CHRYSLER CORP.

Chrysler Corp., All Models

CAUTION – *Disconnect fusible link in engine compartment before servicing instrument panel.*

DESCRIPTION & OPERATION

Fuel, temperature and oil pressure gauges operate on the constant voltage principle through a voltage limiter. On models equipped with Gauge Alert System, the fuel, temperature and ammeter gauges have a small light emitting diode mounted in gauge dial. Light will illuminate if gauge is functioning other than normal. The electronic sensor circuit is mounted on gauge housing and if gauge or sensor fail, replace as a unit.

Fuel Level Gauge – A hinged float arm in fuel tank raises or lowers depending on fuel level, and contacts a variable resistor in the gauge sending unit. This provides a change of resistance in the fuel gauge circuit. This resistance registers on instrument panel gauge in the form of a level reading.

Temperature & Oil Pressure – The operation of temperature and oil pressure indicating systems are identical in operation with the fuel system, with the exception of the method of varying resistance of sending unit.

In temperature, the resistance of the disc in sending unit varies with a direct relation to coolant temperature. When coolant temperatures are high, resistance is low, when coolant temperatures are low, resistance is high.

In oil pressure, the sending unit resistance is controlled by a diaphragm. The diaphragm is actuated as oil pressure increases or decreases.

Oil Pressure Indicator Light – The oil pressure switch is mounted on the engine (location depends on engine). When oil pressure is high (normal) switch is held in "Off" or "Open" position, allowing no current to flow to the indicator light. When oil pressure is low, switch is in "On" or "Closed" position allowing current to flow to the indicator light.

Alternator Indicating System – Alternator gauge is an ammeter which senses the direction and rate of flow of electrical current to or from battery, thereby indicating whether battery is being charged or discharged.

TESTING

VOLTAGE LIMITER

To quickly test voltage limiter in vehicle, connect one lead of a voltmeter or test light to temperature sending unit and other

