



# Service Bulletin

## PRELIMINARY INFORMATION

**Subject:** Engine Rattle Noise After R And R Of The Crankshaft Balancer - Inspect Bolt Torque

**Models:** 2004-2007 Buick Rainier  
2002-2009 Chevrolet Trail Blazer  
2004-2012 Chevrolet Colorado  
2002-2009 GMC Envoy  
2004-2012 GMC Canyon  
2006-2010 Hummer H3  
2002-2004 Oldsmobile Bravada  
2005-2009 Saab 97x  
with Inline 4/5/6 Cylinder Engine  
(RPO Code L52, LK5, LL8, LLR, or LLV)

*This PI was superseded to update Models and Keywords. Please discard PIP4581A.*

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

### Condition/Concern

Some customers may complain of an engine rattle that started shortly after engine repairs that required crankshaft balancer removal and replacement.

In some cases, the technician may find that the noise can be eliminated by retarding the CMP actuator with a Tech 2.

This noise may be the result of the crankshaft gear rattling on the crankshaft pin if the crankshaft balancer bolt was not torqued to specification during recent repairs.

If this rattle occurs for a long period of time, it could eventually lead to crankshaft timing sprocket and/or pin damage, which may cause a SES light due to DTCs P0016 or P0017 (DTC depends on model year) and no engine performance concerns.

### Recommendation/Instructions

If a rattle noise is experienced without a SES light and SI diagnosis does not isolate the cause of it, re-torque the crankshaft balancer bolt to specifications by following SI procedures and re-evaluate the noise.

If a rattle noise, SES light, and DTC P0016 or P0017 is experienced and SI diagnosis does not isolate the cause of it, re-torque the crankshaft balancer bolt to specifications by following SI procedures and re-evaluate the noise.

If tightening the bolt repairs the rattle noise but the DTC P0016 or P0017 continue to set, follow SI diagnosis and any other bulletins or PIs that may apply, and repair as necessary.

If this does not repair the DTC, follow SI procedures to remove the crankshaft timing sprocket and inspect the crankshaft alignment pin and the related groove of the sprocket for obvious wear.

If obvious wear is present, replace the crankshaft timing sprocket and/or pin and re-evaluate the concern

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.

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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