

INSTRUMENT PANEL

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DESCRIPTION AND OPERATION

INSTRUMENT PANEL (OPEL 1900. MANTA)

Headlight Switch

The three position light switch controls the headlights, taillights, parking lights, side marker lights, license plate light and instrument panel lights and is located at the lower left on the instrument panel.

With the switch knob pulled outward to the first stop, the parking lights, side marker lights, license plate light and instrument panel lights will light. The instrument panel lights can be turned off by turning the lightswitch knob counterclockwise past the first detent.

By pulling the lightswitch knob out all the way, the headlights will also be turned on.

Fog Light Switch (Rallye)

The fog light toggle switch is located in the instrument cluster to the left of the temperature and fuel gauge cluster. The fog lights can be turned off at any time by the toggle switch, but can only be turned on when:

1. The ignition switch is on or the engine running.

2. The fog light toggle switch lower half is pushed in.

3. The parking lights and/or low beam headlights are on.

The fog lights are automatically turned off if the ignition switch is on and the headlights are on high beam.

Windshield Wiper Switch

The windshield wiper switch is located on the instrument panel to the right of the headlight switch.

By pushing the lower half of this switch in to the first stop, the wipers will operate at slow speed. By pushing in to the second stop, the wipers will operate at fast speed.

Electrically Heated Rear Window Switch (If Equipped)

The heated rear window switch is located in the instrument panel to the right of the clock opening.

To operate (only possible with the engine running), push in on the lower half of the switch. When the rear window is being heated, the switch will be lighted.