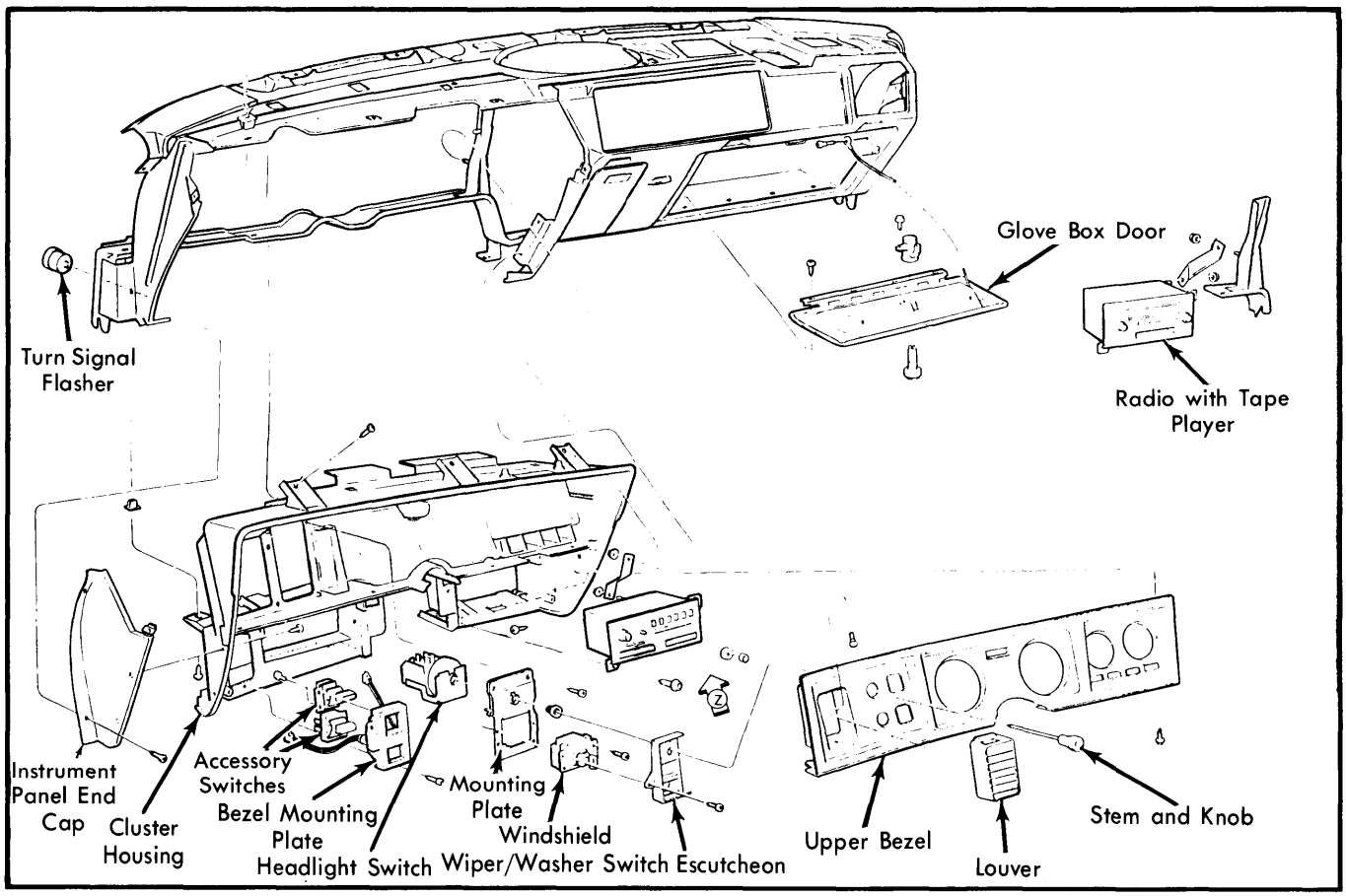

Fig. 1 Fury, Monaco, Cordoba & Charger/Magnum Instrument Panel

CHRYSLER CORP. (Cont.)

lead to a good ground. Leave sending unit wire attached to sending unit. Turn ignition switch on. A fluctuating voltmeter or a flashing light indicates voltage limiter is operating.

FUEL GAUGE

1) Disconnect wire at fuel tank unit. Connect one lead of suitable gauge tester (C-3826) to wire terminal, and other lead to a good ground. Turn ignition on, turn tester knob to "H" position and observe instrument panel gauge. Gauge should read "FULL", plus 3/32" or minus 1/32". Turn tester knob to "M", gauge should read 1/2. Turn knob to "L" and gauge should read "EMPTY", plus 1/32" or minus 3/32". If gauge alert system is working properly, light should illuminate with tester knob in "L" position.

2) If panel gauge does not perform as prescribed, continuity of circuit from tank sending unit to panel unit should be tested with special attention to printed circuit board before replacing gauge. If panel performs properly when tested but fails to operate properly when connected to vehicle system, fuel tank sending unit ground strap should be inspected for proper installation on fuel line. If ground continuity is OK, remove tank unit for testing.

FUEL TANK SENDING UNIT

With unit removed from tank proceed as follows: Using an ohmmeter with a 0 to 100 ohm scale, connect one lead to body of sending unit, and other lead to terminal in center of unit. Hold unit so float arm contacts EMPTY stop. The ohmmeter should read 73 ohms ± 12 ohms. Raise arm to FULL stop. The reading should now be 9.6 ohms ± 1 ohm. If unit does not perform to these specifications inspect the stops or arm for possible distortion. If no physical defect can be found, unit must be replaced.

