

PONTIAC

Pontiac
All Models (Exc. Sunbird)

TESTING

NOTE — For Sunbird, see General Motors "H" Body in this section.

DESCRIPTION & OPERATION

Fuel Gauge — Circuit consists of an electromagnetic gauge in instrument panel and a fuel tank sending unit incorporating a float, linkage, movable contact arm and rheostat. As float lowers with fuel level, contact arm moves over rheostat which decreases resistance to gauge circuit, allowing gauge pointer to move towards empty position. Gauge pointer may rest at any position with ignition in "OFF" or "START" and should move to correct fuel level with ignition in "ACC" or "ON" position.

Temperature Indicator — When engine coolant temperature reaches about 248° F, engine temperature sending unit will close, completing indicator ground circuit, allowing temperature indicator light to come on. When engine is in "START", temperature indicator should come on as a test of indicator bulb.

Oil Pressure Indicator — A pressure operated sending unit is located on oil filter support or side of block. Indicator light on instrument panel will come on as sending unit closes and ground circuit is completed when oil pressure drops below 5 psi. Lamp should also come on when ignition is on and when engine is not running.

Alternator Indicator — Indicator on instrument panel should come on with ignition switch on and engine not running or until engine is accelerated above 900 RPM after being started. When alternator voltage output is above battery voltage, indicator light should turn off.

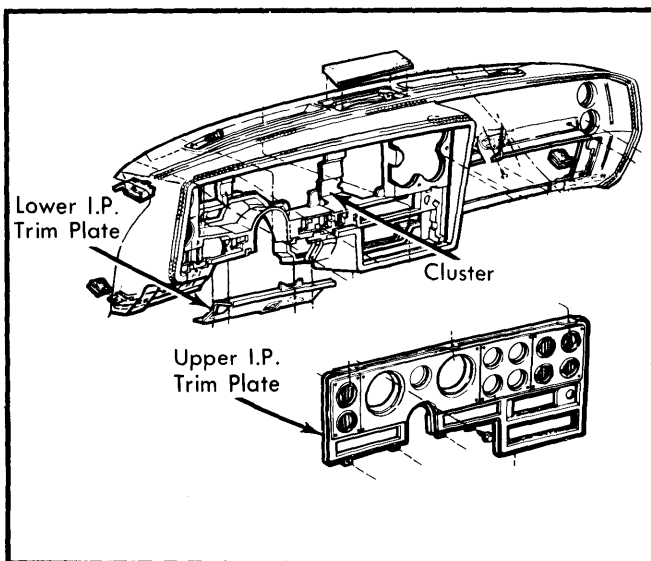


Fig. 1 Grand Prix, Grand AM & LeMans Instrument Cluster

INDICATOR WARNING LIGHTS

Temperature Indicator — If light remains on, check coolant temperature or sending unit for ground. Check for a shorted condition between firewall and sending unit or between firewall and printed circuit. If indicator fails to come on, check bulb, fuse or circuit for an open condition.

Oil Pressure Indicator — If indicator light remains on, check for shorted sending unit or firewall connector. Also check for a short between printed circuit and fuse block. If light fails to come on, check bulb, fuse, circuit or printed circuit for an open condition.

Alternator Indicator — If indicator light fails to come on with ignition on and engine not running, check bulb. If bulb is good, or if indicator remains on after engine is started and accelerated above 900 RPM, test charging system. See *Delco-Remy Alternators in ELECTRICAL Section*.

FUEL GAUGE

1) With ignition switch in "OFF" position, disconnect sender wire (Pink) in rear compartment. Turn ignition to "ON" position and gauge should read past "FULL".

2) Use a jumper wire and short body side of harness connector to ground. Gauge should read past "EMPTY".

3) If steps 1 and 2 are OK, trouble is in the sending unit or wiring connector at tank.

4) If steps 1 and 2 are not OK, remove gauge from cluster and reconnect wire in rear compartment.

5) Check terminal connectors, 3 positions, with an ohmmeter and ignition in "ON" position. Readings should be 12 volts, ground, and a signal. Signal should read between 0 and 90 ohms. If all check OK, replace gauge. If not, repair wiring between rear connector and gauge.

STOP LIGHT SWITCH

If stop-hazard fuse is good and stop lights fail to come on, or fail to turn off, check for voltage using a test light at White wire terminal in steering column connector while depressing brake pedal. If light does not come on, check switch adjustment. If switch is properly adjusted and light fails to come on, replace stop light switch.

