Bulletin No.: PIT4815C

Date: Nov-2012

Service Bulletin

PRELIMINARY INFORMATION

Subject: Additional Vehicle Speed Sensor Diagnostic Information

Models: 2007-2013 Cadillac Escalade Models

2007-2013 Chevrolet Avalanche, Silverado, Suburban, Tahoe

2008-2013 Chevrolet Express

2008-2013 GMC Savana

2007-2013 GMC Sierra Models, Yukon Models

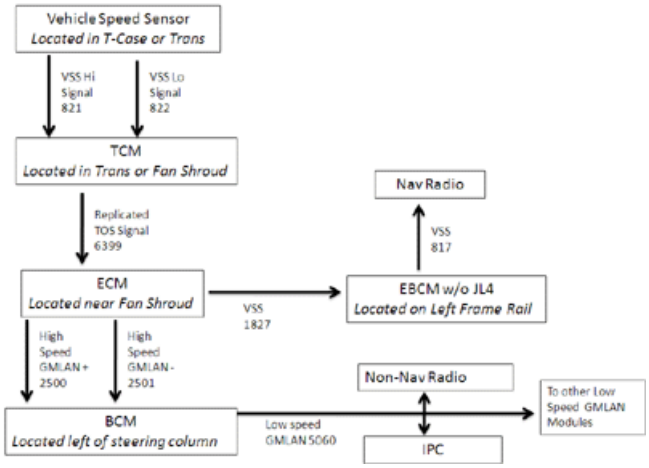
This PI was superseded to update model years. Please discard PIT4815B.

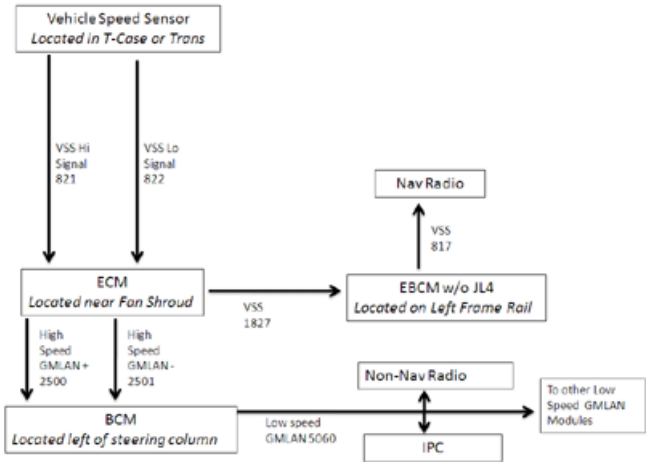
The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition/Concern

While diagnosing a Vehicle Speed Sensor (VSS) concern you may encounter one or more of the following issues:

1. Difficult to follow the speed signal path between the components. Shown below are the two typical VSS paths depending on the vehicle configuration.
2. ECM showing correct MPH in the data list, however it is setting a DTC for the VSS (example P0502). The ECM can get MPH data from the TCM over GMLAN which may mislead your diagnostics. The VSS hard wire inputs (821, 822 and/or 6399 circuits) will need to be checked using the Fluke 87 meter-DO NOT rely on the Tech 2 MPH data as an indication the ECM is getting the hard wire VSS inputs.
3. IPC speedo working correctly when there are ECM or ABS DTCs for the VSS (example P0502, C0055, ext.). The ECM can get MPH data from the TCM over GMLAN and pass it along to the BCM, and the BCM to the IPC. DO NOT rely on the IPC speedo working as an indication the VSS hard wire circuits are good. The VSS hard wire inputs (1827, 821,822 and/or 6399 circuits) will need to be checked using the Fluke 87 meter.
4. ABS MIL on with EBCM DTC C0055 and no other customer complaints. Since the MPH data can be sent over GMLAN, using the TECH 2 to help narrow down the area of concern can be misleading. The VSS hard wire inputs (1827, 821, 822 and/or 6399 circuits) will need to be checked using the Fluke 87 meter.





Recommendation/Instructions

Typical Fluke 87 meter reads for each of the VSS hard wire circuits:

- 821 and 822 from the VSS. This is an analog A/C signal with a HZ reading of approximately 25 HZ per one MPH (example at 10 MPH typical read may b 250 Hz). Connect the Fluke meter leads between circuits 821 and 822 and set the meter to A/C voltage and then press the "HZ" button.
- 6399 from the TCM. This is a digital signal with a typical HZ reading of approximately 25 HZ per one MPH (example at 10 MPH typical read may be 250 Hz). The TCM is sending out approximately 12 volts on this circuit and also toggles it to ground to create the signal. Connect the Fluke meter red lead tc circuit 6399 and the black lead to ground. Then set the meter to D/C voltage and press the "HZ" button.
- 1827 from the ECM to EBCM. This is a digital signal with a typical HZ reading of approximately 25 HZ per one MPH (example at 10 MPH typical read ma be 250 Hz). The ECM is sending out approximately 12 volts and it also toggles it to ground to create the signal. Connect the Fluke meter's red lead to circuit 1827 and the black lead to ground. Then set the meter to D/C voltage and press the "HZ" button.
- 817 is a digital signal with a typical HZ reading of approximately 1.1 HZ per one MPH (example at 10 MPH typical read may be 11 Hz). The EBCM toggl the voltage on this circuit to ground creating the signal. Connect the Fluke meter's red lead to circuit 817 and the black lead to ground. Then set the meter to D/C voltage and press the "HZ" button.

Warranty Information

For vehicles repaired under warranty, please use the appropriate warranty labor operation based on the actual cause and repair. The latest version of bulletin 10-00-89-005: "Warranty Administration - Revised Wiring Repair Labor Operations and Required Additional Information" can be used as a reference.

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.
