



# Service Bulletin

Bulletin No.: 19-NA-256

Date: March, 2023

## INFORMATION

**Subject:** Diagnostic Tips for Knocking, Rattle, Squeak and/or Squeal Type Noise from Engine – Engine Replacement Recommendations for HFV6 Gen 1 and Gen 2

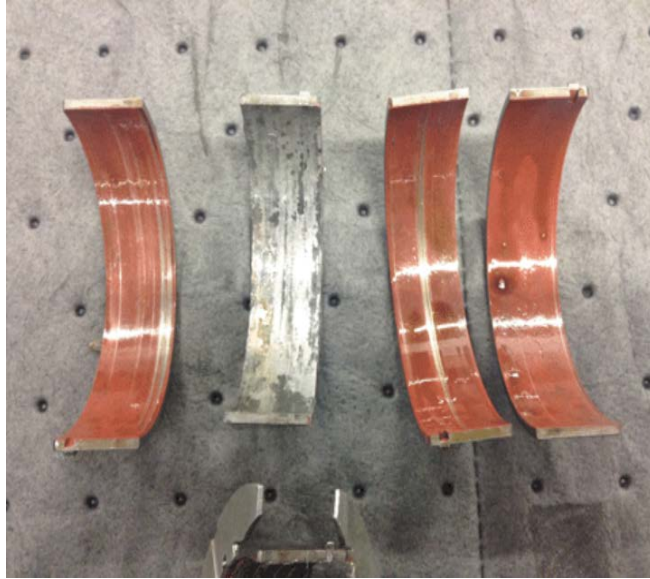
This bulletin replaces PIP5216G. Please discard PIP5216G.

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Buick	Enclave	2008	2023	—	—	3.6L (LLT, LFY)	—
	LaCrosse	2010	2019			3.0L (LF1, LFW) 3.6L (LLT, LFX, LGX)	
	Regal	2018	2020			3.6L (LGX)	
Cadillac	ATS	2013	2019	—	—	3.6L (LFX, LGX)	—
	ATS-V	2016				3.6L (LF4)	
	CT4	2022	2023			3.6L (LF4)	
	CT5	2020	2023			3.0L (LGY)	
	CT6	2016	2020			3.0L (LGW) 3.6L (LGX)	
	CTS	2007	2019			3.0L (LF1, LFW) 3.6L (LY7, LLT, LFX, LGX)	
	CTS V-Sport	2014				3.6L (LF3)	
	SRX	2007	2016			2.8L (LAU) 3.0L (LF1, LFW) 3.6L (LFX)	
	STS	2007	2011			3.6L (LY7, LLT)	
	XT5	2017	2023			3.6L (LGX)	
	XT6	2020	2023			3.6L (LGX)	
	XTS	2013	2019			3.6L (LF3, LFX)	

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Chevrolet	Blazer	2019	2023	—	—	3.6L (LGX)	—
	Camaro	2010	2023			3.6L (LLT, LFX, LGX)	
	Caprice PPV	2012	2013			3.6L (LFX)	
	Captiva Sport	2012	2015			3.6L (LFX)	
	Colorado	2015	2022			3.6L (LFX, LGZ)	
	Equinox	2008	2017			3.0L (LFW, LF1) 3.6L (LFX)	
	Impala VIN W	2012	2016			3.6L (LFX)	
	Impala VIN 1 (including Bi-fuel)	2014	2016			3.6L (LFR, LFX)	
	Impala	2017	2020			3.6L (LFX)	
	Malibu	2008	2012			3.6L (LY7)	
	Traverse	2009	2023			3.6L (LLT, LFY)	
GMC	Acadia	2007	2023	—	—	3.6L (LY7, LLT, LGX)	—
	Canyon	2015	2022			3.6L (LFX, LGZ)	
	Terrain	2010	2017			3.0L (LF1, LFW) 3.6L (LFX)	
Pontiac	G6	2008	2010	—	—	3.6L (LY7)	—
	G8	2008	2009			3.0L (LF1, LFW) 3.6L (LY7, LLT)	
	Torrent	2008				3.0L (LFW) 3.6L (LLT)	
Saturn	AURA	2007	2009	—	—	3.6L (LY7)	—
	VUE	2008	2010			3.6L (LY7)	
	OUTLOOK	2007				3.6L (LY7, LLT)	

