

## #PIP4629A: Diesel Engine Turbo DTC P2563 Or P003A - keywords 6.6 6.6L control LBZ LLY LMM low MIL position power reduced SES SCV sensor solenoid turbocharger valve vane VPS - (Aug 7, 2009)

**Subject:** Diesel Engine Turbo DTC P2563 or P003A



**Models:** 2004-2009 Chevrolet Express, Kodiak, Silverado, Silverado Classic  
 2004-2009 GMC Savana, Sierra, Sierra Classic, Topkick  
 Equipped with the 6.6L Diesel Engine RPO codes LLY, LBZ, and LMM

**This PI was superseded to add percentage readings for earlier model LLY and LBZ. Please discard PIP4629.**

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

### Condition/Concern:

A dealer may encounter a customer concern of SES light, Reduced Power, Low power, and a DTC P2563.

A P003A may or may not set along with P2563.

### Recommendation/Instructions:

Complete the current SI diagnostics for any trouble codes or symptoms found. If a P2563 is found, it may be caused by an unstable Solenoid Control Valve (SCV). Unstable SCV operation may be induced by engine debris or sludge. To diagnose an unstable SCV complete the procedure below.

1. Test the VPS (Vane Position Sensor) operation. Actuate the VPS plunger and monitor the sensor voltage (or TC vane position on LLY or LBZ) on the Tech 2. The VPS body should be grounded during this test. Touch the brass body of the VPS to the turbo center housing to complete the ground. Voltage should go from 4.9v to 0.25v (100 to 0% on LLY or LBZ) as the plunger is depressed. If the sensor operates correctly, go to next step, or replace the VPS as necessary.

**Note:** It is normal for voltage to jump back to 4.9v (or 100% on LLY and LBZ) if the plunger is completely depressed.

2. Command turbo vane position from 10% to 90%, back and forth, several times. During each cycle, monitor the actual turbo vane position sensor reading. The vane position should reach the desired position, and hold steady. If vane position oscillates back and forth more than 5% before stabilizing at the desired position, replace the solenoid control valve.

**Note:** Debris or sludge build up in the SCV can cause the valve's stability to deteriorate. This can be aggravated by not following oil change intervals and/or extended idling in combination with use of biofuels.

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.

vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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