

TURN SIGNALS AND HAZARD WARNING FLASHER

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WARNING: BEFORE SERVICING A STEERING COLUMN EQUIPPED WITH AN AIR BAG, REFER TO GENERAL INFORMATION

GROUP 8M - RESTRAINT SYSTEMS FOR PROPER AND SAFE SERVICE PROCEDURES.

TURN SIGNAL AND HAZARD WARNING FLASHER LOCATION

The turn signal and hazard warning flasher are both located on the Convenience Center (Figs. 1 and 2), which is located up under the driver's end of the instrument panel. Remove chime module from the Convenience Center to gain access to the Turn Signal and Hazard flashers.

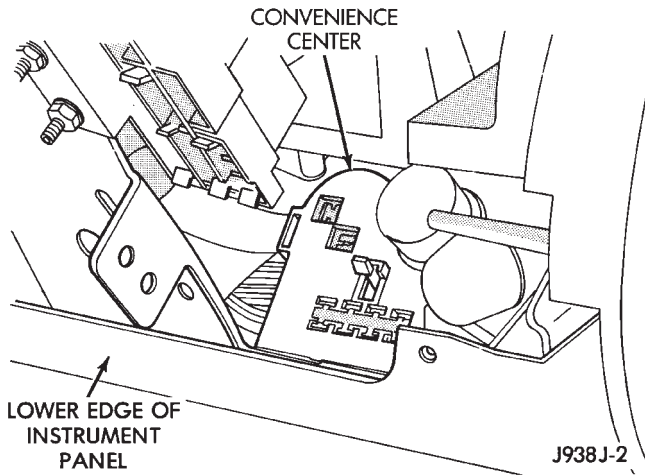


Fig. 1 Convenience Center Location

TURN SIGNALS

DESCRIPTION

The turn signals are actuated with a lever on the left side of the steering column just behind the steering wheel. The signals are turned off by a canceling cam (two lobes molded to the clockspring mechanism). The cam comes in contact with the cancel actuator on the turn signal (multi-function) switch assembly. Either cam lobe, pushing on the cancel actuator, returns the switch to the off position.

If only momentary signaling such as indication of a lane change is desired, the switch is actuated to a left or right intermediate detent position. In this position

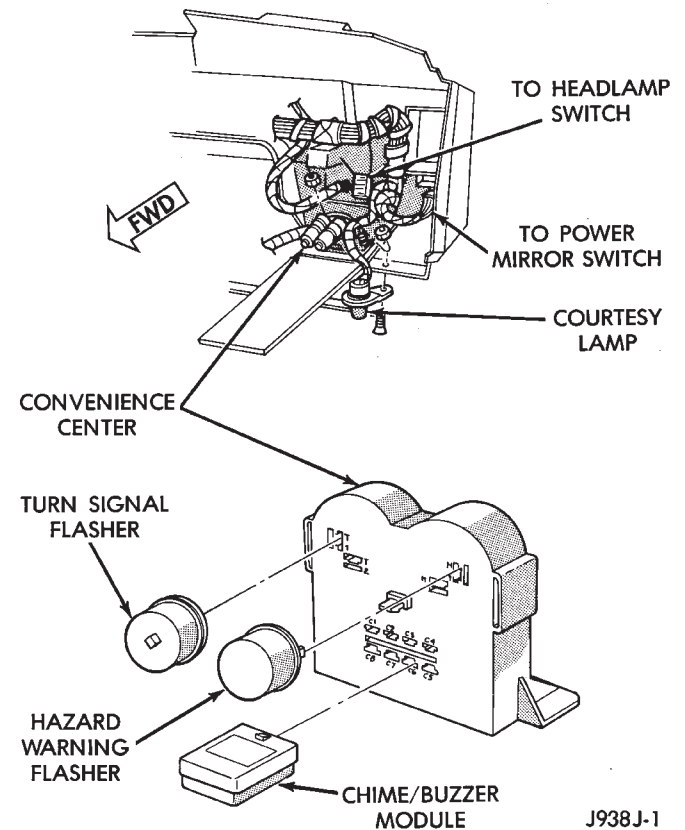


Fig. 2 Turn Signal and Hazard Warning Flashers

the signal lamps flash as described above, but the switch returns to the OFF position as soon as the lever is released.

