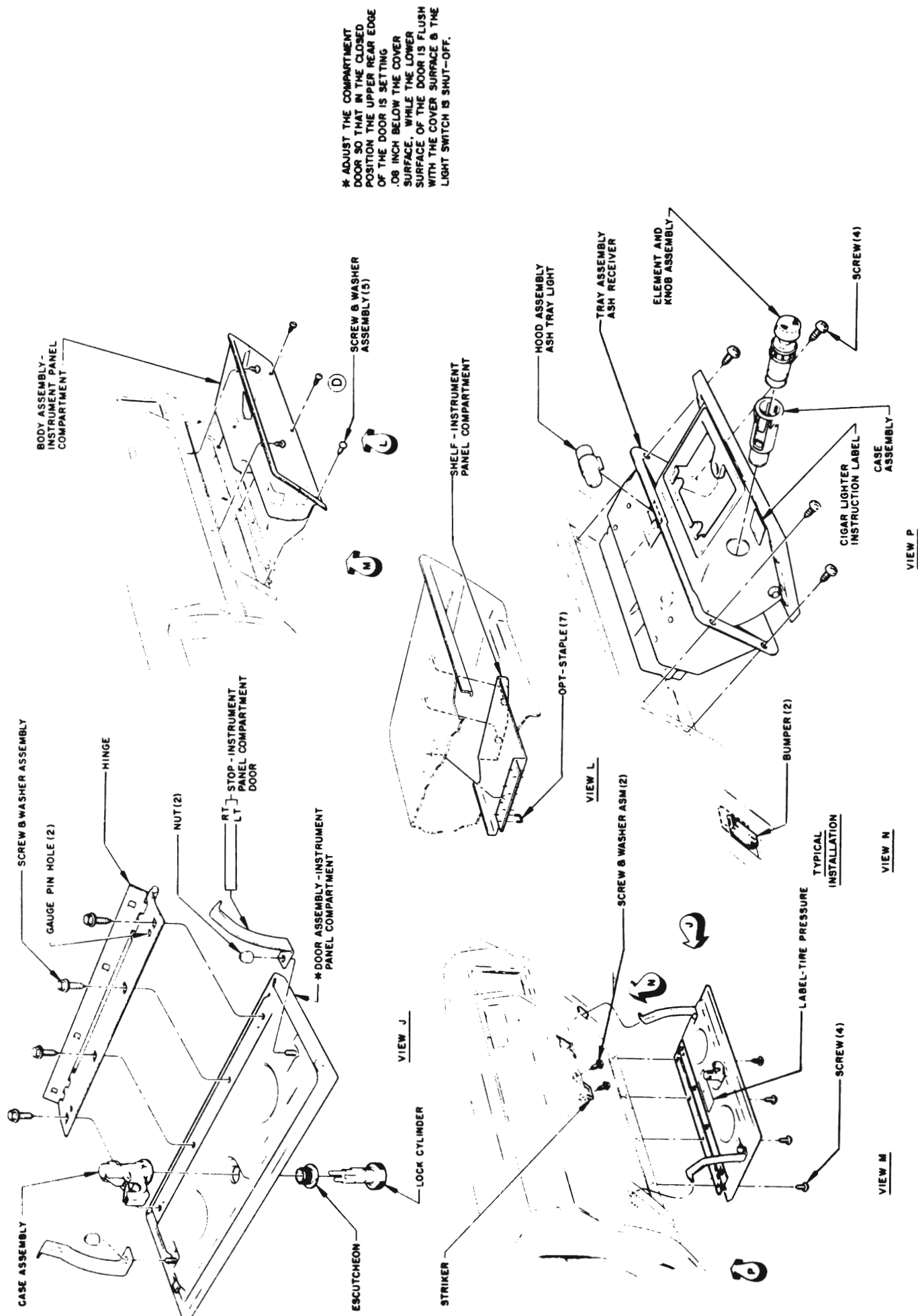
