Preliminary Information

PIT5232D Diagnostic Tip - Outside Temperature Will Not Update / Inaccurate / Poor Hvac Performance

Models

Brand:	Model:	Model Years:	VIN: from	to	Engine:	Transmissions:
Buick	Envision	2016 - 2018	All	All	All	All
Cadillac	Escalade	2015 - 2018	All	All	All	All
Chevrolet	Silverado 1500	2014	All	All	All	All
Chevrolet	Silverado	2015 - 2018	All	All	All	All
Chevrolet	Suburban	2015 - 2018	All	All	All	All
Chevrolet	Tahoe	2015 - 2018	All	All	All	All
GMC	Sierra 1500	2014	All	All	All	All
GMC	Sierra	2015 - 2018	All	All	All	All

Supersession Statement

This PI was superseded to update the Model Year, Condition, Recommendation and Warranty sections. Please discard PIT5232C.

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition / Concern

Some owners may comment of any of the following issues:
- **The outside temperature display is inaccurate and will not update.**
- **The outside temperature display takes too long to update.**
- **The outside temperature display shows 32° F (0° C). This concern may have started after disconnecting the battery or reprogramming a module.**
- **Poor HVAC performance**

Note: The HVAC control module uses the ambient temperature as an input to help control the a/c compressor operation, HVAC temperature door settings, etc.

Recommendations / Instructions

Do NOT replace or reprogram any of the following modules as it will not correct the concern:
- **IPC**
- **Radio Display/ICS**
- **Radio/Tuner**
- **HMI**
- **HVAC control module**
- **ECM**

Please make sure the customer is aware of the following information regarding how the outside temperature updates:

The ambient temperature uses an algorithm that delays updating the display until certain conditions are met. This ensures that the sensor does not detect engine or road heat when the vehicle is idling/slow speed driving.

The outside temperature will begin to update if driven above 20 mph for at least 5 minutes. If the vehicle speed drops below 20 mph, the timer will reset back to 5 minutes and/or stop updating. Once the display starts to update, it may take several more minutes of driving above 20 mph for the display to fully update. Additionally, if the vehicle sits for at least 8 hours, the display will be updated when the ignition is turned on.

Short trip driving habits along with large outside temperature swings between the ambient temperature in the morning as compared to later in the day/afternoon, like in the spring and fall seasons, can aggravate this concern. The morning temperatures can be very cold (example 30 degs F) and later in the day/afternoon the outside temperature can be much higher (example 70 degs F). In this example, if the vehicle was started in the morning, with an outside temperature of 30 degs F and then later in the day the vehicle was restarted when the outside temperature is much higher example 70 degs F, it may need the above drive cycle for the outside temperature display to update and improve HVAC performance.

Also, remember anything attached or mounted to the front of the vehicle, such as, snow plow, winter grille cover, etc. can restrict air flow to the outside temperature sensor and affect the accuracy of the sensor.

Warranty Information

This PI does not provide any repair direction, but if a concern is found and a repair is made please use the appropriate labor operation. Below are a couple examples of labor operations used for ambient temperature sensor issues.

Labor Operation	Description	Labor Time
3432010	Ambient Air Temperature Sensor Replacement	Use Published Labor Operation Time
5430902	Wire-to-Wire Repair	Use Published Labor Operation Time
4429959	HVAC - Customer Concern Not Duplicated (CCND)	Use Published Labor Operation Time

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

Additional SI Keywords

Ambient, Not, Accurate, Inaccurate