ADJUSTMENT

STOP LIGHT SWITCH

Adjust switch on Phoenix Series so stop lights come on when brake pedal is depressed $\frac{3}{8}$ " to $\frac{5}{8}$ ". Adjust all other models as follows: With brake pedal fully depressed, push switch forward until it stops against pedal arm. Then pull pedal rearward with 15 to 20 lbs. force to properly adjust switch.

PONTIAC (Cont.)

REMOVAL & INSTALLATION

INSTRUMENT CLUSTER

Removal (All Exc. Phoenix) — 1) Disconnect battery and remove lower and upper instrument panel trim plates. Remove automatic transmission shift indicator cable. Loosen 2 steering column nuts and lower steering column approximately 1/2" (Firebird only).

2) Remove cluster retaining screws and pull rearward. Disconnect speedometer cable, printed circuit connector and remove cluster.

Installation — To install, reverse removal procedure.

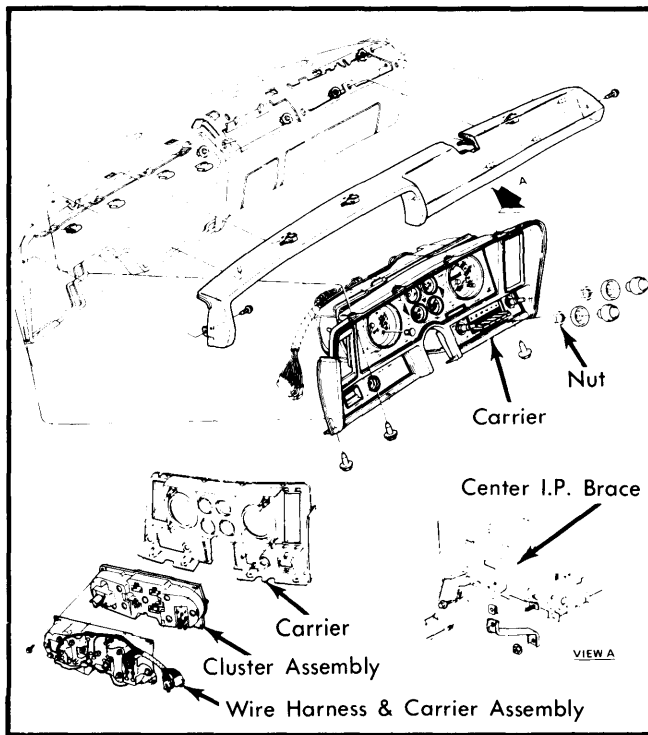


Fig. 2 Phoenix Instrument Cluster

Removal (Phoenix) — 1) Disconnect battery. Remove steering column trim and remove 3 screws retaining heater or air conditioning control panel-to-instrument panel carrier. Remove radio knobs, bezels and nuts.

NOTE — This permits radio to remain attached to instrument panel reinforcement.

2) Remove screws at top, bottom and side of carrier securing it to instrument panel pad. Disconnect shift quadrant indicator cable at shift bowl (Automatic Transmission); remove 2 steering column-to-instrument panel nuts.

3) Remove toe plate-to-cowl screws and lower steering column from instrument panel. Disconnect speedometer cable from under dash. Tilt carrier and cluster assembly rearward, disconnect printed circuit and cluster ground leads, and rest assembly on top of column. Remove screws from cluster-to-carrier assembly and remove cluster.

Installation — To install, reverse removal procedure.

NOTE — See General Motors Steering Columns in STEERING Section for proper reinstallation and alignment of column.

