



# Service Bulletin

Bulletin No.: 20-NA-029

Date: February, 2020

## TECHNICAL

**Subject:** Ticking, Tap, or Rattle Noise from Engine

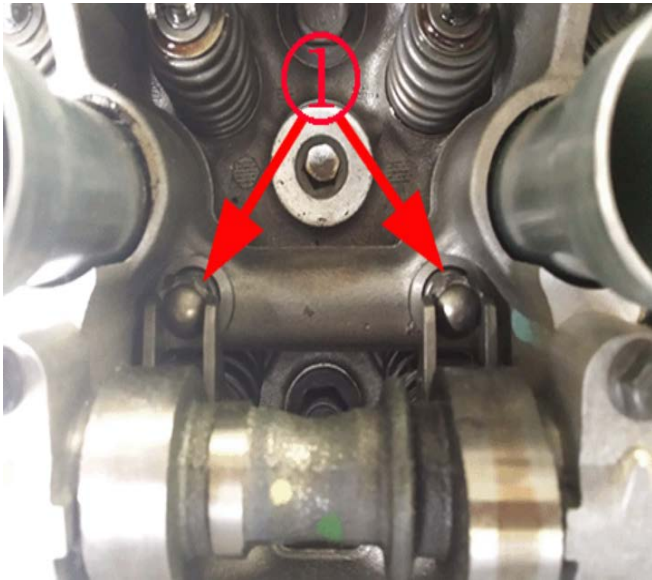
**This bulletin replaces PIP5331H. Please discard PIP5331H.**

Brand:	Model:	Model Year:		VIN:		Engine: (3.6L)	Transmission:
		from	to	from	to		
Buick	Enclave	2013	2020			LFY, LLT	
	LaCrosse	2013	2017			LFX	
Cadillac	ATS	2013	2019			LFX, LF4	
	CTS	2013	2019			LFX, LF3	
	SRX	2013	2016			LFX	
	XTS	2013	2019			LFX, LF3	
Chevrolet	Camaro	2013	2015			LFX	
	Colorado	2015	2016			LFX	
	Captiva Sport (VIN L)	2013	2015			LFX	
	Captiva	2016	2016			LFX	
	Equinox	2013	2017			LFX	
	Impala Models	2013	2020			LFX	
GMC	Traverse	2013	2020			LFY, LLT	
	Acadia	2013	2017			LLT	
	Terrain	2013	2017			LFX	
	Canyon	2015	2016			LFX	

<b>Involved Region or Country</b>	North America, Europe, Russia, Middle East, Iraq, Israel, Palestine, Argentina, Brazil, Bolivia, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela, Japan, Cadillac Korea (South Korea), GM Korea Company, China, Taiwan, Thailand, Singapore, Philippines, Egypt, Other Africa, South Africa
<b>Condition</b>	Some customers may comment on one or more of the following noises from the vehicle: <ul style="list-style-type: none"> <li>• Rattle</li> <li>• Tick</li> <li>• Knock</li> </ul>
<b>Important Information</b>	Prior to any diagnosis, please check the oil level ensuring it is full, and ensure there is sufficient oil pressure available in the engine. If there are any drivability concerns, they should be addressed prior to the following diagnostic progression. Please take a sound file or video with sound of the noise prior to dis-assembly.

## Service Procedure

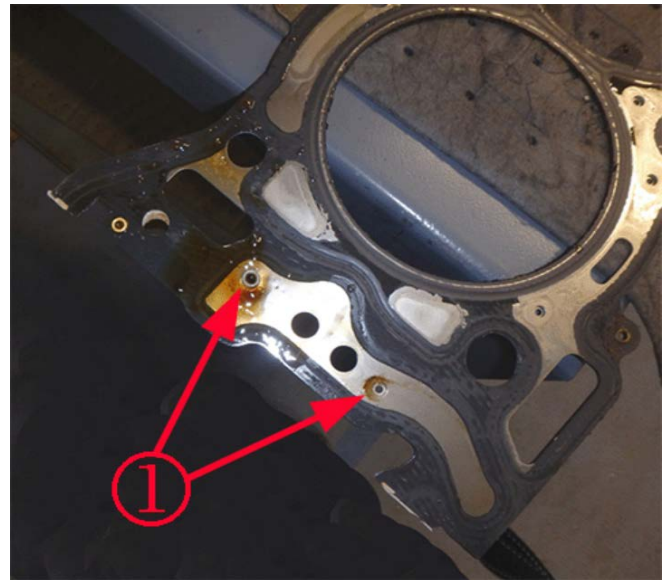
1. Perform injector diagnosis to ensure there are no leaking injectors causing a noise due to excessive fuel in 1 cylinder.
  - 1.1. Perform GDS2 or AFIT test on injectors to isolate a leaking injector.
  - 1.2. Replace any out of specification injectors.
  - 1.3. Re-evaluate the noise.
2. Remove the intake manifold and visually inspect for excessive carbon on the intake valve stems and top of the valve causing noise.
  - 2.1. If carbon is present, then follow the latest version of Service Bulletin 16-NA-383 to clean the valves or replace heads as needed.
  - 2.2. Re-evaluate the noise concern.



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3. Remove the cam cover of the affected bank (both if needed) for inspection of the SHLA (1) (Stationary Hydraulic Lash Adjusters) (Lifters).
4. Push down on the rocker end at the SHLA to test for a soft or spongy feel.

**Note:** Right side exhaust are most common.



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- 4.1. If soft or spongy SHLAS are found, carefully remove the affected head and inspect the oil passage (1) below the head gasket for debris.
  - 4.2. If debris is found, inspect the camshaft caps for wear or discoloration due to lack of oil.
  - 4.3. If wear or discoloration is found, then replace the cylinder head assembly with camshafts.
  - 4.4. If there is no wear or discoloration, clean the oil passages and replace the head gasket.
  - 4.5. Change the oil and filter.
  - 4.6. Re-evaluate the noise concern.
  5. Raise the vehicle while running or with an assistant inside.
  6. With chassis ears or a stethoscope, listen to the right and left side of the engine.
  7. Once the noise is isolated or if unable to isolate, remove the piston and rod assemblies from the affected bank(s) to inspect for either;
    - Loose rod bushing in the rod.
    - Loose wrist pin in the bushing.
- There should be no metal through the oil for this condition.
- If this metal found, a piston and rod assembly will repair this noise.

For all of the above engine repairs, engine replacement is not necessary. Please perform the repairs for these conditions.

**Note:** If metal is found in the oil or throughout the system, refer to the latest version of Service Bulletin 19-NA-256.

Once all of the above inspections and/or diagnostics are completed, If nothing is found to be the cause for the noise, engine replacement MAY be necessary.

## Parts Information

Use the vehicle identification number (VIN) and refer to the GM Electronic Parts Catalog (EPC) to determine the proper part(s) to order.

## Warranty Information

For Vehicles Repaired Under Powertrain Warranty, Use the Appropriate Labor Operation For Process Performed.

Please review IVH for warranty information.

Version	1
Modified	Released February 7, 2020

