

CHIME/BUZZER WARNING SYSTEMS

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GENERAL INFORMATION

This group covers the buzzer warning system, which is standard equipment on XJ (Cherokee)/YJ (Wrangler) models. The system provides an audible warning to the driver when it monitors the following conditions:

- key is in ignition switch with the driver's door open
- head or park lamps are on with driver's door open (XJ only)
- driver's seat belt is not buckled with ignition switch in ON position.

Following are general descriptions of the major components in the buzzer warning system. Refer to Group 8W - Wiring Diagrams for complete circuit descriptions and diagrams.

BUZZER MODULE

The buzzer module is located in the fuseblock module under the left end of the instrument panel. It receives battery voltage at all times from (fuse 15 - XJ, fuse 3 - YJ) the fuseblock module. It also receives a second battery feed (fuse 17 - XJ, fuse 9 - YJ) when the ignition switch is in the ON or START position.

Other inputs to the module include the driver's door jamb switch, the driver's seat belt switch, the ignition key-in switch, and the headlamp switch (XJ only). The only output of the module is a timed 4 to 8 second feed to the seat belt reminder lamp in the message center of the instrument cluster. The timer function begins after the ignition switch is turned to the ON position.

The buzzer module can not be repaired. If faulty, it must be replaced.

DRIVER'S DOOR JAMB SWITCH

The driver's door jamb switch is mounted to the driver's door hinge pillar. The switch closes a path to ground for the buzzer module through the key-in switch or headlamp switch (XJ only) when the driver's door is opened, and opens when the driver's door is closed. This switch can not be repaired. If faulty, it must be replaced.

IGNITION KEY-IN SWITCH

XJ MODELS

The key-in switch is integral to the ignition switch, which is mounted on the right side of the steering column. It closes a path to ground for the buzzer module when the ignition key is inserted in the ignition lock cylinder and the driver's door jamb switch is closed (door open). The switch opens when the key is removed from the ignition lock cylinder. This switch can not be repaired. If faulty, the entire ignition switch must be replaced. Refer to Group 8D - Ignition Systems for service procedures.

YJ MODELS

The key-in switch is mounted within the steering column in the lock cylinder housing. It closes a path to ground for the buzzer module when the ignition key is inserted in the ignition lock cylinder and the driver's door jamb switch is closed (door open). The switch opens when the key is removed from the ignition lock cylinder. This switch is available for service replacement. Refer to Group 19 - Steering for service procedures.

HEADLAMP SWITCH (XJ ONLY)

The headlamp switch is located in the instrument panel. It closes a path to ground for the buzzer module when the park or headlamps are on and the driver's door jamb switch is closed (door open). The switch opens the ground path when the park and headlamps are turned off. The headlamp switch can not be repaired. If faulty, it must be replaced. Refer to Group 8E - Instrument Panel and Gauges for service procedures.

DRIVER'S SEAT BELT SWITCH

The driver's seat belt switch is integral to the driver's seat belt buckle-half assembly. The switch is normally closed, providing a ground path to the buzzer module. When the tip-half of the seat belt is inserted into the seat belt buckle, the switch opens the buzzer module ground path. The seat belt switch can not be repaired. If faulty, the entire driver's seat belt buckle-half must be replaced. Refer to Group 23 - Body Components for service procedures.

DIAGNOSIS

BUZZER MODULE

(1) Check fuses (15 and 17 - XJ, 3 and 9 - YJ) in the fuseblock module. If fuses are OK, go to next step. If not OK, replace fuses as required.

(2) Check for battery voltage at fuse (15 - XJ, 3 - YJ) in fuseblock module. If OK, go to next step. If not OK, repair feed circuit from power distribution center as required.

(3) Turn ignition switch to ON position. Check for battery voltage at fuse (17 - XJ, 9 - YJ) in the fuseblock module. If OK, go to next step. If not OK, repair feed from ignition switch as required.

(4) Turn ignition switch to OFF position. Replace buzzer module with a known good unit and test operation. If not OK, remove buzzer module and go to next step.

(5) Check for battery voltage at cavity for buzzer terminal 7 in buzzer module connector (Fig. 1). If OK, go to next step. If not OK, repair circuit to fuse (15 - XJ, 3 - YJ).