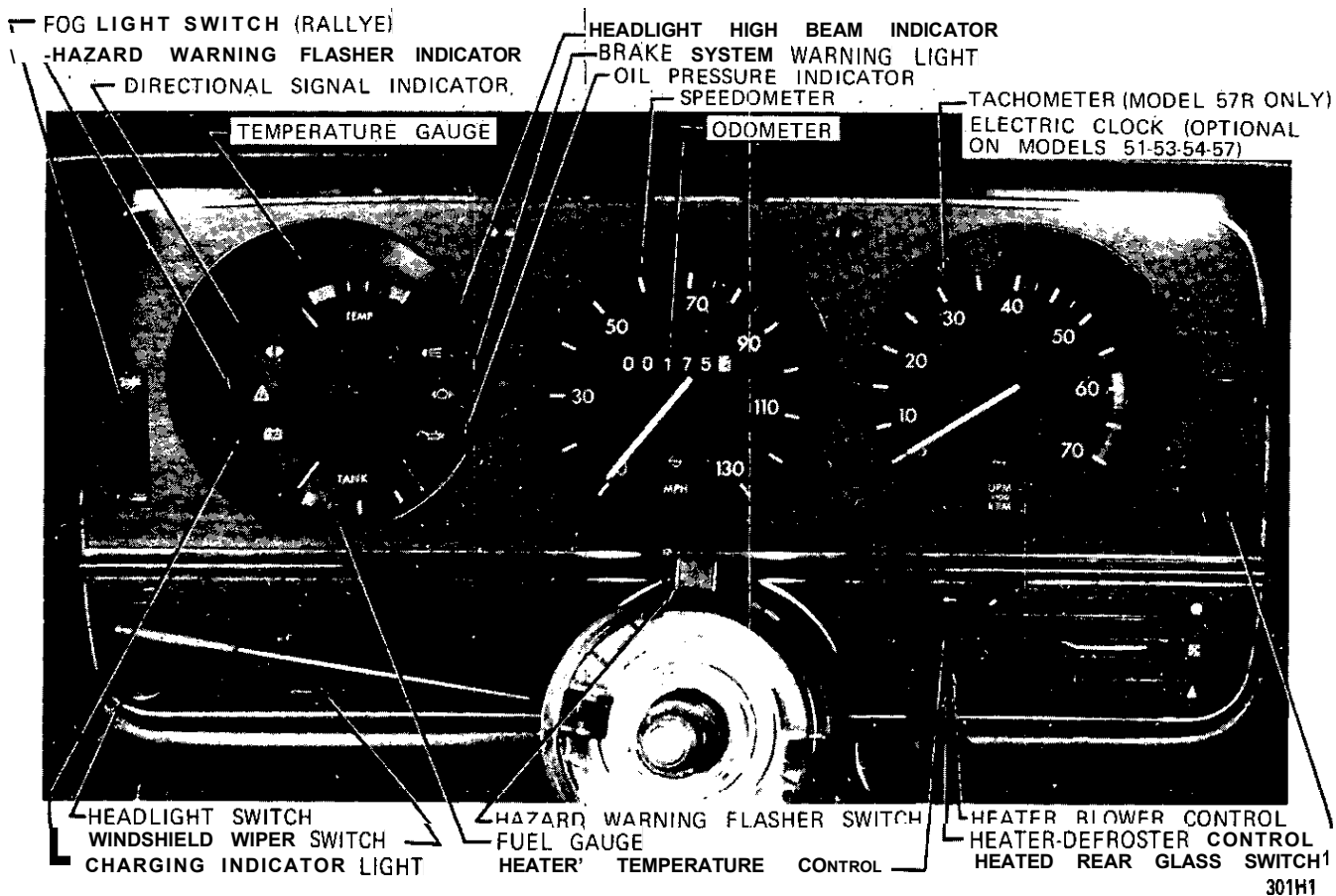


Figure 1 H-I • 1900 Instrument Arrangement

INSTRUMENT PANEL (GT)

Headlight Switches

There are two headlight switches, one for turning on the headlights and the other operates an indicator light on the instrument panel. Both switches are located behind the left headlamp assembly.

When the headlamp lever is **pushed** forward, the operating mechanism rotates the headlights to open position, **turns** the headlight **and** instrument panel indicator light switches on until the headlamps are locked in full open position at which time the **indicator** lamp switch is turned off.

Along with the headlights, the headlight switch also turns on the parking lights, taillights, license plate lights and rear side marker lights.

Parking Light and instrument Panel Light Switch Assembly

The left switch of this assembly is the Parking Light Switch. By pushing inward on the lower half of this

switch, the parking lights, taillights, license plate lights and rear side marker lights are **turned** on and can **be** turned off by pushing inward on the upper half of the switch providing the headlights are not turned on.

The center portion of this switch assembly is inoperative and controls nothing.

The switch on the right end of this assembly is the Instrument Panel Light switch. By pushing inward on the lower half of the switch turns on the instrument panel lights. The brightness of the instrument panel lights can be adjusted by movement of the switch. If either the Parking Light or Instrument Panel switch becomes defective, the switch assembly must be replaced.

Combined Windshield Wiper, Electrically Heated Rear Window and Heater Blower Switch

This switch assembly is located to the right of the cigar lighter. If any one of these switches should fail, the complete switch assembly must be replaced.

