Subject: Stalling Shudder And/or Hard shifting Into 1st Gear Or Reverse Vibration On launch (With Excessive Crankshaft End Play)

Models: 2014-2016 Chevrolet Corvette, Silverado,
2016 Chevrolet Camaro
2014-2016 GMC Sierra
2015-2016 Chevrolet Tahoe, Suburban, GMC Yukon / XL
2015-2016 Cadillac Escalade
2016 Cadillac CTS-V
With engines 4.3L, 5.3L, 6.2L L83, L86, LT1, LT4, LV3
2014-2016 Chevrolet Corvette
Built with an 6.2L, LT1, LT4 engine and auto or manual transmission with crank shaft end play concern

This PI was superseded to update Model Years. Please discard PIP5248A.

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

Condition/Concern

Corvette Only
Customers may have a Corvette that exhibits one of the following conditions:

1. Customers may have a Corvette that exhibits one of the following conditions:
2. Auto transmission it could be a vibration on takeoff or clunk noise.

Truck, SUV, Camaro, CTS –V
Clunk when shifting into reverse or drive (automatic)
The crankshaft and or Thrust Bearing needs to be replaced, please use following information before considering a crankshaft replacement

Recommendation/Instructions

This concern could be caused by excessive crankshaft end play.

Check to determine if the crank shaft end play is within specification 0.0015–0.0086 in (0.040–0.220 mm). See eSI

If end play is found to be out of specification, remove engine and inspect for possible Crankshaft thrust bearing and/or crankshaft for wear.

Note: If bearings and crankshaft look like components in attached picture, damage has not occurred.
Inspect thrust bearing for wear on one side and crankshaft on that "mating" surface.

If wear is evident (3 vertical channels worn off) replace connecting rod bearings, main bearings, thrust bearing and crankshaft.

**Corvette Only**

For this repair the oil tank with lines and oil cooler are both required to be replaced if equipped.

**Note:** Be sure to follow all SI documents for DSA replacement

For all other Crankshaft concerns

- As always, Please be sure to complete the SI diagnostics and the Cost Comparison Worksheet for Assembly Repair vs Replacement to determine if the engine requires a repair or replacement
- Be sure to Follow the latest version of 09-06-04-026G to verify the ECM calibration is not an Aftermarket cal.

**Note:** It is required on dry sump engines, the oil tank and lines should be replaced when replacing and/or repairing the engine.

Also Note: If equipped, the oil cooler is also required to be replaced.

If the customer prefers to KEEP the original numbers matching engine please call TAC for repair direction.

**Warranty Information**

For vehicles repaired under warranty use:

<table>
<thead>
<tr>
<th>Labor Operation</th>
<th>Description</th>
<th>Labor Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>4066750</td>
<td>Crankshaft Replacement</td>
<td>Use Published Labor Operation Time</td>
</tr>
</tbody>
</table>

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.

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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