

## BUICK

## All Models

## DESCRIPTION &amp; OPERATION

**Fuel Gauge** — The system consists of a tank sending unit and dashboard gauge, which operate only when the ignition is "ON". The variable resistance sending unit controls voltage to the gauge and is moved by the fuel in the tank. An optional economy indicator contains two lights which are mounted in the fuel gauge, a vacuum switch, and a vacuum line. The green lamp glows when engine vacuum is high; the amber lamp glows when vacuum and economy drop.

**Oil & Temperature Indicators** — Indicator circuits are open until coolant temperature or oil pressure switch completes circuit to ground. Oil indicator will come on if pressure falls below 4-6 psi, and temperature indicator will come on when coolant is above 258°F.

**Engine Indicator Light (V6 Engine)** — On all models except Skylark and Riviera, the oil pressure light is represented by a red oil can engine light. This light indicates low oil pressure or a defective electric choke.

**Alternator Indicator** — Indicator light should be on with ignition turned to "ON" before the engine is started. Once engine is started, light should go off and remain off.

**Turbo-Power Indicator** — The turbo-power indicator consists of two lights in the instrument cluster. A yellow light glows during moderate acceleration, and an orange light glows during heavy acceleration. No lights illuminate during economical driving.

## TESTING

## FUEL GAUGE

**Gauge Shows Empty When Tank is Full** — Disconnect fuel tank unit wire connector. Turn ignition on. If gauge shows beyond full, check gauge. If gauge shows empty, disconnect front body connector near fuse block. If gauge still shows empty, replace gauge. If gauge shows full, reconnect front connector and disconnect rear connector in trunk on left side. If gauge shows empty, repair ground in tank unit wire from front to rear body connector. If gauge shows full, repair ground in tank unit wire from tank unit to rear body connector.

**Gauge Shows Full at All Times** — 1) Check for proper ground at tank unit wire. If gauge shows full, disconnect tank unit wire connector and connect one lead of a jumper wire to ground and other lead to harness side of tank unit connector. If gauge shows empty, remove tank unit and check connections. If good, replace tank unit.

2) If gauge shows full, disconnect front body connector and connect a jumper wire to ground and fuel gauge circuit wire in instrument panel half of connector. If gauge shows empty, repair front body connector to tank unit connector wire. If gauge shows full, check for loose connection at cluster, or printed circuit for open. If okay, replace gauge.

**Gauge is Inaccurate** — Tester BT-6508 is required for this test. Disconnect tank unit wire connector and connect tester to wire from dash gauge, and to ground. Set tester at empty and turn ignition on. Gauge should read empty. Set tester at full. Gauge should read full. If gauge does not respond properly, replace gauge. If gauge responds properly, check tank unit ground and wire connections. If okay, replace tank unit.

## OIL PRESSURE INDICATOR

If indicator is inoperative with ignition "ON" and engine not running, check for burned out bulb, open sender wire, or defective sending unit. If bulb is on with engine running, check oil pressure with mechanical gauge, check for short in sender wire, or replace sender.

## TEMPERATURE INDICATOR

If "HOT" indicator is inoperative with ignition "ON" and engine not running, check for burned out bulb, open sender wire, defective sender or defective ignition switch. If lamp is on with engine running, check for overheated condition, short circuit in sender wire, defective sender or defective ignition switch.

## ALTERNATOR INDICATOR

If light is inoperative with ignition in "On" position before starting engine, check for burned out bulb or short in wiring. If light is on with engine running, check for loose or missing belt, or short in the circuit. If good, check alternator (generator) and regulator for proper output.

## ENGINE INDICATOR

If light is inoperative with ignition in "ON" position before starting engine, check for disconnected choke at carburetor, blown fuse, defect in bulb or wiring, and bad sender. If light remains "ON" with engine running, check oil pressure with a mechanical gauge, check for open circuit between sender and dash, or for defective pressure sender unit.