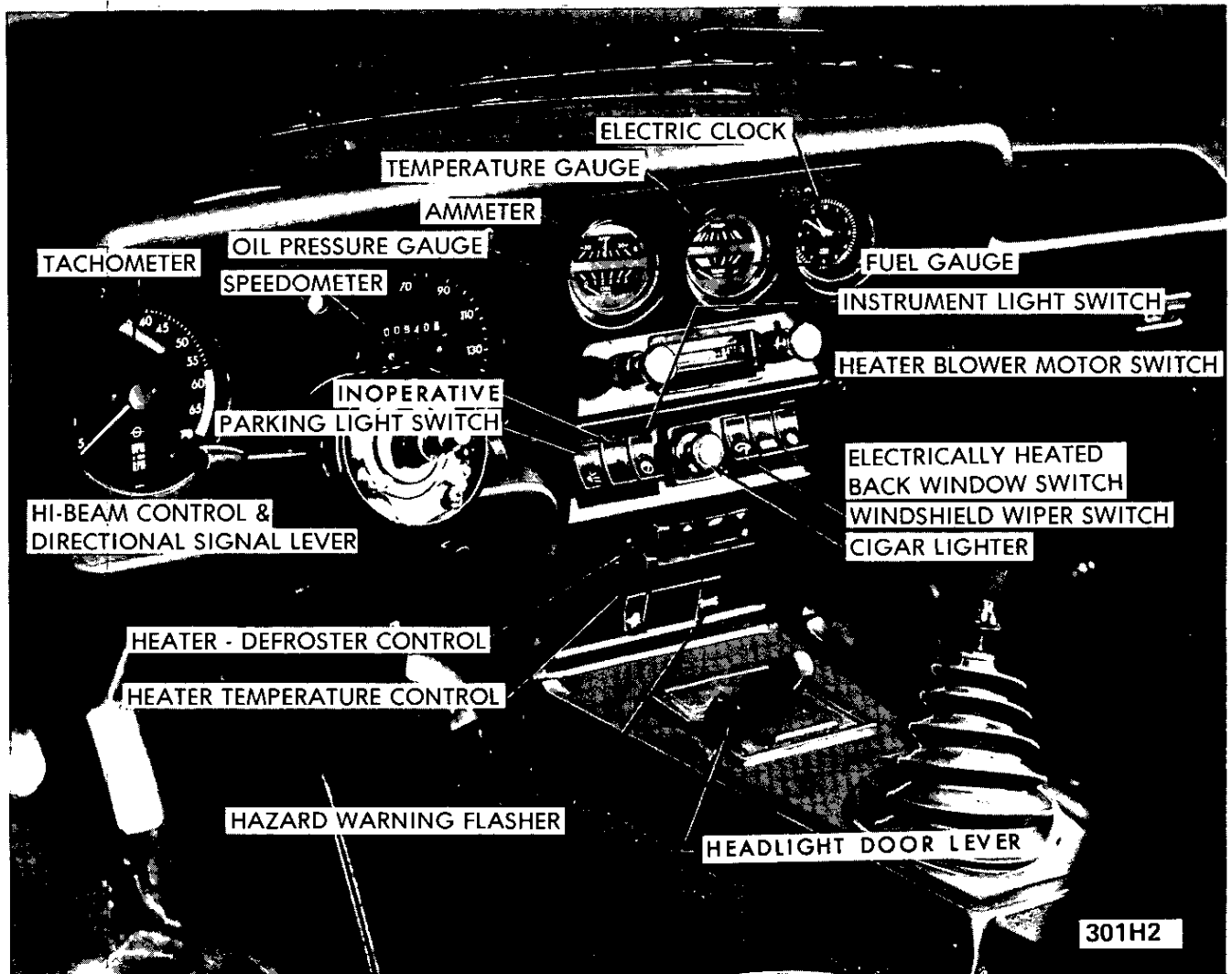


Figure 1 H-2 • GT Instrument and Switch Arrangement

The **Windshield Wipers** have two-speed operation. By **pushing** the lower half of the switch inward to the first stop, the wipers will operate at half speed and by **depressing** to the second stop will provide full speed operation. When the switch is returned to the off position, the wiper blades automatically return to their park position.

The **Electrically Heated Rear Window Switch** is standard whether or not the vehicle is equipped with this option. The engine must be running before sufficient current can be generated to energize this circuit even though the switch is depressed to the "ON" position! When the window is being heated, a warning light on the instrument panel will glow. This light is located **below** the left ventilation inlet.

The **Heater Blower Switch** is a three position switch. By depressing the lower half of the switch to the first stop, the blower will operate at low speed. When depressed to the second stop, the blower will operate at high speed.

Four Way Hazzard Warning Flasher Switch

The **hazzard** warning flasher switch is located below the heater controls in the center console. By **depressing** the lower half of the switch, all four turn-signal lamps flash at the same time. Although this system makes use of the regular turn signal system, it has a separate feed wire to the switch which allows for its operation even with the ignition switch and doors locked. No vehicle should be driven with this system in operation because of its universal meaning "This Vehicle Is Not Moving". To turn the system off, simply depress the upper half of the switch.

