

INSTRUMENT PANEL AND GAUGE

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DESCRIPTION AND OPERATION

ELECTRO/MECHANICAL INSTRUMENT CLUSTER

The mechanical instrument cluster is an electro-mechanical module which receives most of its information from the Body Control Module (BCM) via the CCD bus.

The cluster (Fig. 1) includes:

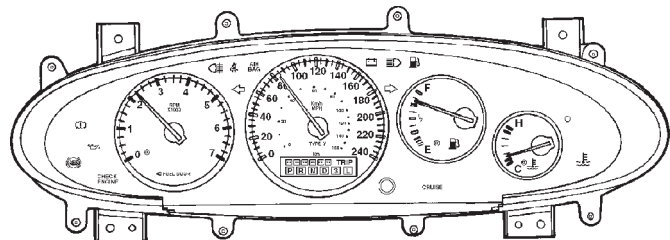


Fig. 1 Cluster

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- 240 km/h (180 MPH) speedometer
- Tachometer
- Odometer/trip odometer and transmission range indicator with automatic transmission
- Fuel gauge
- Temperature gauge
- Security alarm indicator (optional)

The warning and information indicators include the following:

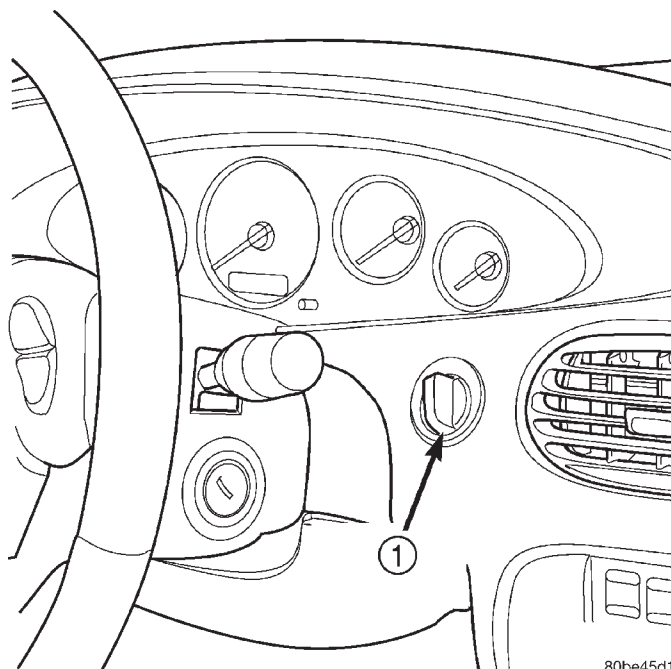
- Malfunction indicator lamp (Check Engine)
- Airbag
- Charging system
- Low oil pressure
- High temperature
- Low fuel
- Seat belt
- Cruise
- Brake/park brake
- Anti-lock brake system (optional)
- High beam

- Fog lamps (optional)
- Vehicle Theft Security System alarm LED indicator (optional)
- Turn signals

The gauges are the magnetic air-core type. When the ignition switch is OFF, the gauge pointers should rest at or below the low graduation.

DIAGNOSIS AND TESTING

HEADLAMP LEVELING SWITCH



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Fig. 2 Headlamp Leveling Switch Location

1 – HEADLAMP LEVELING SWITCH

(1) Remove headlamp leveling switch from instrument panel and disconnect the wire harness connec-

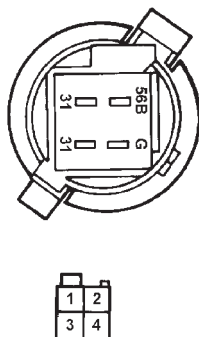
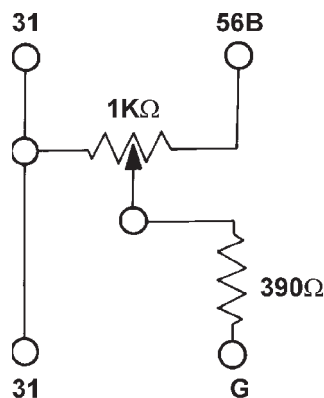
DIAGNOSIS AND TESTING (Continued)

tor from the switch. Refer to Wiring Diagrams for the proper wire circuits and connector connections.