## ADJUSTMENT

## STOP LIGHT SWITCH

**All Models** — With pedal in released position, adjust switch in or out so switch plunger is fully depressed against brake pedal arm.

## REMOVAL &amp; INSTALLATION

## HEADLIGHT SWITCH

**Removal (Century, Skyhawk)** — Disconnect battery. Remove instrument panel trim plate and left side trim plate as needed. Remove headlight switch retaining screws. Pull out switch.

**Removal (Electra, LeSabre)** — Disconnect battery. Pull switch out, depress button on switch and remove knob assembly. Remove left side trim plate, then remove switch retaining nut. Disconnect electrical connector from switch and remove switch.

## BUICK (Cont.)

**Removal (Regal, Riviera, Skylark)** — Disconnect battery. Pull knob out and press retainer tab on rear of knob to remove. Remove switch bezel ring and trim plate, then remove retaining screws and headlight switch.

**Installation (All Models)** — Reverse removal procedures to install.

### TOP COVER

**Removal (Electra, LeSabre)** — Disconnect battery. Remove 1 screw at each end of cover, then remove 5 screws at lower edge and 6 screws at upper edge of cover. Remove illumination lights and cover.

**Installation** — To install, reverse removal procedure.

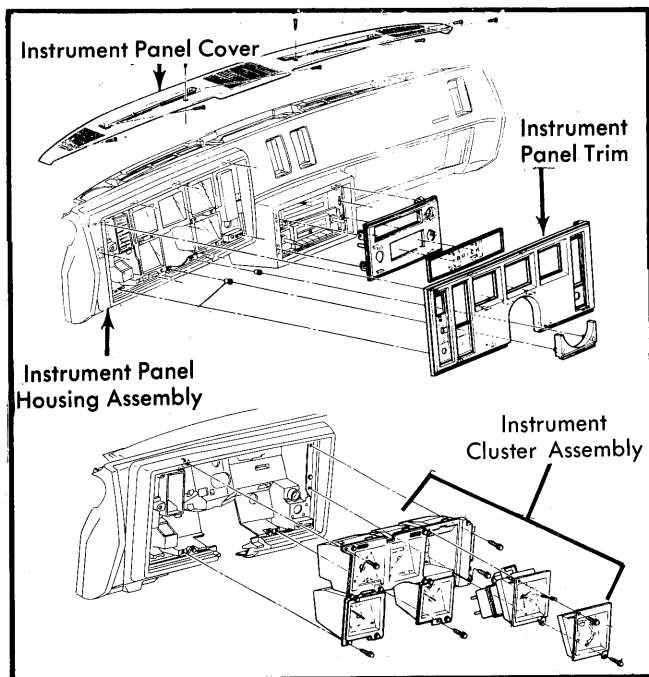


Fig. 1 Regal Instrument Panel Assembly

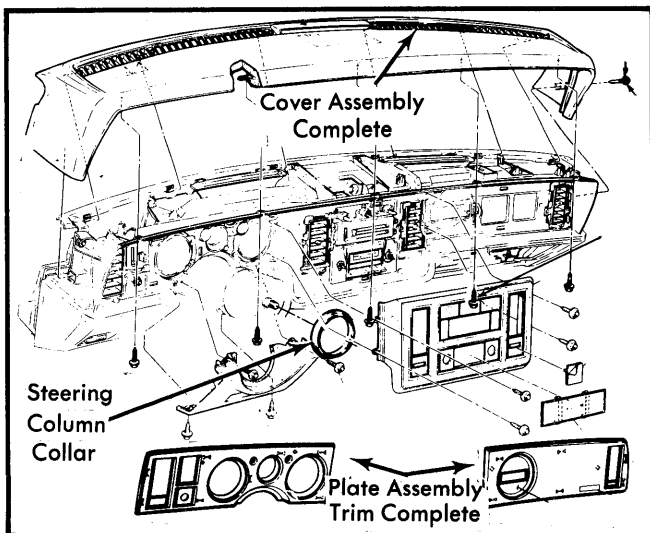


Fig. 2 Electra, LeSabre & Estate Wagon Instrument Panel Assembly

**Removal (Regal)** — Disconnect battery. Remove glove box door, glove box, and 2 screws securing cover from inside glove box opening. Release retainer clip inside glove box opening. Remove 4 screws across front of cover. Pull cover free from clips, disconnect speaker wires, and remove.

