

The inside temperature sensor operates within a temperature range between -6.5°C (20.3°F) to 57.5°C (135.5°F). If the sensor is shorted to ground, an open, or shorted to voltage, the HVAC system will use a default value.

The outside temperature sensor operates within a temperature range between -30°C (-22°F) to 51°C (123.8°F). The radio displays the OAT value that it receives from the HVAC control module through a class 2 message. If the HVAC control module has determined that the outside temperature sensor has failed, the radio shall display, 75, in place of the outside air temperature. If the sensor is shorted to ground, an open, or shorted voltage, the HVAC control module will use a default value.

The radio displays the outside air temperature value that it receives from the HVAC control module through a class 2 message. The scan tool has the ability to update the displayed ambient air temperature. The outside air temperature value is displayed or updated under the following conditions:

Condition	Display
At start up with the engine OFF more than 3 hours	Displays actual outside temperature
At start up with the engine OFF less than 3 hours	Displays last stored temperature
Vehicle moving above 16 km/h (10 mph) for 5 minutes	Updates temperature display at a slow filtered rate.
Vehicle moving at 51 km/h (32 mph) or greater for 2.5 minutes	Updates temperature display as rapidly as possible.
When the sensor reading is less than the displayed value.	Updates temperature display as rapidly as possible.
When the Front Defrost, Rear Defog and fan up buttons are pressed simultaneously.	Updates temperature display instantly.

### Sunload Sensor

The sunload sensor is a 2-wire photo diode. The vehicle uses left and right sunload sensors. The two sensors are integrated into the sunload sensor assembly along with the ambient light sensor. Low reference and signal circuits enable the sensor to operate. As the sunload increases, the sensor signal decreases. The sensor operates within an intensity range between completely dark and bright. The sensor signal varies between 0-5 volts. The HVAC control module converts the signal to a range between 0-255 counts.

The sunload sensor provides the HVAC control module a measurement of the amount of light shining on the vehicle. Bright, or high intensity, light causes the vehicles inside temperature to increase. The HVAC system compensates for the increased temperature by diverting additional cool air into the vehicle. If sensor is open or shorted, no sunload condition occurs.