MAJOR REPAIR

Removal of Instrument Cluster Housing Assembly. Opel 1900 Manta

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

1. Remove headlight switch button by depressing retaining clip on shaft and pulling back on switch knob. See Figure 1H-3.

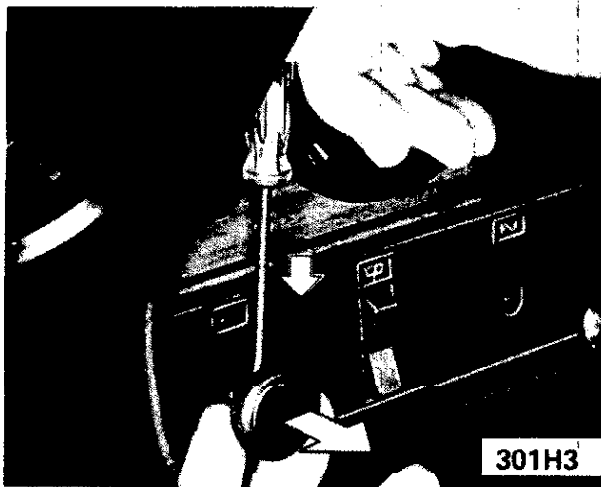


Figure 1H-3 . Removing Headlight Switch Knob,

2. Remove two (2) plugs on cluster panel. See Figure 1H-4.

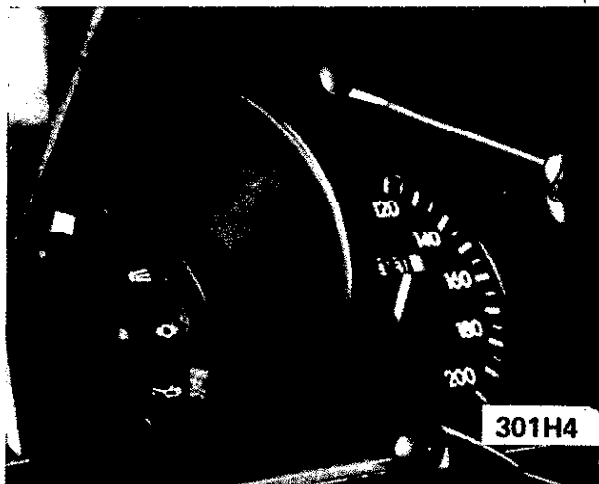


Figure 1 H-4 Removing Plugs

3. Remove two (2) sheet metal screws behind plugs on cluster. See Figure 1H-5.

4. Pull off heater control knobs toward front.

5. On top, carefully pull instrument 'trim plate towards steering wheel and remove plate.

6. Remove two screws for lower housing attachment. See Figure 1H-6.

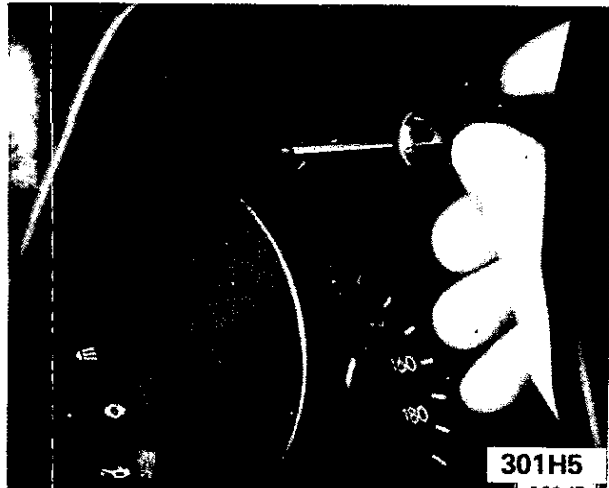


Figure 1 H-5 . Removing Cluster Screws

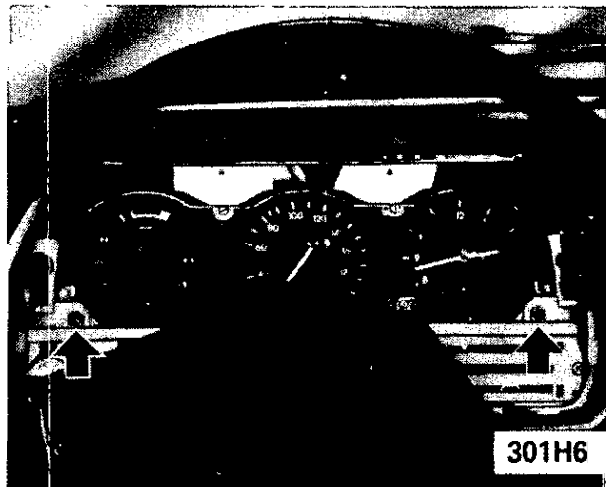


Figure 1 H-6 Lower Housing Attaching Screws

7. Disconnect **speedo** cable at cluster by turning coupling counterclockwise.