With the ignition key ON and the multi-function lever in its UP or DOWN position, current flows through the:

- turn signal flasher canister
- multi-function
- turn indicator lamp
- front and rear bulbs.

The selected turn signal indicator with front and rear turn signal bulbs will flash.

The chime will sound after the vehicle has traveled a distance of approximately 0.5 mile with the turn signal ON.

DIAGNOSIS—TURN SIGNAL INOPERATIVE

High generator output voltage can burn out lamps rapidly.

(1) Turn ignition key to RUN position. Place turn stalk in up or down position. Observe the turn indicator arrow on instrument cluster. If the arrow stays lit, check for burned out exterior turn signal bulb. Replace bulb as required. Turn indicator should now flash, if not go to next step.

(2) Open front passenger door. Locate the fuse panel at the passenger end of the instrument panel. Inspect 20 amp Turn fuse in cavity #16. Replace if necessary.

(3) Locate turn signal flasher in convenience center and remove it. There should be battery voltage at the fuse side of the flasher (top terminal) (Fig. 3). If not, repair open circuit in wiring between turn fuse and flasher.

(4) Replace flasher with a known good flasher. The lamps should flash. If not, install original flasher, put electrical tape over flashers and go to next step.

(5) Locate multi-function as described in Multi-Function Switch Testing Procedures. Measure voltage at the multi-function switch connector cavity #17. Meter should read battery voltage. If OK, replace multi-function switch assembly. If not, repair open circuit in wiring between turn flasher and multi-function switch.

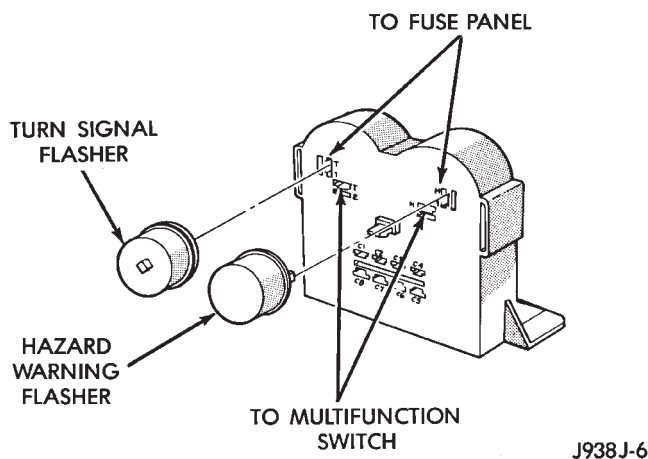


Fig. 3 Flasher Wiring

HAZARD WARNING SYSTEM

DESCRIPTION

The hazard warning system is actuated by a push button located on the top of the steering column between the steering wheel and the instrument panel. The hazard switch is identified with a double triangle. Push and release the button to turn the hazard function on and off. The button will move out from the steering column in the ON position and will remain in toward the column in the OFF position.

With the hazard switch OUT, current flows through the

- hazard flasher canister
- multi-function switch
- front turn signal bulbs
- rear turn signal bulbs
- both indicator bulbs.

All of the turn lamps and both indicators will flash.

DIAGNOSIS—HAZARD FLASHER INOPERATIVE

Hazard switch in ON. The lamps should flash. If not proceed as follows:

(1) Open front passenger door. Locate the fuse panel at the passenger end of the instrument panel. Inspect the 20 amp Haz. Lamps fuse #3. Replace if necessary.

(2) Measure voltage at the fuse side of the flasher (top terminal) (Fig. 3). Meter should read battery voltage. If not, repair open circuit in wiring between fuse and Hazard flasher.

(3) Replace Hazard flasher with known good flasher. Lamps should flash. If not, install original flasher and go to next step.

(4) Locate multi-function as described in Multi-Function Switch Testing Procedures. Measure voltage at the multi-function switch connector cavity #13. Meter should read battery voltage. If OK, replace multi-function switch. If not, repair open circuit in wiring between hazard flasher and multi-function switch connector cavity #13.

MULTI-FUNCTION SWITCH TESTING PROCEDURES

The multi-function switch contains electrical circuitry for

- turn signal
- hazard warning
- headlamp beam select
- headlamp optical horn
- windshield wiper
- pulse wipe
- windshield washer switching.

This integrated switch assembly is mounted to the left-hand side of the steering column. Should any function of the switch fail, the entire switch assembly must be replaced.