**Installation** — To install, reverse removal procedure.

### SPEEDOMETER, GAUGES, AND PRINTED CIRCUITS

**Removal (Century, Skylark)** — 1) Disconnect battery cable. Disconnect speedometer cable at cruise control transducer (if equipped), or at upper and lower connections. Remove odometer knob on Skylark and instrument panel trim plate on both models. Remove 4 cluster lens plate screws and remove lens plate.

2) On Skylark, remove 4 cluster cover plate screws and remove cluster cover plate. Disconnect shift indicator spring below speedometer and slide indicator needle to right, out of cluster housing. Pull cluster out about 3".

3) On Century, remove shift indicator cable clip from shift bowl. Remove lower trim plate and steering column retaining bolts. Lower steering column. Pull cluster out about 3".

4) Disconnect speedometer cable by pushing retaining clip toward cluster and pulling cable away from speedometer. On Century, disconnect electrical connector from back of cluster. On both models, remove screws retaining speedometer and remove speedometer.

5) On Century, remove snap-in bulbs and clips from back of cluster. Remove printed circuit. On Skylark, remove 8 nuts on back of cluster and lift cluster from housing. Remove printed circuit.

**Installation** — To install, reverse removal procedures.

**Removal (Electra, LeSabre)** — Remove instrument panel cluster bezel and lens. Remove 4 screws each on speedometer and fuel gauge to remove.

**Installation** — To install, reverse removal procedure.

**Removal (Regal)** — Remove headlight knob. Carefully pry out trim plate, then remove 5 cluster lens screws and lens. Remove 2 speedometer screws, disconnect cable and wiring, then remove speedometer. Remove gauges as necessary. Disconnect 10 bulb sockets, 1 screw, and 6 clips from rear to remove printed circuit.

**Installation** — To install, reverse removal procedure.

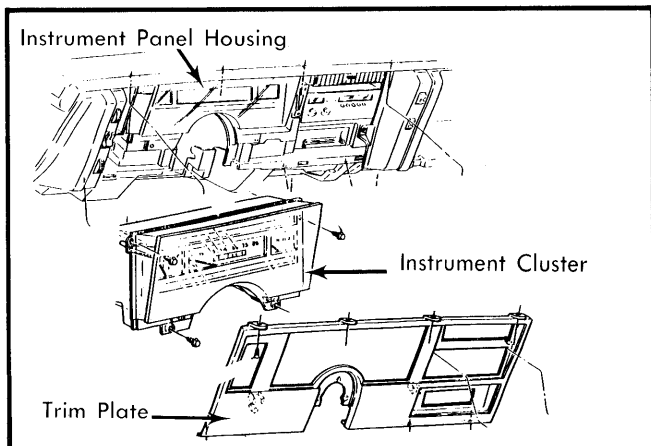
**Removal (Riviera)** — 1) Remove headlight switch knob and cluster trim plate. Disconnect speedometer cable at transmission. Remove 6 screws and lower dash trim panel, then disconnect parking brake release cable at lower air duct.

2) Disconnect shift indicator wire. Remove 2 nuts and lower steering column. Remove 4 screws and speedometer cable from cluster and remove cluster. Remove fuel gauge assembly, screws, and speedometer. Remove printed circuit.