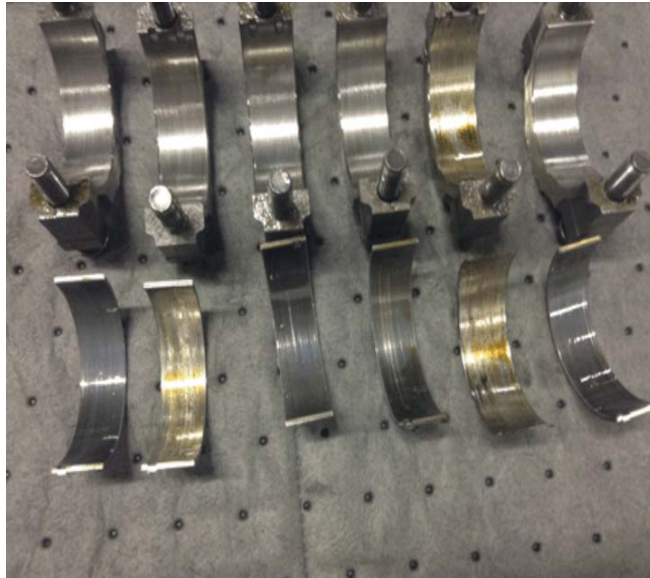
<b>Involved Region or Country</b>	North America, Europe, Middle East
<b>Condition</b>	Some customers may comment on one or more of the following conditions: <ul style="list-style-type: none"> <li>• Knocking noise</li> <li>• Seized engine</li> <li>• Lower end squeak or squeal</li> </ul>
<b>Cause</b>	This condition may be caused by a crankshaft main or rod bearing failure.

1. Verify there is metal in the engine oil by removing the oil pan.
2. Remove the main or rod bearing caps:
  - If the main and/or rod bearing are not the cause of the debris, refer to SI for further diagnostics.



Correction

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- If the main and/or rod bearings are found to be the cause of the debris, before deciding whether to replace the engine or repair it, refer to the Service Procedure below before making that determination.

**Important:** Service agents must comply with all International, Federal, State, Provincial, and/or Local laws applicable to the activities it performs under this bulletin, including but not limited to handling, deploying, preparing, classifying, packaging, marking, labeling, and shipping dangerous goods. In the event of a conflict between the procedures set forth in this bulletin and the laws that apply to your dealership, you must follow those applicable laws.