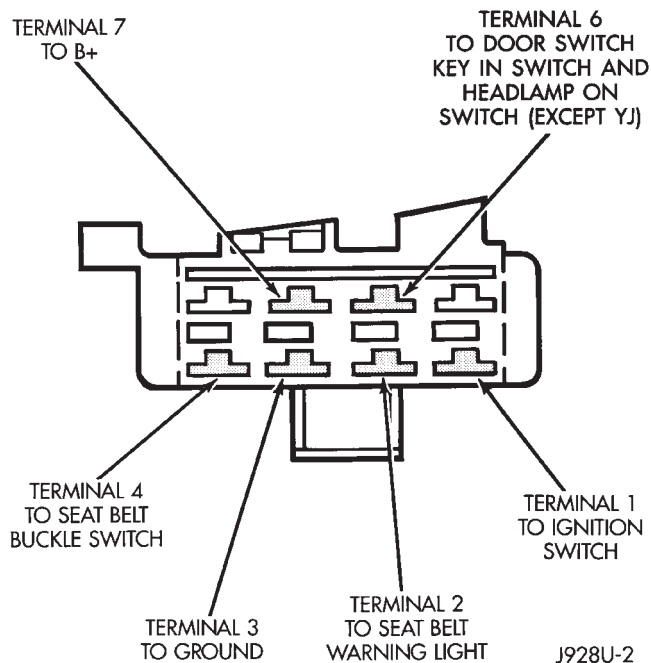


Fig. 1 Buzzer Module Connector

(6) Turn ignition switch to ON position. Check for battery voltage at cavity for buzzer terminal 1 in buzzer module connector. If OK, go to next step. If not OK, repair circuit to fuse (17 - XJ, 9 - YJ) in fuseblock module.

(7) Turn ignition switch to OFF position. Check for continuity between cavity for buzzer terminal 3 and a good ground. There should be continuity. If OK, go to diagnosis for switch that is related to buzzer malfunction. If not OK, repair circuit to ground as required.

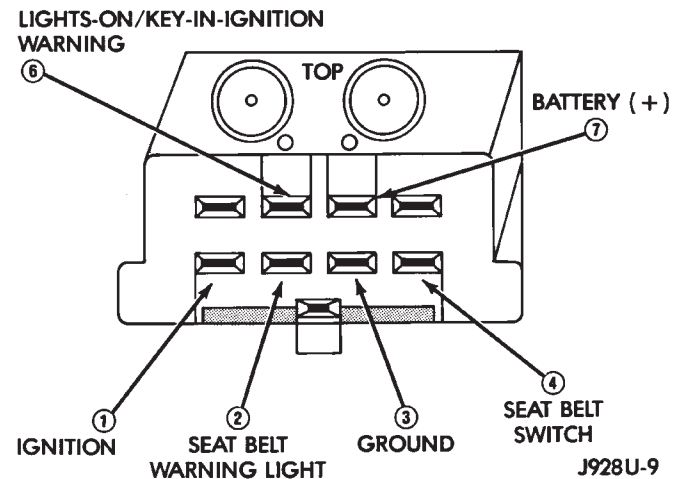


Fig. 2 Buzzer Module Terminals

DRIVER'S DOOR JAMB SWITCH

(1) Open driver's door and note whether interior lamps light. They should light. If OK, see diagnosis for Ignition Key-In Switch (XJ or YJ) or Headlamp Switch (XJ only). If not OK, go to next step.

(2) Check for continuity between door jamb switch body and a good ground. There should be continuity. If OK, go to next step. If not OK, tighten or clean switch attachment to hinge pillar as required to restore ground path.

(3) Remove switch from hinge pillar and check wire connections for clean and tight engagement. If OK, replace faulty switch. If not OK, clean and tighten connections as required.

IGNITION KEY-IN SWITCH

XJ MODELS

(1) Remove steering column shrouds (refer to Group 8D - Ignition Systems for procedure). Unplug ignition key-in switch connector from ignition switch (Fig. 3). Open driver's door. Check for continuity between cavity 4 (black/light blue wire) and a good ground. There should be continuity. If OK, go to next step. If not OK, repair circuit to driver's door jamb switch as required.