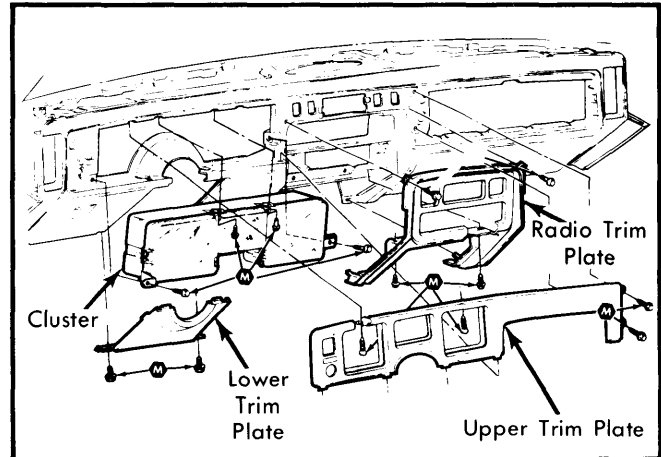


Fig. 3 Bonneville & Catalina Instrument Cluster

PRINTED CIRCUIT

Removal (Phoenix) — With instrument cluster removed and tilted rearward, work from back of cluster and remove bulb sockets. Remove gauge nut and screws retaining printed circuit to cluster, and remove printed circuit.

Installation — To install, reverse removal procedure.

Removal (Grand Prix & Grand LeMans) — 1) Remove instrument cluster. Remove instrument panel carrier mounting screws. Place a protective cloth over steering column and tilt carrier rearward on column.

2) Disconnect all wire connectors to printed circuit, remove lights and clips retaining printed circuit to carrier and remove printed circuit.

Installation — To install, reverse removal procedure.

Removal (All Others) — Remove instrument cluster, cluster lights, and nuts retaining printed circuit to instrument cluster. Remove printed circuit.

Installation — To install, reverse removal procedure.

STOP LIGHT SWITCH

Removal — Disconnect electrical lead. Remove nut from switch (if equipped) and pull switch from bracket.

Installation — To install, reverse removal procedure.

CLUTCH START SWITCH

Removal — Clutch must be fully depressed before engine will start. Remove switch after removing electrical lead and retaining screw.

Installation — To install, reverse removal procedure.

PONTIAC (Cont.)

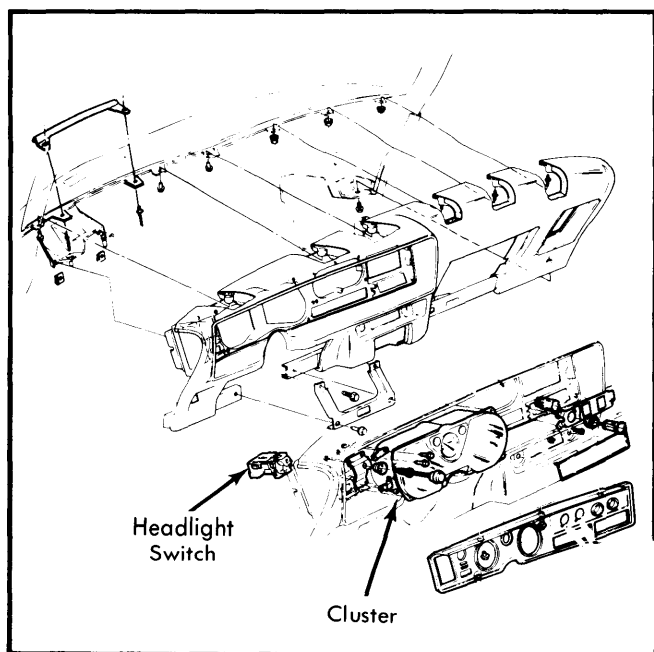


Fig. 4 Firebird Instrument Cluster

HEADLIGHT SWITCH

Removal — Disconnect battery and pull switch knob to full "ON" position. From under instrument panel, depress switch shaft retainer button and remove knob and shaft from switch.

Disconnect connector from switch and remove ferrule nut and switch from instrument panel.

Installation — To install, reverse removal procedure.

FUEL GAUGE

Removal (Phoenix) — 1) When removing cluster, disconnect battery and remove left A/C duct (if equipped) by removing retaining screw above kick pad and pushing duct toward firewall. From under instrument panel, remove bulb sockets from left side of cluster and disconnect cluster ground connector.

2) Remove fuel gauge terminal nuts from printed circuit away from gauge. Remove gauge retaining screws and remove gauge from cluster.

Installation — To install, reverse removal procedure.

Removal (Firebird With Rally Gauge Cluster) — Disconnect battery and remove upper and lower instrument panel trim plates. Remove gauge unit rearward, disconnect electrical lead and remove gauge.

Installation — To install, reverse removal procedure.

Removal (All Others) — Remove instrument cluster, printed circuit, gauge retaining nuts and then gauge.

Installation — To install, reverse removal procedure.