TEMPERATURE GAUGE

Disconnect terminal from temperature sending unit on engine. Connect one test lead of suitable tester (C-3826) to terminal and other lead to a good ground. Turn ignition on, turn tester knob to "L" and temperature gauge should show "C" plus or

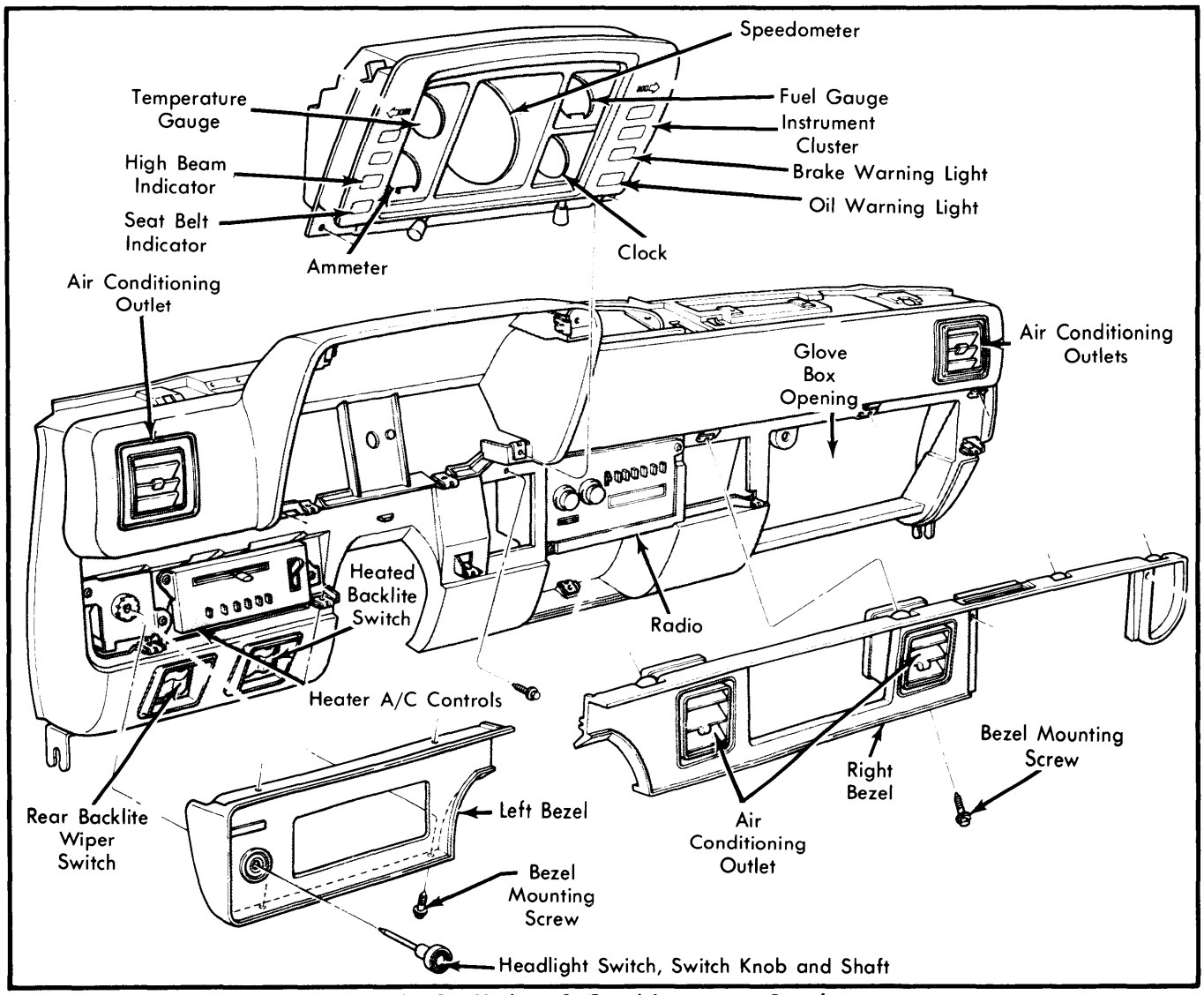

Fig. 2 Horizon & Omni Instrument Panel

CHRYSLER CORP. (Cont.)

minus ⅛". Turn tester knob to "M", pointer should advance to driving range left of ½ position of dial. Turn tester knob to "H", gauge pointer should move to "H" position on dial. If gauge alert system is working properly, light should illuminate with tester knob in "H" position.