To test the switch:

- (1) Disconnect negative cable from the battery.
- (2) Remove tilt lever (tilt column only).
- (3) Remove both upper and lower steering column covers. Requires removal of 3 screws (Torx T-20).
- (4) Remove 4 screws holding steering column trim panel (Fig. 4).
- (5) Remove 6 screws holding knee blocker.
- (6) Remove steering column retaining nuts.
- (7) Lower steering column to gain access to rear of multi-function switch.
- (8) Remove switch connector (Figs. 5 and 6).
- (9) Using an ohmmeter, test for continuity (no resistance) between the terminals of the switch as shown in the following continuity chart (Fig. 7).

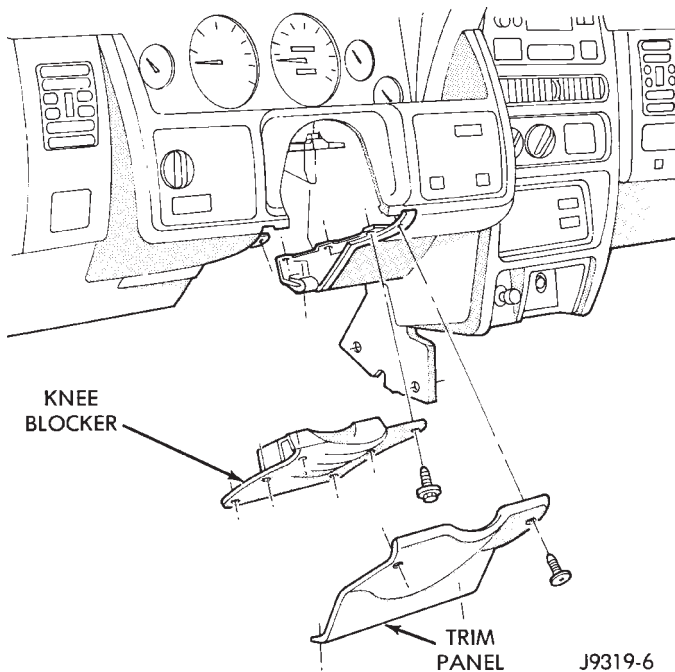


Fig. 4 Steering Column Trim And Knee Blocker

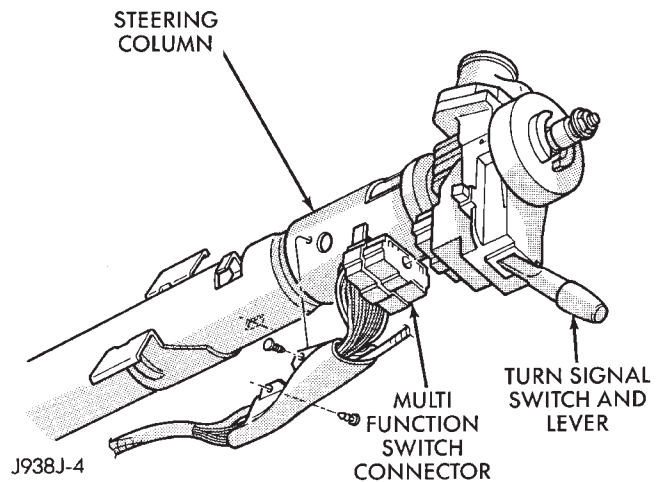


Fig. 5 Multi-Function Switch Connector

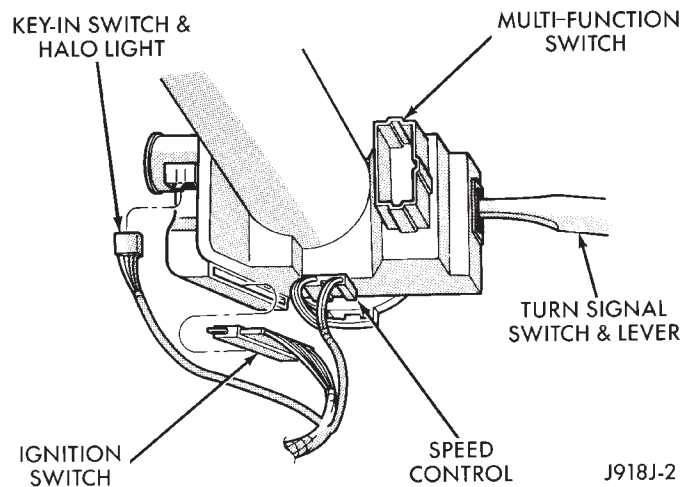
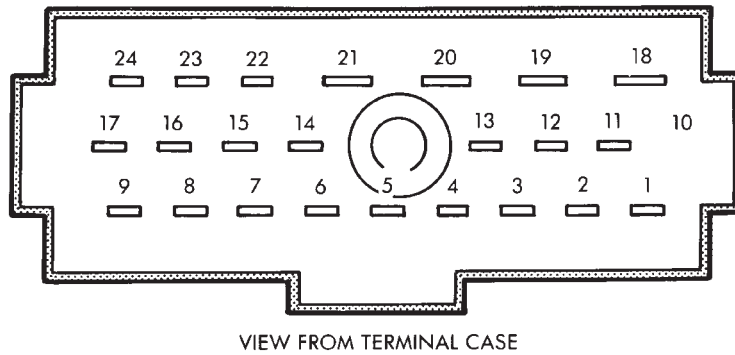


Fig. 6 Steering Column Connectors



VIEW FROM TERMINAL CASE

SWITCH POSITIONS		CONTINUITY BETWEEN
TURN SIGNAL	HAZARD WARNING	
NEUTRAL	OFF	12 AND 14 AND 15
LEFT	OFF	15 AND 16 AND 17
LEFT	OFF	12 AND 14
LEFT	OFF	22 AND 23 WITH OPTIONAL CORNER LAMPS
RIGHT	OFF	11 AND 12 AND 17
RIGHT	OFF	14 AND 15
RIGHT	OFF	23 AND 24 WITH OPTIONAL CORNER LAMPS
NEUTRAL	ON	11 AND 12 AND 13 AND 15 AND 16

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Fig. 7 Turn Signal and Hazard Switch Continuity Chart

