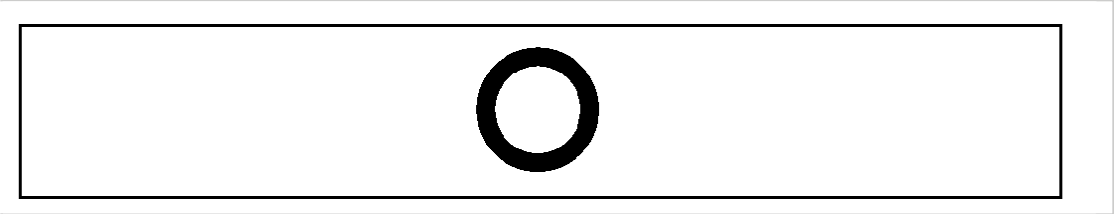
2006 Dodge or Ram Truck RAM 2500 Truck 4WD L6-5.9L DSL Turbo VIN C
Vehicle > Accessories and Optional Equipment > Antitheft and Alarm Systems > Security Lamp/Indicator > Description and Operation

COMPONENTS



A security indicator is standard equipment on all instrument clusters. However, on vehicles not equipped with the optional Vehicle Theft Security System (VTSS), this indicator is electronically disabled. This indicator is located in the lower right quadrant of the instrument cluster, between the speedometer and the coolant temperature gauge.

The security indicator consists of a small round cutout in the opaque layer of the instrument cluster overlay. The dark outer layer of the overlay prevents the indicator from being clearly visible when it is not illuminated. A red Light Emitting Diode (LED) behind the cutout in the opaque layer of the overlay causes the indicator to appear in red through the translucent outer layer of the overlay when it is illuminated from behind by the LED, which is soldered onto the instrument cluster electronic circuit board. The security indicator is serviced as a unit with the instrument cluster.

The security indicator gives an indication to the vehicle operator when the Vehicle Theft Security System (VTSS) is arming or is armed. On models equipped with the Sentry Key Immobilizer System (SKIS), the security indicator also gives an indication to the vehicle operator of the status of the SKIS. This indicator is controlled by a transistor on the instrument cluster circuit board based upon cluster programming, hard wired inputs to the cluster from the various security system components, and electronic messages received by the cluster from the Sentry Key REmote Entry Module (SKREEM) over the Controller Area Network (CAN) data bus.

The security indicator Light Emitting Diode (LED) is completely controlled by the instrument cluster logic circuit, and that logic will allow this indicator to operate whenever the instrument cluster receives a battery current input on the fused B(+) circuit. Therefore, the LED can be illuminated regardless of the ignition switch position. The LED only illuminates when it is provided a path to ground by the instrument cluster transistor. Depending upon the programmed condition the indicator can be illuminated solid, flashed at a slow rate (**0.5 Hertz**, 12.5 percent duty cycle), or flashed at a fast rate (**1 Hertz**, 50 percent duty cycle). The instrument cluster will turn on the security indicator for the following reasons:

- **Bulb Test** - Each time the ignition switch is turned to the On position the security indicator illuminates for about **two seconds** as a bulb test. The entire bulb test is a function of the SKREEM.
- **VTSS Indication** - During the **sixteen second** VTSS arming function, the cluster will flash the security indicator on and off repeatedly at a steady, fast rate to indicate that the VTSS is in the process of arming. Following successful VTSS arming, the cluster flashes the security indicator on and off continuously at a slower rate to indicate that the VTSS is armed. The security indicator continues flashing at the slower rate until the VTSS is disarmed or triggered. I the VTSS has alarmed and rearmed, the cluster will flash the security indicator at a steady, slow rate for about **thirty seconds** after the VTSS is disarmed.

- **SKIS Lamp-On Message** - Each time the cluster receives a SKIS lamp-on message from the SKREEM, the security indicator will be illuminated. The indicator can be flashed on and off, or illuminated solid, as dictated by the SKREEM message. The indicator remains illuminated solid or continues to flash until the cluster receives a SKIS lamp-off message from the SKREEM, or until the ignition switch is turned to the Off position, whichever occurs first.
- **Communication Error** - If the cluster receives no SKIS lamp-on or lamp-off messages from the SKREEM for ten consecutive message cycles, the security indicator is illuminated by the instrument cluster. The indicator remains controlled and illuminated by the cluster until a valid SKIS lamp-on or lamp-off message is received from the SKREEM.
- **Actuator Test** - Each time the instrument cluster is put through the actuator test, the security indicator will be turned on, then off again during the bulb check portion of the test to confirm the functionality of the LED and the cluster control circuitry.

The instrument cluster circuitry controls the security indicator whenever the ignition switch is in the Off position and the VTSS is arming, armed, or alarming. Whenever the ignition switch is in the On or Start positions, the SKREEM performs a self-test to decide whether the SKIS is in good operating condition and whether a valid key is present in the ignition lock cylinder. The SKREEM then sends the proper lamp-on or lamp-off messages to the instrument cluster. For further diagnosis of the security indicator or the instrument cluster circuitry that controls the indicator, refer to testing. If the instrument cluster flashes the security indicator upon ignition On, or turns on the security indicator solid after the bulb test, it indicates that a SKIS malfunction has occurred or that the SKIS is inoperative.

For proper diagnosis of the VTSS, the SKIS, the SKREEM, the CAN data bus, or the electronic message inputs to the instrument cluster that control the security indicator, a diagnostic scan tool is required.