PONTIAC

Pontiac
All Models (Exc. Astre & Sunbird)

NOTE — *For Astre and 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.

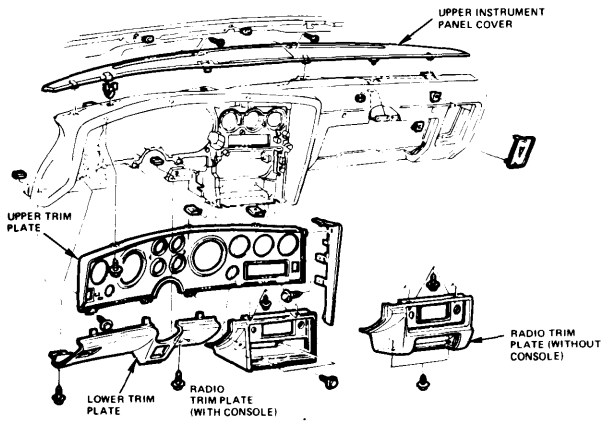

Fig. 1 Grand Prix & Grand LeMans Instrument Cluster

TESTING

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

Use a suitable Gas Gauge Tester (J-22344 or equivalent). Disconnect Tan wire from the gas gauge tank terminal and connect one test lead to the wire and ground the other lead. Switch tester to "Empty" and "Full" positions and fuel gauge should read the same as the tester. If not, proceed with the following tests with ignition in "On" position.

Gauge Never Reads Empty or Reads Full At All Times — Check for disconnected or loose tank unit feed wire at tank. If good, check for proper connections at the printed circuit.

Gauge Always Reads Empty — Disconnect tank unit feed wire and gauge should indicate full. If not at "Full" position, check connections to printed circuit or for an open in the printed circuit.

Gauge Never Reads Full — Check system with Gas Gauge Tester, positioned in line between Tan wire and tank terminal. If gauge reads full, fill the gas tank. Using an ohmmeter, check resistance of tank sending unit which should read between 88 and 92 ohms. If ohm reading is low, check tank mounting area for damage. If gauge does not read full, check connections to printed circuit or for an open within the printed circuit.

Gauge Dead — Check feed wire voltage to the tank which should read 3-4 volts. If it does not, check for open on hot side of the gauge, or proper connections at the printed circuit. If voltage is correct, remove and check fuel 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 Ventura Series so stop lights come on when brake pedal is depressed 3/8" to 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

All Series (Exc. Ventura & Phoenix) – Disconnect battery and remove lower and upper instrument panel trim plates. Remove automatic transmission shift indicator cable. Loosen two steering column nuts and lower steering column approximately ½" (Firebird only). Remove cluster retaining screws and pull rearward. Disconnect speedometer cable, printed circuit connector and remove cluster. To install, reverse removal procedure.