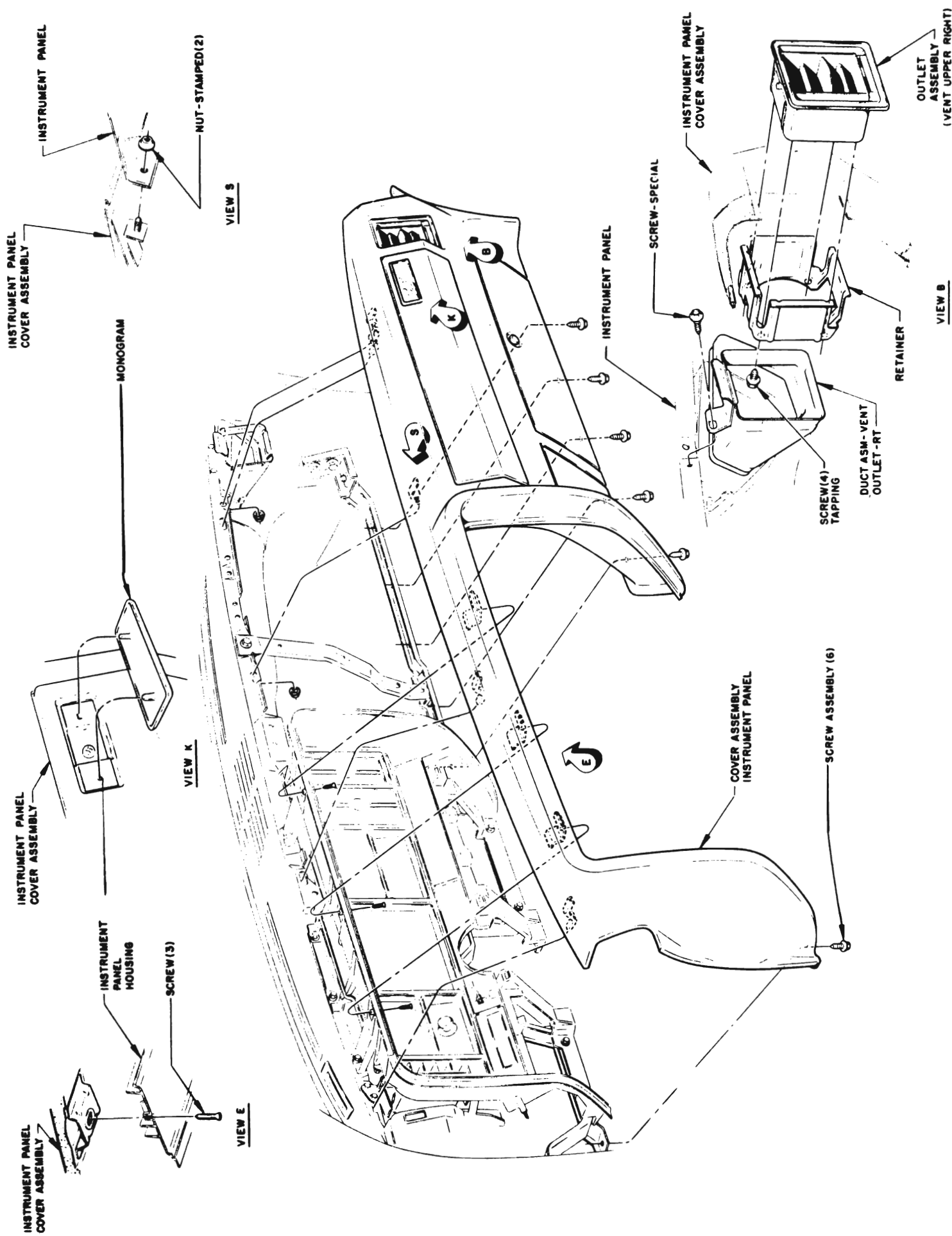