8. If equipped, pull heated rear window or fog lamp switch out of instrument housing and disconnect wires from switches.

9. Pull cluster right and left sides partially out and disconnect wires on back of cluster. See Figure 1H-7.

Installation

1. **Place** instrument cluster in position and connect wires on back of cluster.

2. Pull fog light or heated back glass switch wires into opening, if equipped, and connect wires and replace switch.

3. Connect two screws on lower housing attachment.

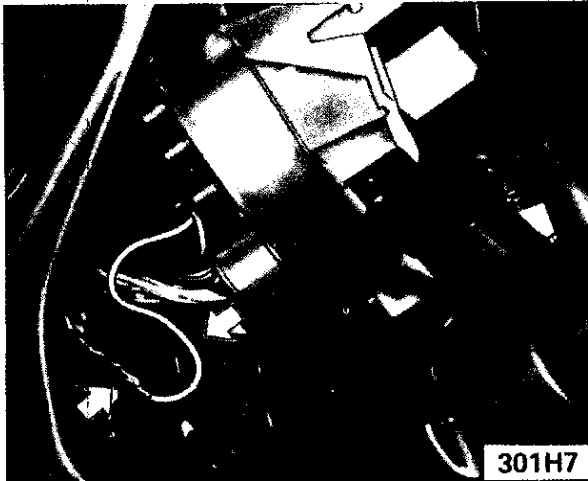


Figure 1 H-7 • Disconnecting Cluster Wires

4. **Install** instrument cluster trim plate and replace two screws and plugs.
5. **Con&t speedo** cable by turning coupling clockwise.
6. **Install** light **switch** button and heater control knobs.
7. **Connect** battery cable.

Removing Windshield Wiper Switch • Opel 1900 Manta

1. **Remove** instrument cluster trim plate.
2. **Compress** retaining clips and remove switch. See Figure 1H-8.

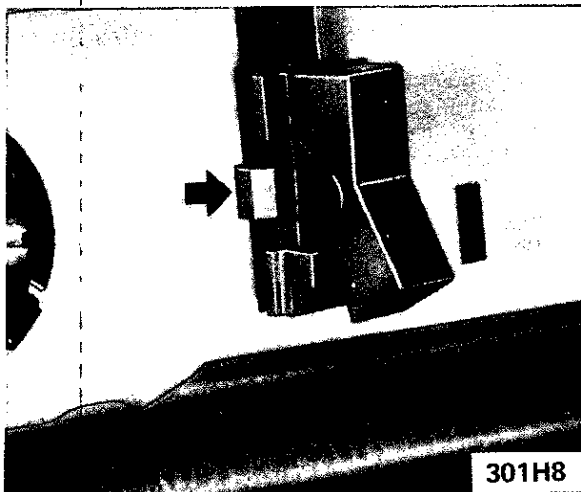


Figure 1H-8 . Removing Windshield Wiper Switch

3. **Disconnect** wiring connector.