**Installation** — To install, reverse removal procedure.

# 5-84 Switches, Gauges & Instrument Panels

## BUICK (Cont.)



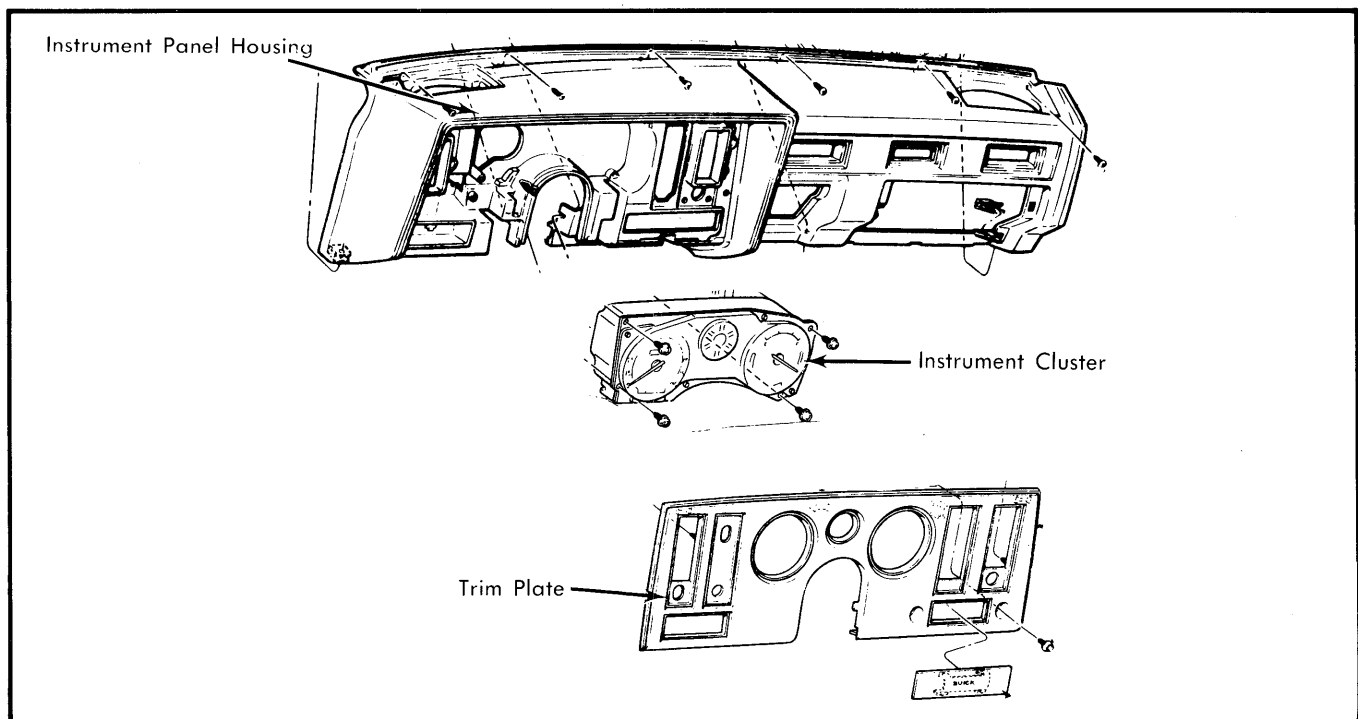
**Fig. 3 Century Instrument Panel Assembly**

**Removal (Skyhawk) – 1)** Remove instrument trim plates (4). Remove 5 screws retaining lens and bezel to cluster carrier. Loosen steering column retaining bolts and lower steering column. Remove 4 screws attaching cluster housing to cluster carrier. Pull cluster partially out of instrument panel and disconnect speedometer cable. Remove cluster housing.

**2)** Remove the screw retaining the vehicle speed sensor LED/photo cell to rear of speedometer head. Remove 2 retaining screws holding speedometer head to cluster housing and remove speedometer.

**3)** Remove all bulbs from rear of instrument cluster, disconnect VSS connector and remove all nuts holding printed circuit to cluster housing. Remove printed circuit.

**Installation –** To install, reverse removal procedure.



**Fig. 4 Skylark Instrument Panel Assembly**