AMMETER GAUGE

Turn headlights on (do not start engine). Ammeter needle should move toward the "D" or discharge scale. If no movement of the needle is observed, check terminals for loose wires. If terminals are secure, ammeter is defective. If needle moves toward the "C" or charge side, the connections are reversed.

OIL PRESSURE GAUGE

Disconnect wire from oil pressure sending unit on engine. Connect one lead of a suitable tester (C-3826) to removed wire and other lead to a good ground. Place tester knob in "L" position, and turn ignition on. Do not start engine. Oil pressure gauge should read "L" plus or minus ⅛". Turn tester knob to "M" position, oil pressure gauge should advance to ½ position on dial. With tester knob in "H" position, gauge should also advance to "H" position. Should gauge respond to the above tests, but fail to operate when connected to vehicle system, indications are of a defective sending unit. Should gauge fail to respond to above tests, indications are; loose connection, broken wire or a faulty gauge.

ADJUSTMENT

STOP LIGHT SWITCH

NOTE – *Do not pull brake pedal back at any time.*

The stop light switch and mounting bracket assembly is attached to the brake pedal bracket. The switch is actuated by a striker plate on Chrysler models. On all other models the switch is actuated by a brake push rod. Stop lights should come on when brake pedal is depressed ½" from released position.

NOTE – *On Horizon & Omni, .130" from released poaition.*

REMOVAL & INSTALLATION

STEERING COLUMN LOWERING & RAISING

NOTE – *This procedure is not for removal and installation of steering column and should be used only when necessary.*

Lowering – Remove three toe plate bolts. Remove nut attaching horn ground strap. Remove gear shift pointer (Aspen, Volare, Monaco, Diplomat, LeBaron, Fury & Chrysler only). Remove nuts attaching steering column bracket-to-support bracket and lower column to seat.

Raising – Reverse lowering procedure insuring that wiring does not get pinched and that column attaching bracket nuts