Installation

1. **Connect** wiring to switch.
2. **Snap** switch back into panel.
3. **Replace** instrument cluster trim plate.

Removing Instrument Cluster Bulbs • Opel 1900 Manta

1. **Remove** instrument cluster assembly.
2. **Replace** bulbs from back of cluster. See Figure 1H-9.

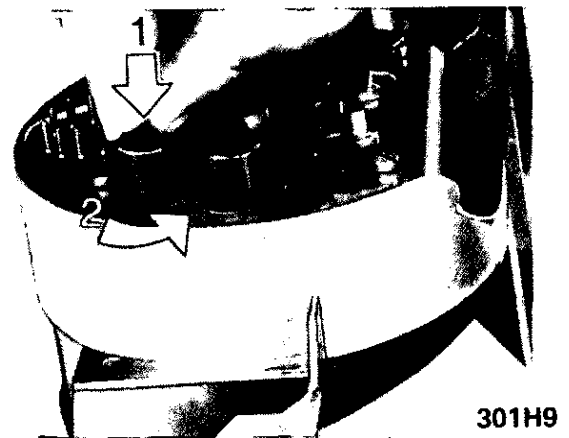


Figure 1H-9 Removing Instrument Cluster Bulbs

Installation

1. **Replace** bulbs in cluster.
2. **Replace** instrument cluster assembly.

Removing and Installing Ignition Switch

Refer to Group 3, Section F.

Removal of Instrument Cluster Housing Assembly. GT

Disconnect battery before making any electrical repairs.

1. **Disconnect** battery cable.
2. **Remove** right access cover and remove screw. See Figure 1H-10.

