



# Service Bulletin

## PRELIMINARY INFORMATION

**Subject:** Crank No Start - Inspect for Sheared Cam Pin

**Models:** 2009-2014 Chevrolet Corvette, Camaro, Express, SS, Silverado, Suburban, Tahoe  
2009-2014 GMC Savana, Sierra, Yukon  
with a V8 engine (RPO Codes L20, L96, LMF, LMG, LS3, LY2, LY5, LY6)

*This PI was superseded to correct model year listings. Please discard PIP5168B.*

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

### Condition/Concern

On rare occasions, a crank no start may be encountered on a cast iron V8 engine. Typically when this occurs, it is generally when the vehicle still has low mileage, possibly during the Pre-Delivery inspection.

During diagnosis, the technician will find proper fuel pressure, spark from each spark plug wire, and proper injector pulse. However, the following concerns will be noted during their diagnosis: low static compression, excessive cylinder leakage past an intake or exhaust valve, the engine may start but run poorly if the CMP sensor is disconnected, and/or the valve train may not move while cranking the engine.

This concern may be the result of a sheared camshaft sprocket locating pin due to the camshaft seizing to the camshaft bearings at one time.

### Recommendation/Instructions

If this concern is encountered, the following suggestions should be performed as necessary:

1. Crank the engine while checking for movement in the valve train. This can be done by shining light down the oil fill tube on most models. If the valve train appears to be moving normally while the crankshaft is turning, continue to step 2. But, if you determine valve train is not moving while the crankshaft is turning, continue to step 4.
2. Disconnect the CMP sensor to see if the engine will start. If the engine starts, continue to step 4.
3. Perform the following SI diagnostic procedures as necessary:
  - Engine Cranks But Does Not Run diagnosis in SI
  - Engine Compression Test in SI (document results)
  - Cylinder Leakage Test in SI (document results)If the SI procedures above isolate an engine mechanical concern (low compression; excessive cylinder leakage through the exhaust or intake, any type of valve train damage, etc.), continue to step 4.
4. If you have completed steps 1, 2, or 3, remove the front cover to inspect for a sheared cam sprocket locator pin. Before removing the front cover, follow the latest version of 09-06-04-026 to verify the ECM calibrations just in case engine replacement is necessary. If this is a new dealer stock unit, it is not necessary to verify the ECM calibrations.
5. If you have determined the cam sprocket locator pin has sheared, replace the engine assembly.

### Warranty Information

The correction for this concern may be one of several repairs described above. For vehicles repaired under warranty, please use the appropriate warranty labor operation based on the actual cause and repair.

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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