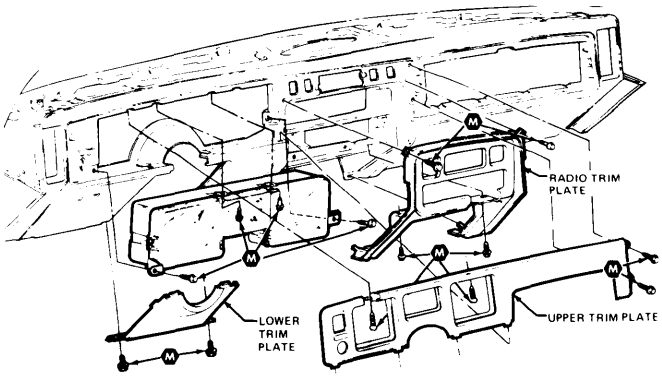

Fig. 3 Bonneville, Catalina & Safari Instrument Cluster

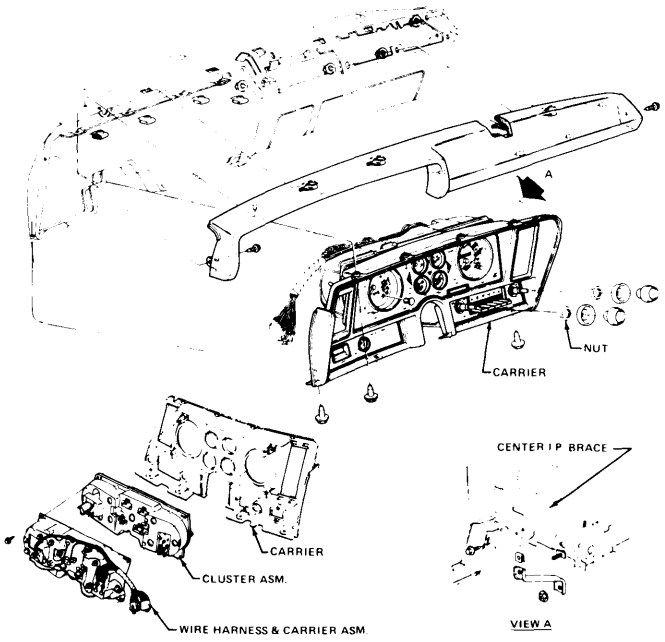

Fig. 2 Ventura & Phoenix Instrument Cluster

Ventura & Phoenix Series – 1) Disconnect battery. Remove steering column trim and remove three 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.* Remove screws at top, bottom and side of carrier securing it to instrument panel pad. Disconnect shift quadrant indicator cable at shift bowl (Auto. Trans.); remove two steering column-to-instrument panel nuts.

2) 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. To install, reverse removal procedure.

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

PRINTED CIRCUIT

Ventura & Phoenix Series – 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. To install, reverse removal procedure.

Grand Prix & Grand Le Mans – Remove instrument cluster. Remove instrument panel carrier mounting screws. Place a protective cloth over steering column and tilt carrier rearward on column. Disconnect all wire connectors to printed circuit, remove lights and clips retaining printed circuit to carrier and remove printed circuit. To install, reverse removal procedure.

All Others – Remove instrument cluster, cluster lights, and nuts retaining printed circuit to instrument cluster. Remove printed circuit. To install, reverse removal procedure.

STOP LIGHT SWITCH

Disconnect electrical lead. Remove nut from switch (if equipped) and pull switch from bracket. To install, reverse removal procedure and check adjustment.

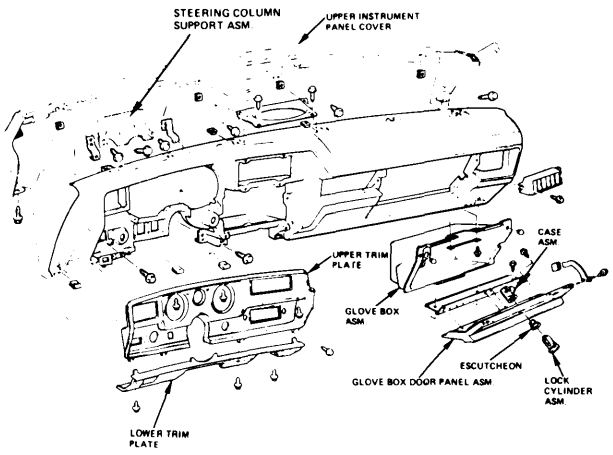

Fig. 4 LeMans Instrument Cluster

PONTIAC (Cont.)

CLUTCH START SWITCH

Clutch must be fully depressed before engine will start. Remove switch after removing electrical lead and retaining screw. To install, reverse removal procedure. No adjustment is required.

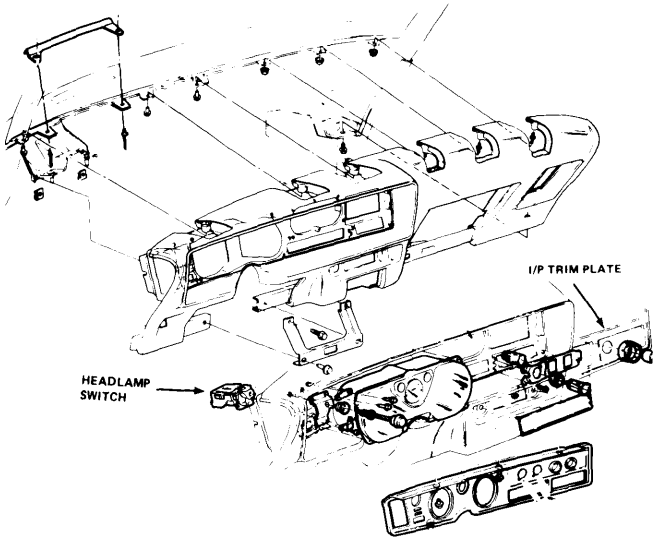

Fig. 5 Firebird Instrument Cluster

HEADLIGHT SWITCH

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. To install, reverse removal procedure.

FUEL GAUGE

Ventura & Phoenix – Without 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. Remove fuel gauge terminal nuts from printed circuit away from gauge. Remove gauge retaining screws and remove gauge from cluster. To install, reverse removal procedure.

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. To install, reverse removal procedure.

All Others – Remove instrument cluster, printed circuit, gauge retaining nuts and then gauge. To install, reverse removal procedure.