

# 1999 - 2006 Corvette: Service Bulletin: Intermittent Neutral from a Stop or 2-3 Shift

**Date:** April 19, 2006

**Subject:** Intermittent Neutral from a Stop or 2-3 Shift

**Bulletin:** #PIP3002D

**Models:** 1999-2006 GM Cars, Light Duty Trucks and Utilities equipped with 4L60E/4L65E transmissions

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

## **Condition/Concern:**

The 4L60E/4L65E may experience an intermittent neutral condition while accelerating from a stop (category one) or while driving (category two).

**Category One:** Intermittent neutral condition occurs on accel from a stop with the shifter in D4. The neutral may be associated with an engine flare and then a harsh engagement. The Transmission Fluid Pressure Switch should read correct signal "A" High "B" Low "C" Low.

**Category Two:** Intermittent neutral occurs during 2-3 shift and the transmission will not have 3rd or 4th gear. The "B" Shift Solenoid is not bleeding off during the 2-3 shift allowing the transmission to stay in 2nd gear and return to first during the 3-4 shift.

## **Recommendation/Instructions:**

### **Category One:**

Attempt to duplicate the condition and if possible capture a snap shot of the condition with the Tech II or VDR while monitoring the transmission line pressure with a gauge.

The following should be monitored to ensure the PCM is not commanding a higher than first gear start.

The Transmission Fluid Pressure Switch. The correct reading for D4 is as follows:

"A" High "B" Low "C" Low.

VSS should be monitored at stop to ensure that it is reading 0 MPH/RPM

Commanded Gear should be first Solenoid Status "A" on "B" on

Engine cooling fan operation should be noted and discussed (TSB 01-06-04-052, 02 Trailblazer, Envoy Bravada with 4.2 engine)

Transmission line pressure low during the condition may cause an intermittent loss of pressure and neutral condition

Some customers may describe a launch in a higher than first gear as a neutral due to the greater amount of engine noise associated with the launch and lack of acceleration.

In the event the dealer is unable to duplicate the condition the dealer may consider installing an entire transmission shift cable, inspecting the forward clutch seal/piston and inspect for a broken or missing oil pump spring (two springs on units built 15-DEC-03 or earlier, one spring on units built 16-DEC-03 or later, reference bulletin 04-07-30-006) Installing Transmission Assemblies, Lo Roller and the Forward Sprag have not been proven to be an effective repair.

### **Category Two:**

Attempt to duplicate the condition.

The "B" Shift Solenoid should be air checked for being restricted and not exhausting. However air testing the solenoid may remove the restriction. The "B" Shift Solenoid should be replaced.

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.

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