



# Service Bulletin

## PRELIMINARY INFORMATION

**Subject:** Inline 4 5 And 6 Cylinder Engines With P0017

**Models:** 2004-2007 Buick Rainier  
2004-2012 Chevrolet Colorado  
2005-2009 Chevrolet Trail Blazer  
2004-2012 GMC Canyon  
2004-2009 GMC Envoy  
2006-2010 Hummer H3  
2004 Oldsmobile Bravada  
With 2.8L 2.9L, 3.5L, 3.7L, 4.2L Inline Truck Engines (RPO's LK5 LLV L52 LLR LL8)

*This PI was superseded to update Models. Please discard PIP4945A.*

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

### Condition/Concern

A customer may comment that they have an SES with or without a drivability concern, or after performing an engine repair the technician finds the SES is or Upon investigation a DTC p0017 may be set as current or as history.

### Recommendation/Instructions

Due to the varied amount of concerns that can cause a p0017 code and number of PIs and TSBs for a DTC P0017, this document was created to cumulate all that information for those times when normal published diagnostics does not lead to a repair. Some of these include; the technician may have performed repairs for a secondary or non-related concern such as a cylinder head or front cover replacement and then has a DTC p0017, or still has a DTC P0017 after performing repairs according to published diagnostics. Remember, a DTC p0017 DTC sets when CMP sensor pulse is greater than 16.31 degrees out of sequence with the corresponding crank sensor pulse; as stated in service information.

**Note:** This document is not intended as a short cut to diagnostics listed in SI.

A P0017 code may set for any of the following reasons:

1. The engine is timed incorrectly. See current version of TSB 06-06-01-017 (RPO's L52, LK5), See current version of 07-06-01-019 (RPO's LLR, LLV) See current version of 07-06-01-018 (RPO LL8) Use these documents to check timing. The technician should follow the procedures to set the engine to #1 TDC then place the straight edge on the cam flats and:
  - 1.1. If one cam flat has excessive clearance as noted in the TSB that cam is one tooth off.
  - 1.2. If both are cams flats have excessive clearance as noted in the TSB in the same direction the timing is off at the crank gear.
2. The crank timing gear has a loose fit to the crank. See current version of PIP4581, The concern could be:
  - 2.1. The crank key or keyway has excessive clearance
  - 2.2. The crank bolt is loose.
3. The Crank end play is excessive. See current version of PIP3694
4. The cam actuator solenoid is restricted or screens are missing. See current version of PIP3694
5. The cam actuator is sticking. See current version of PIP4913
6. Low oil pressure or oil contamination. See current version of PIP4913

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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GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a 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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