(2) Using a voltmeter, connect B+ lead to Pin 1 of the Wire harness connector. Connect the negative lead to Pin 2. Turn ON the headlamp switch to the low beam position. If battery voltage, OK. If not OK, go to Step 3.

(3) Connect the ground lead to a good ground, if no voltage, refer to Wiring Diagrams and test circuit back to headlamp switch. If battery voltage, repair Pin 2 ground circuit as necessary.

(4) Turn headlamps OFF. Connect the wire harness connector to the headlamp leveling switch. Turn ON the headlamp switch to the low beam position. Check voltage at Pin 3, while rotating the headlamp leveling switch knob through it's range. The voltage reading should change as the switch is rotated. If the voltage does not vary replace switch. If OK, test the headlamp leveling motors and/or circuit to the motors.



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Fig. 3 Headlamp Leveling Switch Circuit Diagram

REMOVAL AND INSTALLATION

FUEL GAUGE AND TEMPERATURE GAUGE

REMOVAL

(1) Disconnect and isolate the remote negative battery cable.

(2) Remove radio bezel. Refer to Group 23, Body for procedure.

(3) Remove instrument panel cluster hood. Refer to Group 23, Body for procedure.

(4) Remove mask/lens retaining screws and remove mask/lens (Fig. 4).

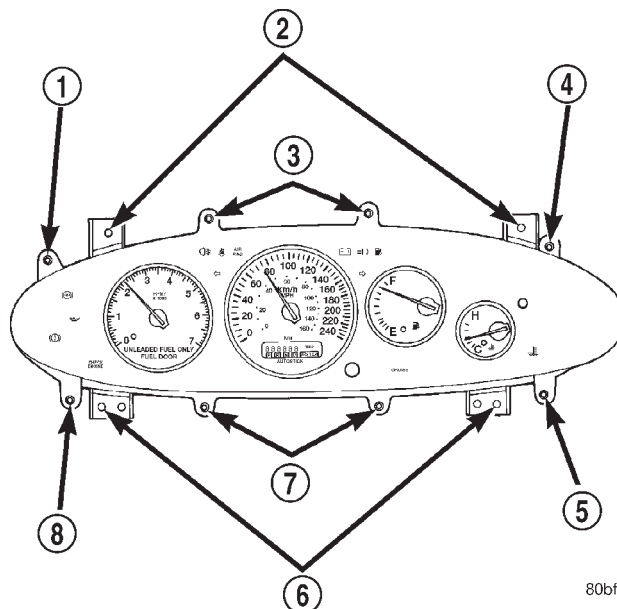
(5) Disconnect odometer/transmission range indicator connector from the printed circuit board (Fig. 5).

(6) Remove screws attaching speedometer/tachometer to housing and remove.

(7) Remove the fuel/temperature gauge attaching screws from the housing and remove (Fig. 6).

INSTALLATION

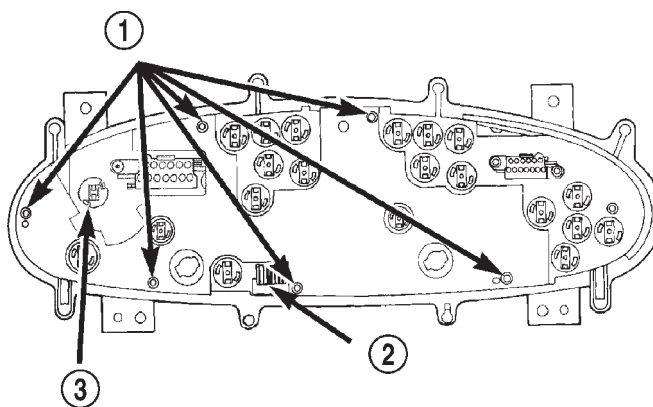
For installation, reverse the above procedures.