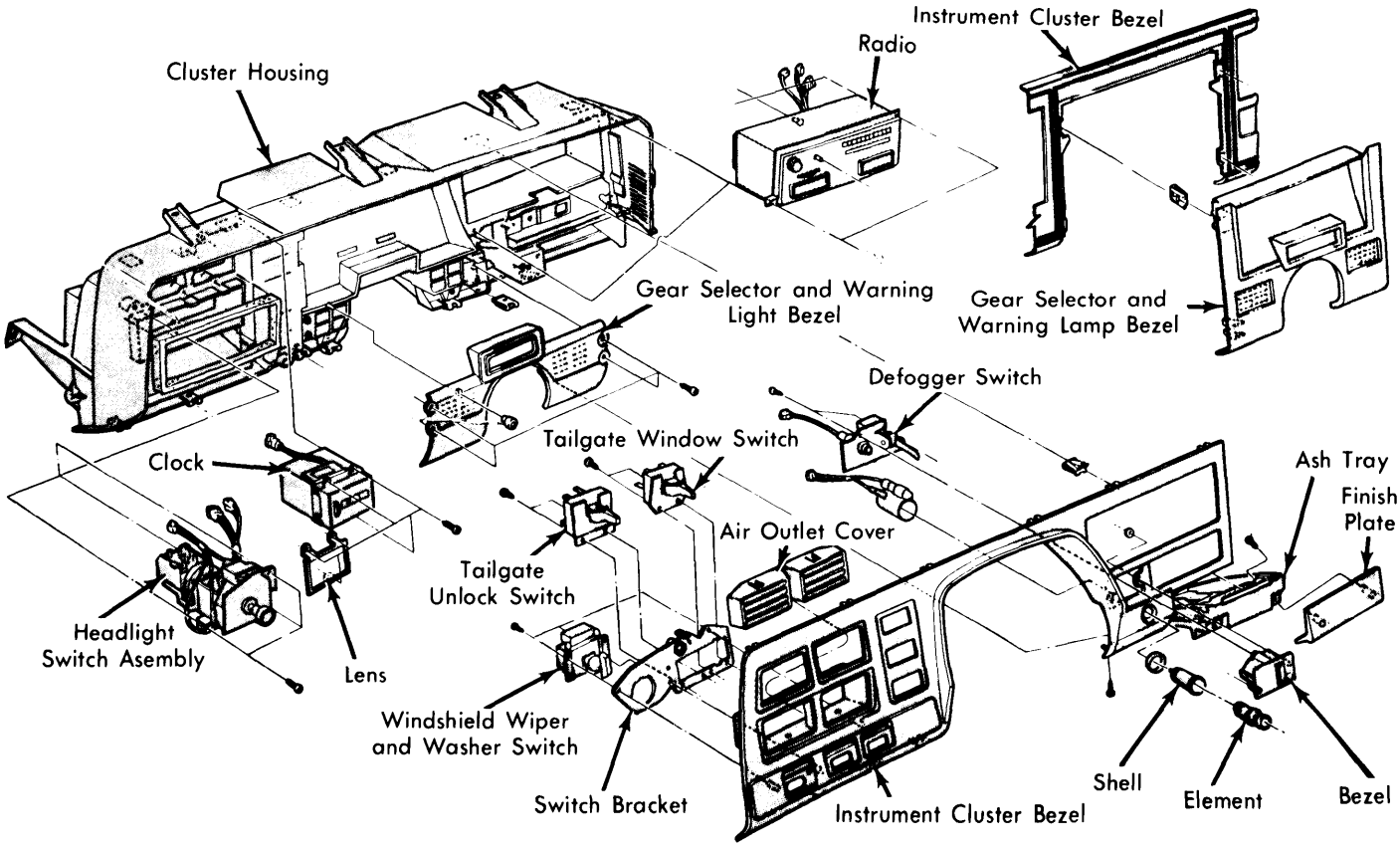

Fig. 3 Chrysler Instrument Cluster

CHRYSLER CORP. (Cont.)

are torqued to 110 INCH lbs. and that toe plate attaching bolts are torqued to 200 INCH lbs.

INSTRUMENT CLUSTER

Aspen, LeBaron, Diplomat & Volare – Remove four cluster bezel mounting screws from lower edge of bezel. Place gear selector lever in "L" position. Remove bezel by pulling rearward to disengage retaining clips along top edge of bezel. Loosen gear selector pointer and rotate with set screw to allow clearance for cluster removal. Remove cluster mounting screws and then cluster. To install, reverse removal procedure.

Fury, Monaco, Cordoba & Charger/Magnum – Remove trim pad, radio and heater/air conditioner controls. Remove cluster housing reinforcement bracket and from under dash disconnect speedometer cable. Disconnect all electrical leads and three wiring through clips. Remove upper cluster bezel, instrument panel end cap and steering column-to-support bracket nuts. Remove 11 screws mounting cluster housing to instrument panel and remove cluster housing. To install, reverse removal procedure.

Horizon & Omni – Remove speedometer assembly, disconnect two wiring harness connectors and two cluster attachment screws. Disengage cluster upper spring retainers and remove unit.

Chrysler – Remove instrument panel upper cover by lifting rearward edge of cover to free mounting clips then lift cover rearward, up, and off. Working through hole in top of panel, disconnect speedometer cable and round printed circuit board connector. Place gear selector in "L" position. Remove ash tray and while holding trip odometer reset shaft with needle nose pliers, remove reset shaft knob. Remove gear selector bezel by pulling it from the panel (Brougham), or removing bezel retaining screws (Chrysler). Remove screws along bottom edge of cluster bezel. Center temperature control lever. Disengage clips along top of bezel by pulling bezel out. Disconnect electrical lead and remove bezel. Remove cluster lens by rolling it out from the top. Remove cluster-to-carrier screws and pull cluster assembly out enough to disconnect lights, modules, and wires. Remove cluster assembly. To install, reverse removal procedure.