Figure 120-29 Instrument Housing Installation - 45-46-48000 Series



Figure 120-30 Ash Tray, Glove Box and Door Installation - 45-46-48000 Series





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Figure 120-31 Cover Installation - 45-46-48000 Series

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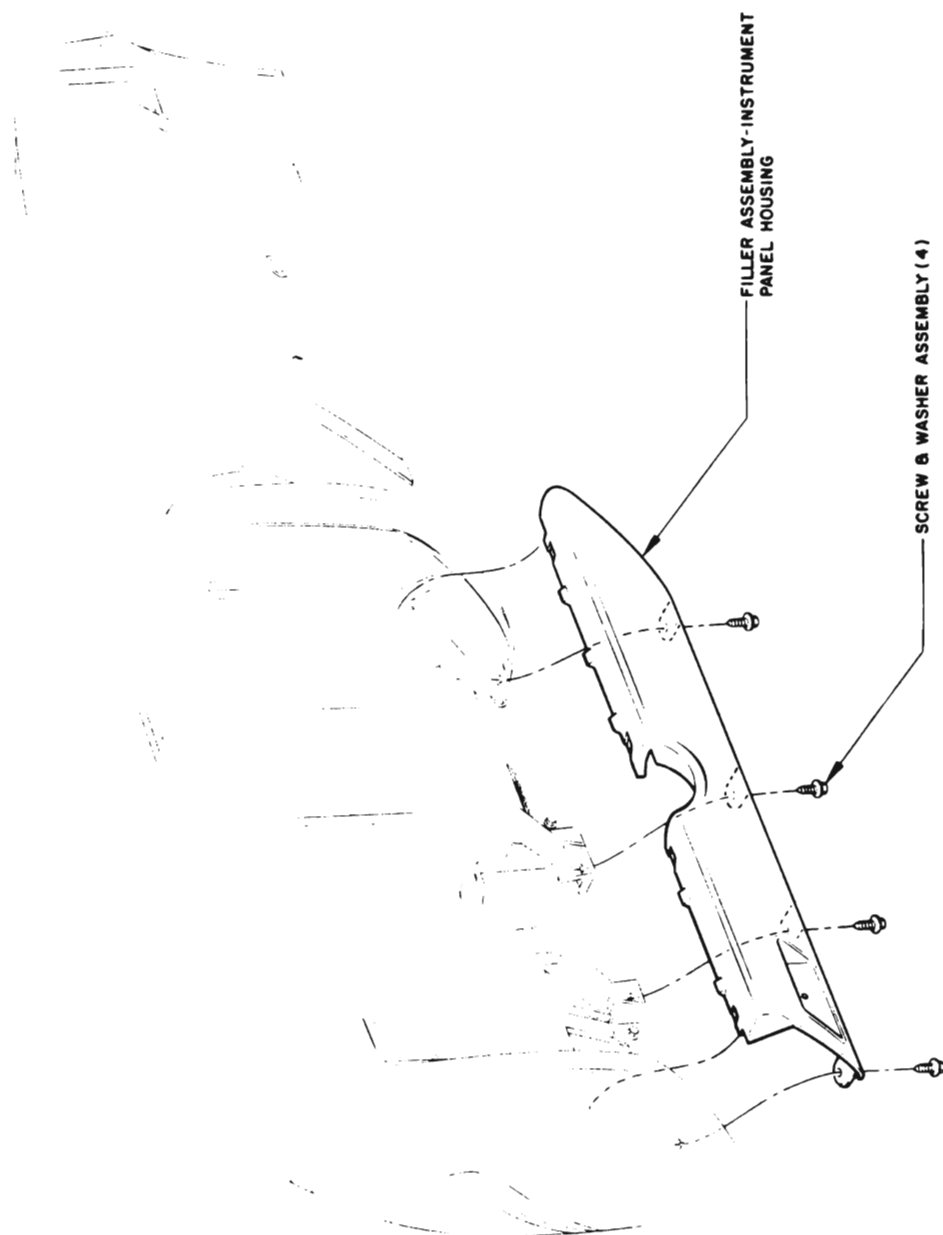