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Fig. 4 Mask/Lens Retaining Screws

- 1 - MASK/LENS SCREWS
- 2 - CLUSTER SCREWS
- 3 - MASK/LENS SCREWS
- 4 - MASK/LENS SCREWS
- 5 - MASK/LENS SCREWS
- 6 - CLUSTER SCREWS
- 7 - MASK/LENS SCREWS
- 8 - MASK/LENS SCREWS

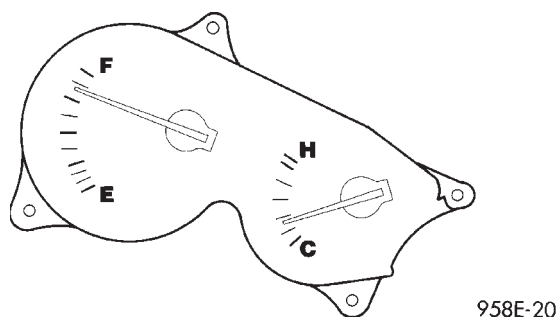
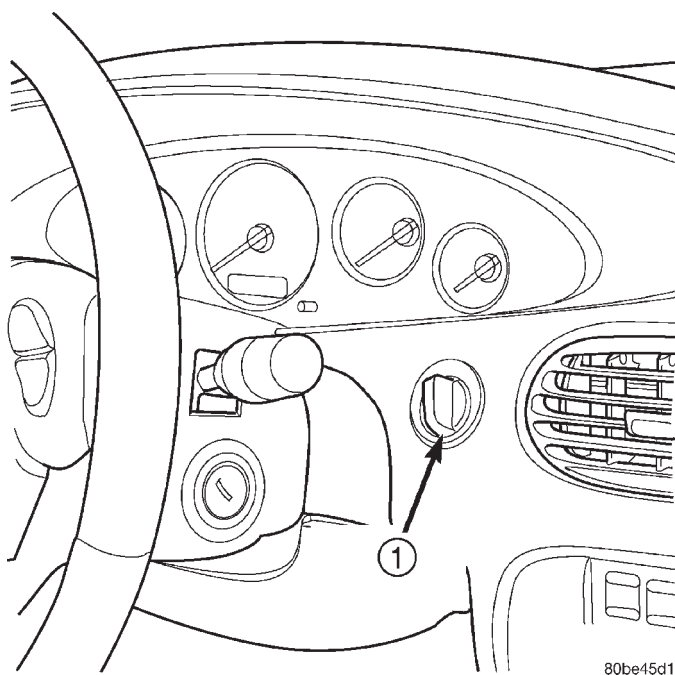


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Fig. 5 Back Cover Retaining Screws

- 1 - CLUSTER BACK COVER RETAINING SCREWS
- 2 - ODOMETER/TRANSMISSION RANGE INDICATOR CONNECTOR
- 3 - VTSS LED

REMOVAL AND INSTALLATION (Continued)

*Fig. 6 Fuel Gauge and Temperature Gauge***HEADLAMP LEVELING SWITCH****REMOVAL***Fig. 7 Headlamp Leveling Switch*

1 - HEADLAMP LEVELING SWITCH

(1) Disconnect and isolate the battery negative cable.

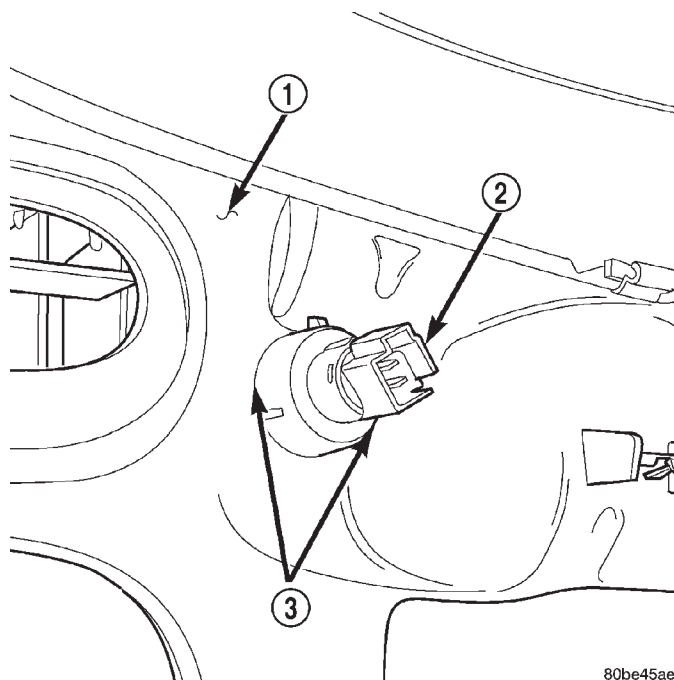
(2) Disconnect headlamp leveling switch electrical connector and remove the instrument cluster hood from the instrument panel. Refer to Group 23, Body for the procedure.