(2) Insert ignition key in ignition lock cylinder. Check for continuity between key-in switch cavities 3 and 4 (Fig. 4). There should be continuity until key is removed. If OK, go to next step. If not OK, replace ignition switch.

(3) Check for continuity between key-in switch harness connector cavity 3 (light blue wire) and cavity for terminal 6 of buzzer module in buzzer module connector. There should be continuity. If not OK, repair circuit from switch to buzzer module as required.

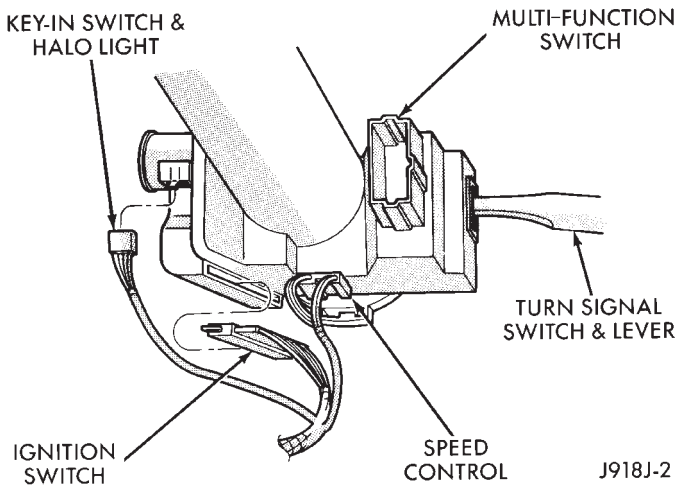
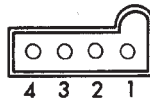


Fig. 3 Key-In Switch Connector



WIRE CAVITY	APPLICATION	CONTINUITY BETWEEN
1	Halo lamp	1 & 2 Almost zero ohms (bulb filament)
2	Halo lamp	
3	Key-in warning switch	3 & 4 with key in ignition
4	Key-in warning switch	

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Fig. 4 Key-In Switch Continuity

YJ MODELS

(1) Unplug steering column connector from instrument panel wiring. Open driver's door. Check for continuity between cavity E (black/light blue wire) in instrument panel half of steering column connector and a good ground. There should be continuity. If OK, go to next step. If not OK, repair circuit to driver's door jamb switch as required.

(2) Insert ignition key in ignition lock cylinder. Check for continuity between cavities E (pink wire) and F (black wire) in steering column half of connector. There should be continuity until key is removed. If OK, go to next step. If not OK, repair steering column wiring or replace key-in switch as required.

(3) Check for continuity between cavity F (light blue wire) in instrument panel half of steering column connector and cavity for terminal 6 of buzzer module in buzzer module connector. There should be continuity. If not OK, repair circuit from switch to buzzer module as required.

HEADLAMP SWITCH (XJ ONLY)

(1) Remove headlamp switch from instrument panel (refer to Group 8E - Instrument Panel and Gauges for procedure). Unplug headlamp switch connector. Open driver's door. Check for continuity between headlamp switch connector cavity with light blue wire and a good ground. There should be continuity until driver's door is closed. If OK, go to next step. If not OK, repair circuit from headlamp switch to driver's door jamb switch as required.

(2) Check for continuity between headlamp switch connector cavity with pink/light blue wire and cavity for terminal 6 of buzzer module in buzzer module connector. There should be continuity. If OK, go to next step. If not OK, repair circuit from headlamp switch to buzzer module as required.

(3) Check continuity between headlamp switch terminal for connector cavity with pink/light blue wire and terminal for cavity with light blue wire. There should be no continuity with switch in off position, and there should be continuity with switch in park lamps or headlamps on position. If not OK, replace headlamp switch.