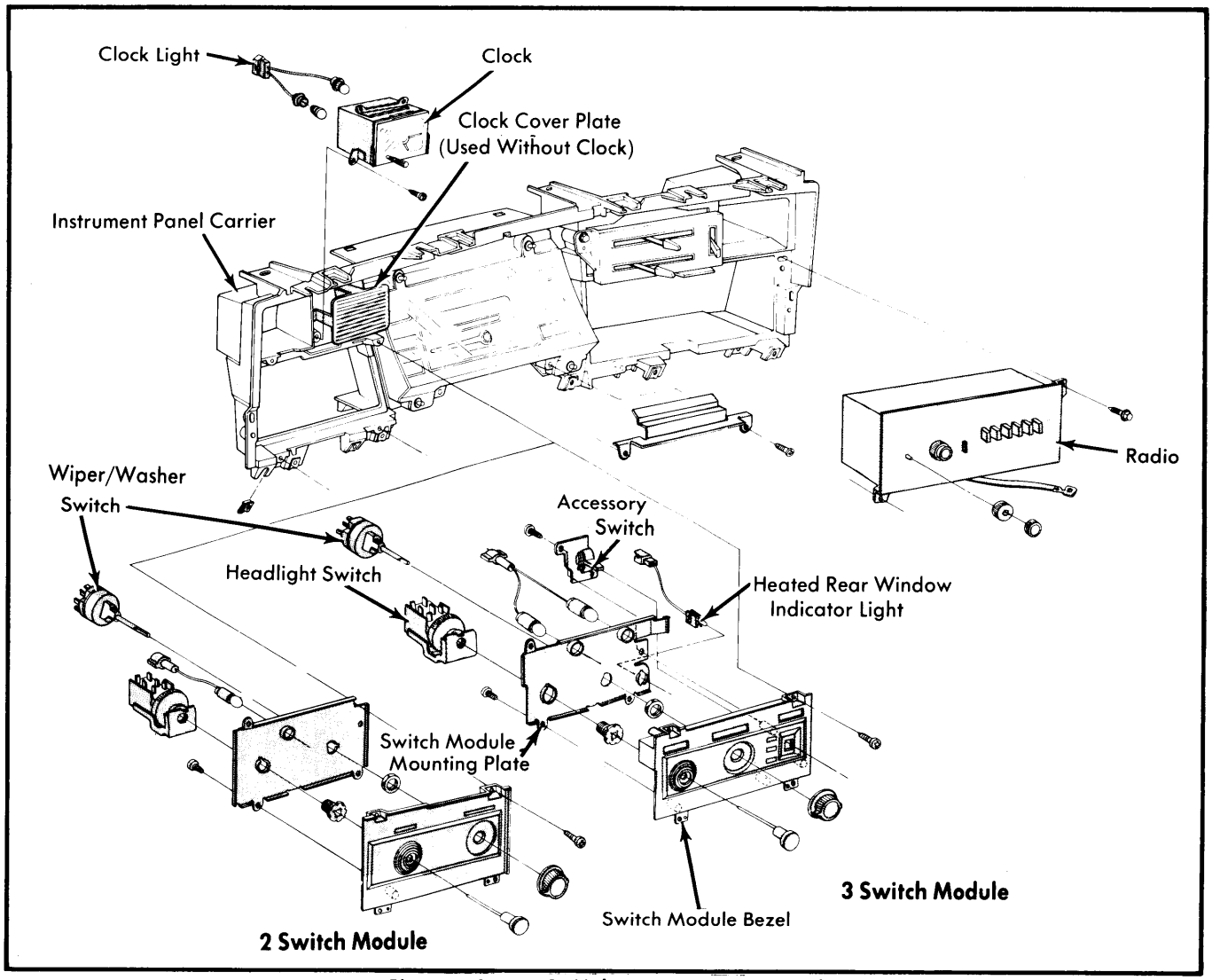

Fig. 4 Aspen & Volare Instrument Panel

CHRYSLER CORP. (Cont.)