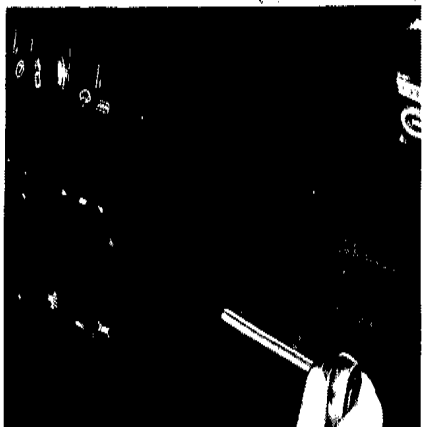


Figure 1 H-10 Removing Right Access Cover and Screw

3. Remove left access cover and remove screw. See Figure 1H-11.

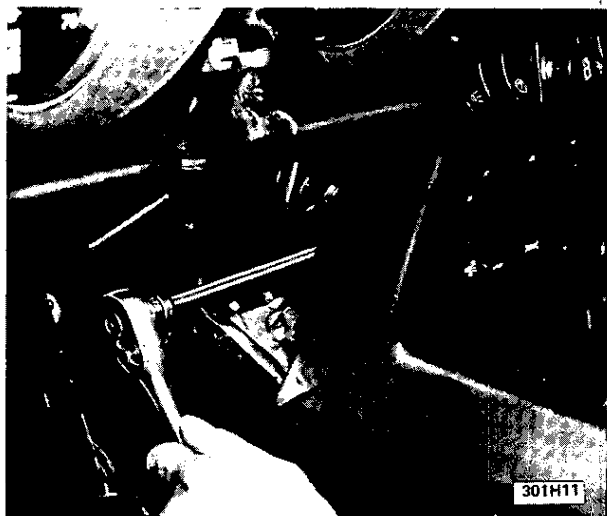


Figure 1H-11 Removing Left Access Cover and Screw

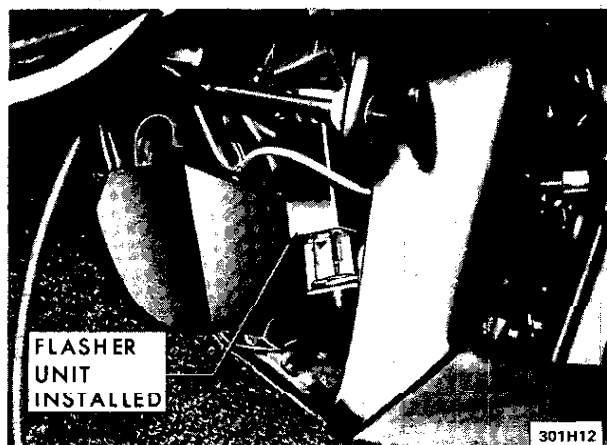


Figure 1H-12 Flasher Unit Installed

4. Remove flasher unit. See Figure 1H-12.

5. Position steering so that wheels are straight ahead.

6. Pull off heads of both tear bolts by first drilling a 3/16 inch pilot hole and then using a stud extractor to remove tear bolts. See Figure 1H-13.

