

2009 ACCESSORIES AND EQUIPMENT**Chime/Buzzer - Service Information - Journey****DESCRIPTION****DESCRIPTION**

The chime warning system uses an electromechanical transducer and an electromechanical relay that are soldered onto the circuit board of the instrument cluster also known as the Cab Compartment Node (CCN) to provide audible indications of various vehicle conditions that may require the attention of the vehicle operator or occupants. The CCN also includes the necessary hardware and software to serve as the vehicle's electronic body control module.

The electromechanical transducer generates chime tones, while the electromechanical relay generates click tones to emulate the sounds associated with conventional turn signal and hazard warning flasher operation. The microprocessor-based CCN utilizes electronic **chime request** messages received from other modules in the vehicle over the Controller Area Network (CAN) data bus along with hard-wired inputs to monitor many sensors and switches throughout the vehicle. In response to those inputs, the circuitry and programming of the CCN allow it to control the audible outputs that are produced through its on-board transducer and relay.

The CCN is capable of producing the following audible outputs:

- **Slow Rate Repetitive Click** - Repeated **click** tones that are issued at a slow rate of about 90 clicks per minute.
- **Fast Rate Repetitive Click** - Repeated **click** tones that are issued at a fast rate of more than about 180 clicks per minute.
- **Single Chime Tone** - A single **chime** tone.
- **Continuous Repetitive Chime Tone** - Repeated **chime** tones that are issued continuously.

Hard-wired circuitry connects the CCN and the various chime warning system switch and sensor inputs to their modules and to each other through the electrical system of the vehicle. These hard-wired circuits are integral to several wire harnesses that are routed throughout the vehicle and they are retained by many different methods. These circuits may be connected to each other, to the vehicle electrical system, and to the CCN through a combination of soldered splices, splice block connectors, and many different types of wire harness terminal connectors and insulators. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, procedures for proper wire and connector repair, further details on wire harness routing and retention, and pin-out and location views for the various wire harness connectors, splices, and grounds.

The chime warning system circuits and components cannot be adjusted or repaired. If the CCN circuitry, the on-board transducer, or the relay is damaged or ineffective, the instrument cluster assembly must be replaced.

OPERATION**OPERATION**

DOOR AJAR CHIME

The Cab Compartment Node (CCN) will sound an audible chime when the key is in the ignition and the driver's door is open. This is to prevent partial closing of vehicle doors.

An audible chime will sound when the vehicle begins to move and the transmission range indicator display will indicate DOOR.

ENHANCED SEAT BELT REMINDER

If all the following are met after sixty seconds with the engine ON, then the enhanced seat belt reminder feature will be activated.

- Driver seat belt is unbuckled for ten seconds or more.
- Vehicle speed is greater than five mph (8 km/h).
- The gear positioning is not in REVERSE (except in MTX vehicles where the reverse position cannot be detected).

The seat belt indicator will periodically blink, accompanied with a continuous chime for approximately ninety-six seconds or until the driver seat belt is buckled. When the enhanced seat belt feature is not initiated or if the feature is disabled, the seat belt indicator will be turned ON continuously until the driver seat belt is buckled.

In the same ignition cycle, if the seat belt is again unbuckled for more than ten seconds with the vehicle speed greater than five mph (8 km/h), the enhanced seat belt reminder feature will again be initiated.

The enhanced seat belt reminder feature is customer programmable and can be enabled/disabled with the use of a Scan Tool, or by the customer completing a sequence of steps.

CUSTOMER PROGRAMMING OF ENHANCED SEAT BELT REMINDER FEATURE

1. With the ignition not in RUN or START, buckle the driver seat belt.
2. Turn the ignition switch to the RUN or START position and wait for the seat belt reminder check to be completed.
3. Unbuckle and then re-buckle the driver seat belt causing the indicator to go ON and OFF three or more times ending with the seat belt buckled.
4. Return the ignition switch back to a non-RUN or no-START position (the feature will toggle from the current status) and a confirmation chime will sound indicating to the customer the proper sequence to enable/disable the feature was performed.

EXTERIOR LAMPS LEFT ON

An audible chime tone that indicates the exterior lamps were left on.

FASTEN SEAT BELTS

At power up, the instrument cluster will conduct a seat belt lamp bulb check. If the driver side seat belt buckle

is unbuckled during the bulb check, an accompanying chime will sound within the duration of the bulb check.

KEY LEFT IN IGNITION

An audible chime tone that indicates the key was left in ignition.

SINGLE WARNING CHIME

After a bulb check at power-up, if any of the following indicators are still activated, the CCN will sound a single chime tone. ABS, Air Bag, Check Engine, Charging System, Engine Temperature, Low Fuel (after 10 seconds for accurate fuel information), and BRAKE (if speed is greater than 2 mph).

DIAGNOSIS AND TESTING

CHIME WARNING SYSTEM

WARNING: To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental Restraint System (SRS) before attempting any steering wheel, steering column, airbag, seat belt tensioner, impact sensor, or instrument panel component diagnosis or service. Disconnect and isolate the battery negative (ground) cable, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the SRS. Failure to take the proper precautions could result in accidental airbag deployment.

The hard-wired circuits between components related to the chime warning system may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, procedures for proper wire and connector repair, details of wire harness routing and retention, connector pin-out information, and location views for the various wire harness connectors, splices, and grounds.

However, conventional diagnostic methods will not prove conclusive in the diagnosis of the chime warning system or the electronic controls or communication between modules and other devices that provide some features of the chime warning system. The most reliable, efficient, and accurate means to diagnose the chime warning system or the electronic controls and communication related to chime warning system operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.