(3) Remove the headlamp leveling switch from the cluster hood by depressing the retaining tabs and sliding out (Fig. 8).

INSTALLATION

(1) Connect headlamp leveling switch and verify operation and disconnect switch.

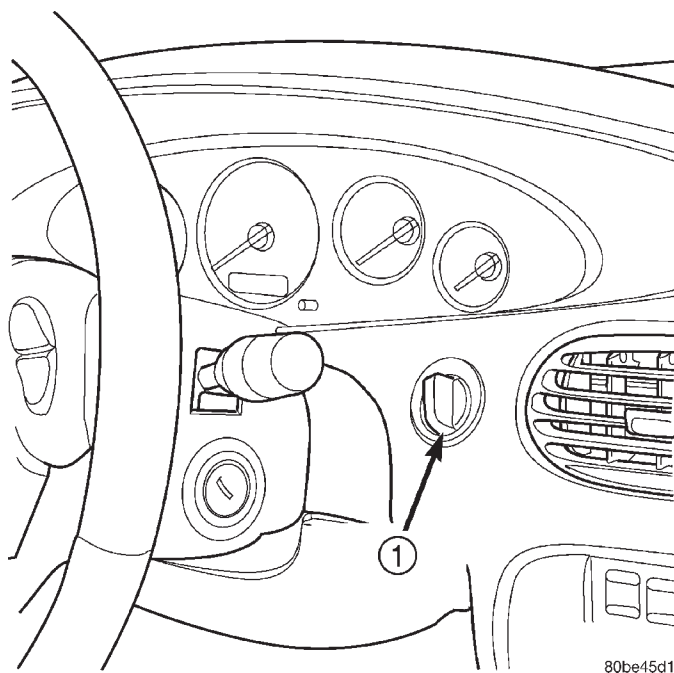
(2) Install the instrument cluster hood on the instrument panel. Be certain leveling switch wire harness is inserted through hole in cluster hood.

*Fig. 8 Rear of Headlamp Leveling Switch*

- 1 - REAR OF INSTRUMENT CLUSTER HOOD
- 2 - HEADLAMP LEVELING SWITCH
- 3 - SWITCH RETAINING TABS

(3) Connect headlamp leveling switch electrical connector.

(4) Install leveling switch in cluster hood by pushing straight in (Fig. 9).

*Fig. 9 Headlamp Leveling Switch*

1 - HEADLAMP LEVELING SWITCH

REMOVAL AND INSTALLATION (Continued)

- (5) Connect the negative battery cable.

SPEEDOMETER/TACHOMETER AND ODOMETER TRANSMISSION RANGE INDICATOR**REMOVAL**

- (1) Disconnect and isolate the remote negative battery cable.
- (2) Remove radio bezel. Refer to Group 23, Body for procedure.
- (3) Remove instrument panel cluster hood. Refer to Group 23, Body for procedure.
- (4) Remove mask/lens retaining screws and remove mask/lens.
- (5) Disconnect odometer/transmission range indicator connector from the printed circuit board.
- (6) Remove screws attaching speedometer/tachometer to housing and remove.
- (7) Remove screws attaching from the back of speedometer and remove the odometer/transmission range indicator display (Fig. 10).

INSTALLATION

For installation, reverse the above procedures.

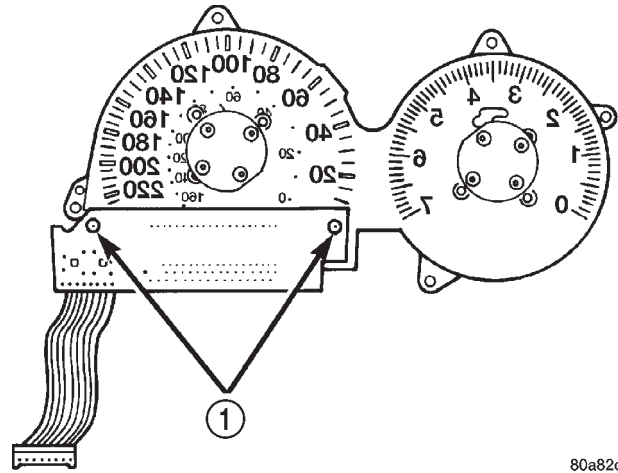


Fig. 10 Odometer/Transmission Range Indicator

1 - MOUNTING SCREWS