Figure 120-32 Lower Filler Installation - 45-46-48000 Series

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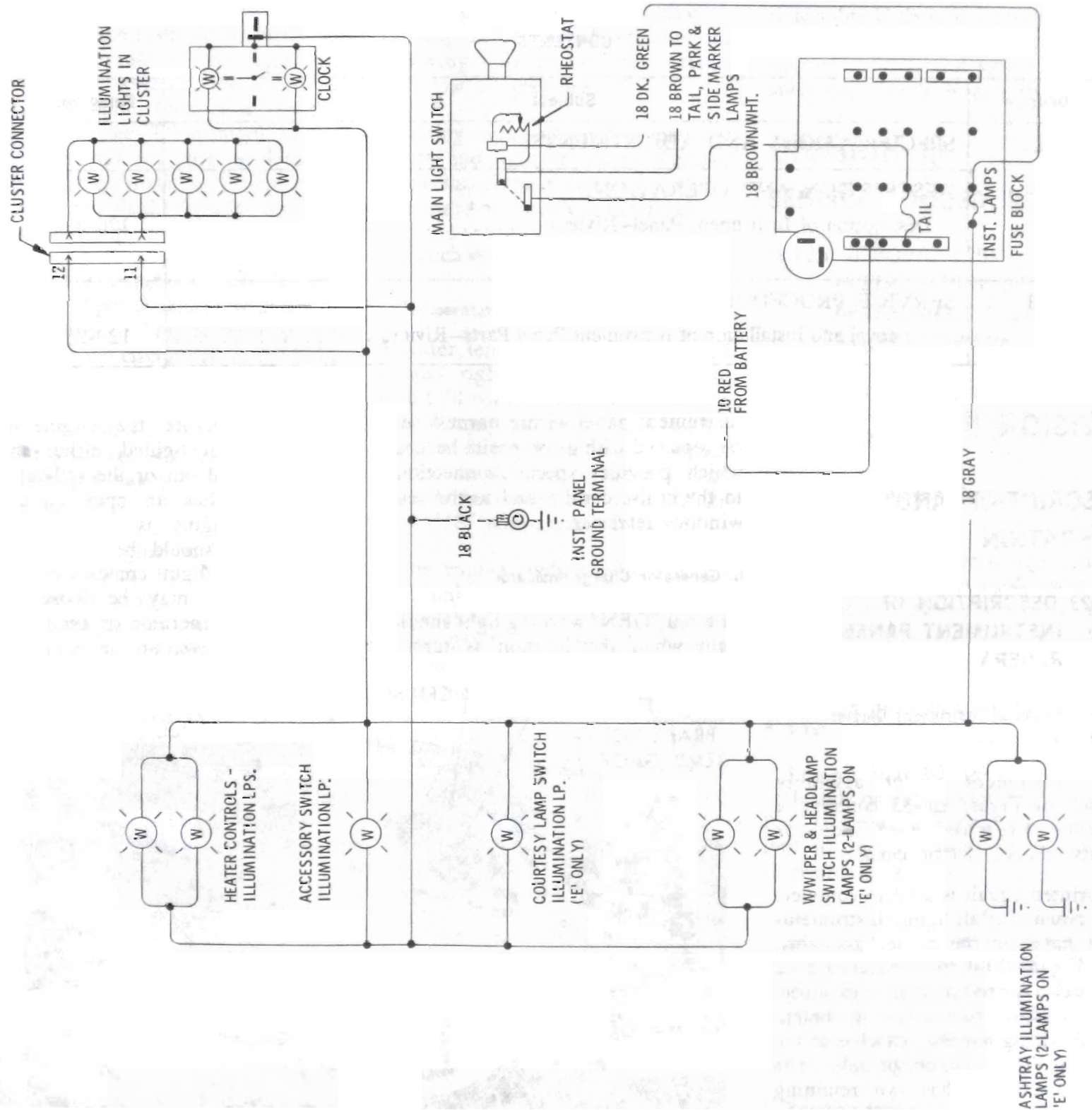


Figure 120-32A Instrument Panel Illumination Lights