### Service Procedure

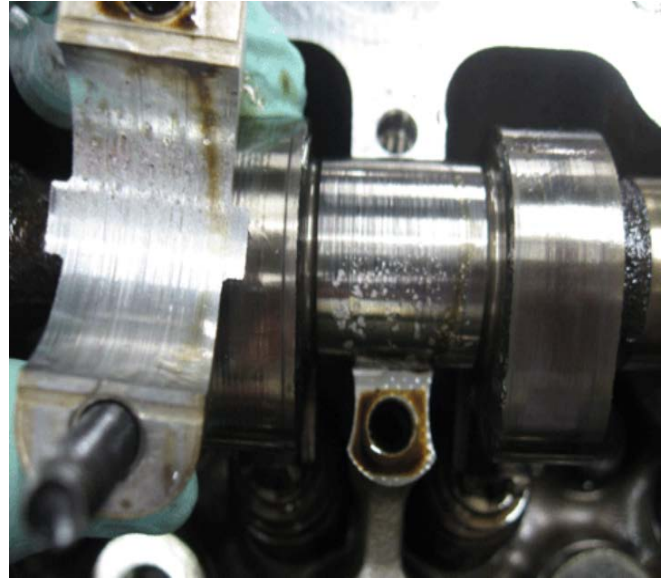


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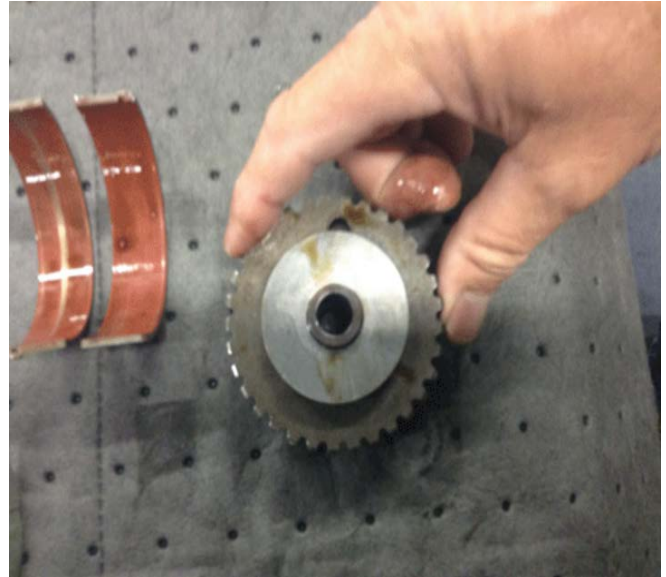
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1. Inspect the oil control solenoids for metal debris. This shows the oil filter is in by-pass and unfiltered oil with bearing debris was pumped into the oil lubrication galleries, throughout the engine.



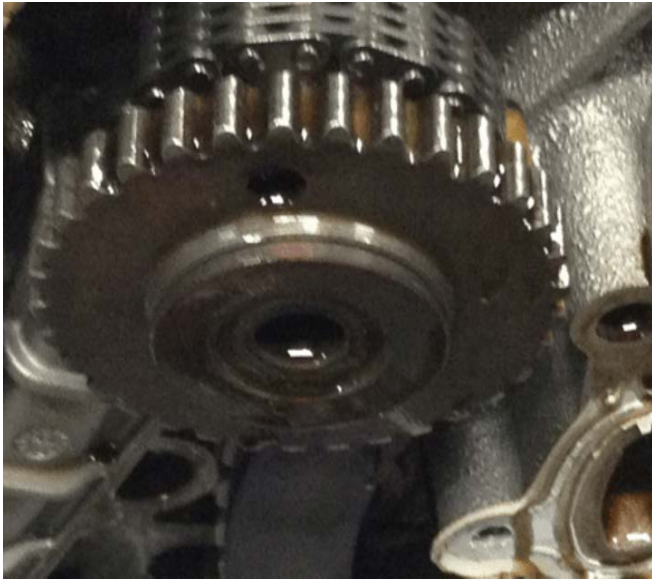
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2. Inspect for damage to the cam caps journals and camshaft journals on the heads (obvious signs of metal through the cap).



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3. Inspect the timing chain idler sprockets for stiffness when turning (Should turn smooth and free).

Any of the above 3 instances would be cause to replace the engine instead of repair.

While engine replacement at this point will be necessary, additional inspections should also be made for conditions:

- Sludging caused by lack of maintenance. Refer to Service Bulletin# 16-NA-222.
- Global oil starvation caused by running the engine very low on oil.
- Intentional abuse to the engine.

**Important:** If this is the case, then a call to the Technical Assistance Center (TAC) is NOT required prior to engine replacement.

If these conditions exist, warranty could be declined or feedback made on Warranty Parts Center (WPC) inspection. Maintenance documentation should be obtained in these instances for warranty validation.

Clearly document your findings on your repair order, fill out the cost worksheet, and call Product Quality Center (PQC) only if required for your dealer.

A repair and then replacement will usually be cause for additional inspection and scrutiny that could result in more questioning about the repair methods.

HFV6 engines are scheduled to be returned to the WPC for inspection to verify the concern, as well as the information provided in the repair order to support the engine replacement.

<b>Version</b>	5
<b>Modified</b>	<p>Released November 13, 2019</p> <p>Revised January 14, 2021 – Added the 2021 Model Year to applicable Models.</p> <p>Revised May 24, 2021 – Added the Blazer and CT5 models.</p> <p>Revised August 20, 2021 – Added 2020-2022 XT6 (RPO LGX), 2022 CT4 (RPO LF4), 2022 Model Year to Enclave, CT5, XT5, Blazer, Camaro, Colorado, Traverse, Acadia and Canyon and added Middle East to Involved Region or Country section.</p> <p>Revised March 15, 2023 – Added the 2023 Model Year to applicable vehicles and Europe to the Involved Region or Country section.</p>

Additional SI Keywords: PIP5216, PIP5216A, PIP5216B, PIP5216C, PIP5216D, PIP5216E, PIP5216F, PIP5216G, PIP5216H, PIP5216I, PIP5216J, PIP5216K, PIP5216L, PIP5216M