



# Service Bulletin

File in Section: -

Bulletin No.: PIP4966B

Date: June, 2013

## PRELIMINARY INFORMATION

**Subject:** Service Malfunction Indicator Light Or Service Anti-Lock Brake System Message Displayed In The Drivers Information Center

**Models:** 2007-2011 Chevrolet Silverado, Suburban, Tahoe, Avalanche  
2007-2011 GMC Sierra, Yukon  
2008-2011 Cadillac Escalade Hybrid  
2008-2011 Chevrolet Tahoe Hybrid  
2008-2011 GMC Yukon Hybrid  
2009-2011 Chevrolet Silverado Hybrid  
2009-2011 GMC Sierra Hybrid  
Equipped with Magna transfer case NP0 NQF NQG or NQH

**This PI was superseded to add inspection of the grooves. Please discard PIP4966A.**

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

### Condition/Concern

Customer may comment on a malfunction indicator light or service anti-lock brake system message displayed in the drivers information center. Another comment may be that the speedometer is erratic or inoperative at times. During diagnostics the vehicle may have stored a C0055 Rear Wheel Speed Sensor (both wheels) Circuit in the electronic brake control module or a P2771 Four Wheel Drive (4WD) Low Switch Circuit in the engine control module. Concern may be intermittent and hard to duplicate, related diagnostics may not identify the root cause.

### Recommendation/Instructions

If the related diagnostics do not identify a root cause it is possible that the tone wheel for the vehicle speed sensor in the transfer case is moving on the transfer case output shaft or the output shaft is moving.

For NQH non hybrid applications see document id 1824278 item 29 for snap ring location and item 28 for output bearing location.

For NQH HYBRID applications see document id 1824278 item 29 for snap ring location and item 28 for output bearing location.

For NQF applications see document id 2372510 item 36 for snap ring location and item 35 for output bearing location.

For NQG applications see document id 2372500 item 34 for snap ring location and item 33 for output bearing location.

The above listed snap rings are visible by removing the propeller shaft and looking up the output shaft past the rear seal. Ensure that the snap ring is present and seated in the groove.

Excess movement of the tone wheel or output shaft, changes the air gap to the vehicle speed sensor and can cause an erratic signal or loss of signal. Normally the tone wheel has about 1/8 inch (.125 in 3.175 mm) movement on the output shaft but should stay centered in the opening for the speed sensor either when using a small screwdriver to move the sensor or pushing and pulling on the output shaft.

In Some cases some customers may comment that the transfer case in the above listed vehicles grinds, growls or disengages. Vehicle will not pull under load. Other comments may be that the transfer case will disengage upon torque reversal i.e. shifting from reverse to drive. Customers may experience unwanted ABS activation during a stop, loss of cruise control operation. This condition can also contribute to transmission ratio related diagnostic trouble codes as the transmission control module is using input/turbine speed and output speed signals to calculate gear ratio.

For NQH/NQG light duty transfer case equipped vehicles built prior to 3/16/2009 replace the output shaft bearing and snap rings.

For NQF/NQG HD/SHD transfer case equipped vehicles built prior to 7/15/2010 replace the output shaft bearing and snap rings.

If any of the snap rings are broken or out of their respective grooves thoroughly inspect that groove for any concerns. Compare with the other groove, the groove depth in the shaft. Also inspect the edge of the groove to ensure that there is no damage to the edge of the groove that would allow a repeat concern. If the groove is damaged then replacement of the mainshaft would also be required.

### Warranty Information

For vehicles repaired under warranty use:

Labor Operation	Description	Labor Time
8420470	Input Shaft Bearing Replacement	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.