DRIVER'S SEAT BELT SWITCH

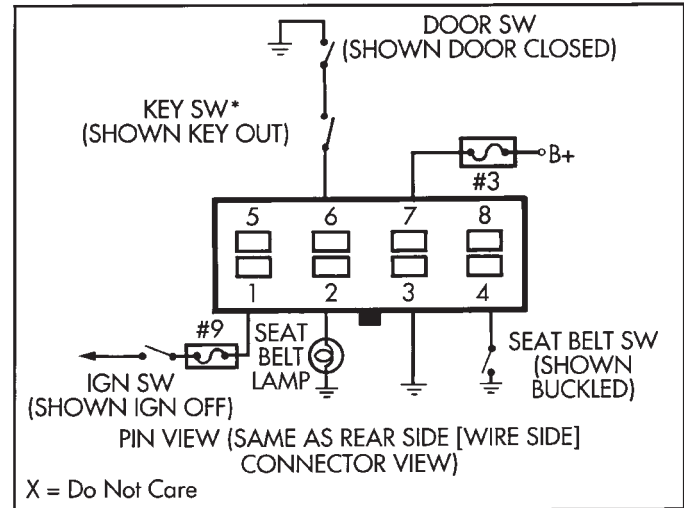
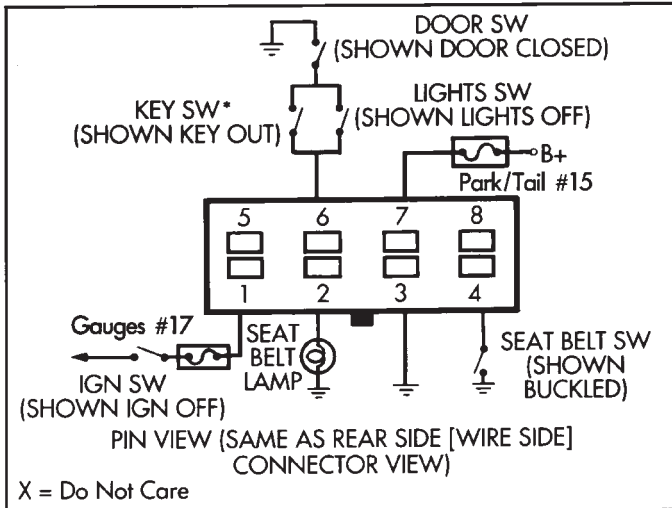
(1) Unplug seat belt switch connector on floor under driver's seat riser near seat belt anchor. Check for continuity between two cavities of seat belt half of connector. There should be continuity with seat belt unbuckled, and no continuity with seat belt buckled. If OK, go to next step. If not OK, replace seat belt buckle-half assembly.

(2) Check for continuity between cavity with black wire in harness half of seat belt switch connector and a good ground. There should be continuity. If OK, go to next step. If not OK, repair circuit to ground as required.

(3) Check for continuity between cavity with light green wire in harness half of seat belt switch connector and cavity for terminal 4 of buzzer module connector. There should be continuity. If not OK, repair circuit from seat belt switch connector to buzzer module as required.

BUZZER MODULE SCHEMATIC - XJ

BUZZER MODULE SCHEMATIC - YJ



FUNCTION	DESCRIPTION	IGN.	SEAT BELT	DRIVER'S DOOR	KEY	HEAD LAMPS
Seat Belt Reminder	4 to 8 Second Tone and Lamp Output	On Off	Not Bckld	X	X	X
	4 to 8 Second Lamp Output Only	On Off	Bckld	X	X	X
Key and Head Lamp Reminder*	Continuous, Steady Tone	X	X	Open	In	X
					X	On

*On some vehicles, the key switch opens when the ignition is switched on.

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FUNCTION	DESCRIPTION	IGN.	SEAT BELT	DRIVER'S DOOR	KEY
Seat Belt Reminder	4 to 8 Second Tone and Lamp Output	On Off	Not Bckld	X	X
	4 to 8 Second Lamp Output Only	On Off	Bckld	X	X
Key Reminder*	Continuous, Steady Tone	X	X	Open	In
					X

*On some vehicles, the key switch opens when the ignition is switched on.

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SERVICE PROCEDURES

Service procedures for components of the buzzer system can be found in the appropriate group as follows:

- driver's door jamb switch - refer to Group 8L - Lamps
- ignition key-in switch (XJ) - refer to Group 8D - Ignition Systems

- ignition key-in switch (YJ) - refer to Group 19 - Steering
- headlamp switch - refer to Group 8E - Instrument Panel and Gauges
- driver's seat belt switch - refer to Group 23 - Body Components.