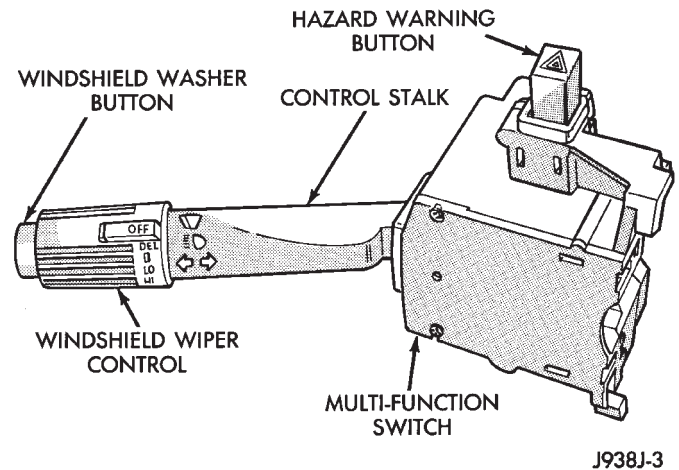
MULTI-FUNCTION SWITCH SERVICE PROCEDURES

REMOVAL

- (1) Disconnect battery negative cable.
- (2) Remove tilt lever (tilt column only).
- (3) Remove both upper and lower steering column covers. Requires removal of 3 screws (Torx T-20).
- (4) Remove 4 screws holding steering column trim panel (Fig. 3).
- (5) Remove 6 screws holding knee blocker.
- (6) Remove steering column retaining nuts.
- (7) Lower steering column.
- (8) Remove multi-function switch tamper proof mounting screws (tamper proof Torx bit Snap-On TTXR20B2 or equivalent required).
- (9) Gently pull switch away from column. Loosen connector screw. The screw will remain in the connector.
- (10) Remove wiring connector from multi-function switch (Fig. 8).

INSTALLATION

- (1) Install wiring connector to switch and tighten connector retaining screw to 17 in. lbs.
- (2) Mount multi-function switch to column and torque retaining screws to 17 in. lbs.
- (3) Install steering column. Tighten nuts to (105 in. lbs.).



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Fig. 8 Multi-Function Switch

- (4) Install knee bolster and trim panel.
- (5) Install steering column covers. Torque retaining screws to 17 in. lbs.
- (6) Install tilt lever (tilt column only).
- (7) Install negative cable to the battery.
- (8) Check all functions of switch for proper operation.