SPEEDOMETER & GAUGES

Aspen, LeBaron, Diplomat & Volare – Remove instrument cluster bezel. Reach under instrument panel to right of steering column and disconnect speedometer cable by pressing retaining clip downward. Remove instrument cluster as previously described. Remove speedometer lens retaining pins and remove lens. Pull off pointer. Remove speedometer mounting screws, or screws retaining appropriate gauge to instrument cluster. To install, reverse removal procedure.

Fury, Monaco, Cordoba & Charger/Magnum – Remove instrument panel lens and mask. Disconnect wires or cable from appropriate gauge and remove gauge retaining screws from front of panel. Pull gauge from cluster housing. To install, reverse removal procedure.

NOTE – *Horizon & Omni – Speedometer and gauges, refer to Instrument Cluster Section.*

Horizon & Omni – Remove lens mask assembly. Remove speedometer assembly, then remove gauges as required and voltage limiter by pulling from cluster housing.

Chrysler Fuel, Ammeter and Temperature Gauges – Remove cluster bezel and gear selector and warning lamp bezel. NOTE – *Remove fuel and temperature gauges before removing ammeter.* Remove cluster lens and appropriate gauge from circuit board slip terminals. To install, reverse removal procedure.

PRINTED CIRCUIT BOARDS

Remove instrument cluster and all lamps, lamp sockets, switches and gauges which attach to or through printed circuit. Remove circuit board mounting screws (if used) and remove circuit board. To install, reverse removal procedure.

WINDSHIELD WIPER/WASHER SWITCH

Aspen, Volare, Diplomat & LeBaron – Remove cluster bezel. Remove switch module assembly mounting screws. Pull assembly out and let hang loose to gain access to switch. Pull and remove knob from switch stem. Remove switch mounting nut. Remove switch and disconnect wiring. To install, reverse removal procedure.

All Other Models – Remove cluster bezel. Remove switch mounting screws. Pull switch outwards and disconnect wiring. Remove switch. To install, reverse removal procedure.

HEADLIGHT SWITCHES

Aspen, Diplomat, LeBaron & Volare – Remove cluster bezel and switch module mounting screws. Pull module out and while depressing release button on switch, pull knob and stem from headlight switch. Using a Phillips screwdriver through stem opening, remove switch mounting nut. Disconnect switch wiring and remove switch. To install, reverse removal procedure.

Fury, Monaco, Cordoba & Charger/Magnum – Remove instrument cluster upper bezel escutcheon retaining screw, and switch plate-to-cluster housing retaining screws. Pull switch from cluster housing and disconnect electrical leads. While depressing release button on switch, pull stem and knob from switch. Remove escutcheon, switch mounting nut, and switch from mounting plate. To install, reverse removal procedure.

Horizon & Omni – Remove instrument cluster left bezel. Remove front mounting screws, switch and harness connector. To install, reverse removal procedure.

Chrysler – Remove instrument cluster bezel. Pull A/C outlet housing seal loose at top to gain access to lower switch bracket retaining screws. Remove lower switch bracket retaining screws, pull assembly outwards and disconnect electrical leads. While depressing release button on switch, pull knob and stem out of switch. Remove bulb assembly retaining screw, bulb assembly, lens mounting clips, and lens. Remove switch to mounting plate retaining nut and remove switch. To install, reverse removal procedure.

INSTRUMENT PANEL SWITCHES

Switches can be removed from front of instrument panel or from cluster bezel after removing bezel from cluster housing.