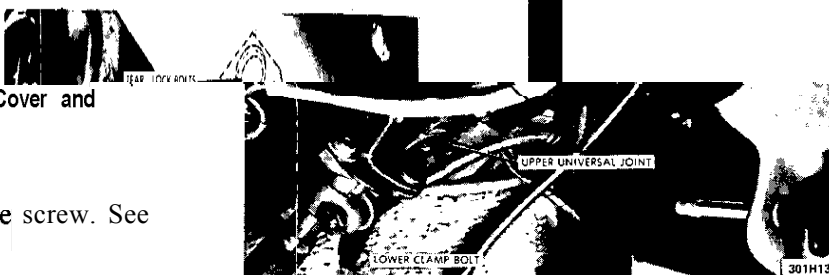


Figure 1 H-I 3 Steering Column Attaching Bolts

7. Disconnect ignition (white) and directional signal (black) wire set plugs.

8. Support steering column assembly and remove both hex head bolts. See Figure 1H-13.

9. Drop steering column assembly to floor.

10. Disconnect speedometer cable.

11. Remove six (6) screws on instrument cluster. See Figure 1H-14.

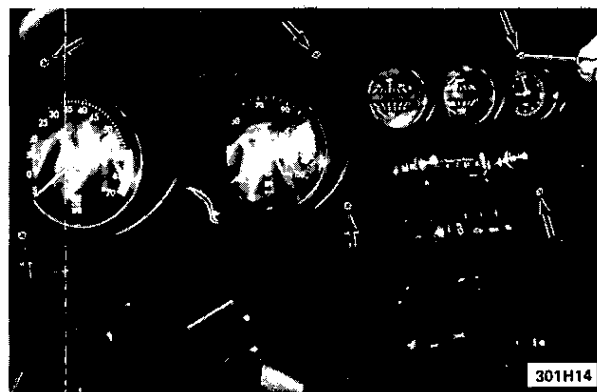


Figure 1H-14 Instrument Cluster Screws

12. Pull back on instrument cluster from top to remove. See Figure 1H-15.

13. Disconnect wires on back of radio. See Figure 1H-16.

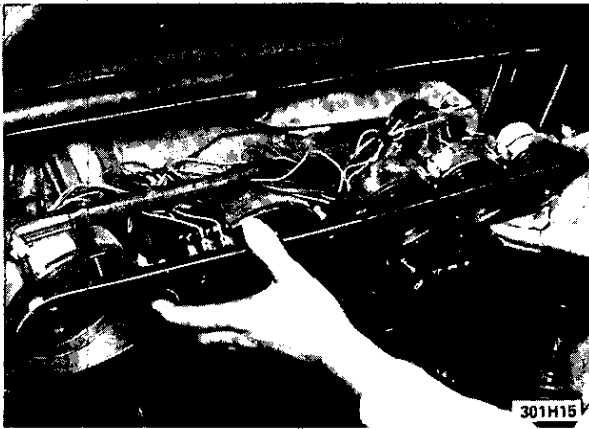


Figure 1H-15 Removing Instrument Cluster Assembly

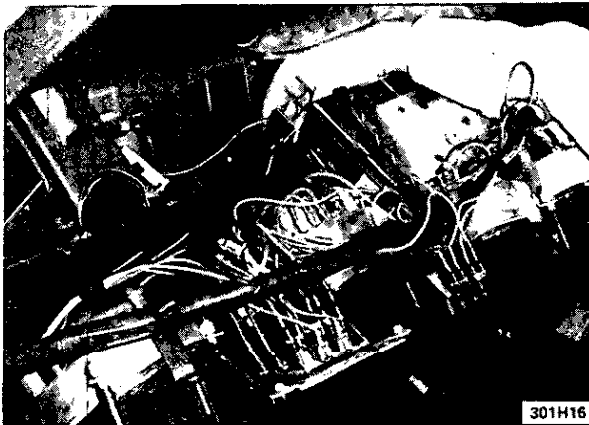


Figure 1H-16 Disconnecting Radio Wires

14. Disconnect antenna lead-in at right lower corner of radio!

15. Pull cluster housing out and turn sideways to remove any instrument gauge or switches.

Installation

CAUTION: Fasteners in subparagraph *B* are important attaching parts in that they could affect the performance of vital components and systems, and/or could result in major repair expense. They must be replaced with one of the same part number, or with an equivalent part if replacement becomes necessary. Do not use a replacement part of lesser quality or substitute design. Torque values must be used as specified during reassembly to assure proper retention of these parts.

1. Plug antenna lead-in cable and power source to radio.

2. Put instrument cluster in position and replace six (6) screws in cluster.

3. Connect speedometer cable.

4. Raise steering column into position and install hex head bolts. Be sure to install ground wire. Tighten hex head bolts to 14 lb.ft.

5. Tighten tear lock bolts until hex head of bolt is torn off.

6. Connect ignition and directional signal wire set plugs.

7. Install flasher unit.

8. Replace screws in right and left lower instrument panel and replace both access covers.

9. Connect battery cable.

Removal of Combined Switch Assemblies. GT

1. Remove instrument cluster.

2. Turn instrument cluster to the side to remove switch assembly.

3. Remove switch by removing two retaining nuts. See Figure 1H-17.

4. Remove wiring from switch.

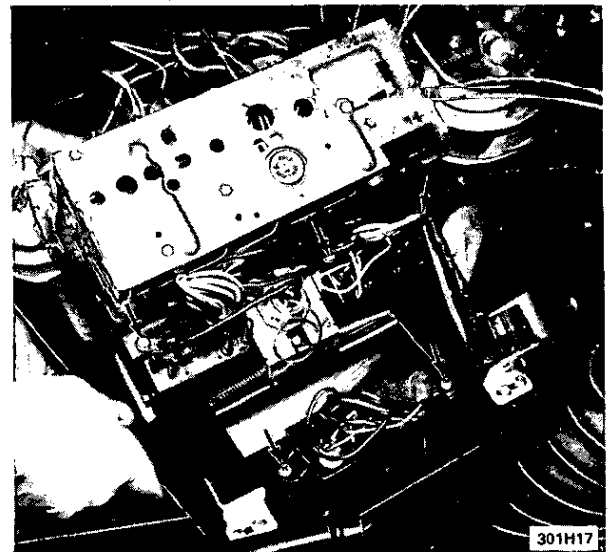


Figure 1H-17 Removing Switches

Installation

1. Plug wiring into switch.

2. Install switch on panel.

3. Install instrument cluster.

Removal of Cigar Lighter GT

1. Remove **instrument** housing.
2. Disconnect electrical wire.
3. Remove hex nut on back of cigar lighter **base**.
4. Remove cigar lighter base.

Installation

1. Install cigar lighter base.
2. Install hex nut on back of lighter base.
3. Connect wire to lighter.
4. Replace instrument cluster.