



Service Bulletin

Bulletin No.: 22-NA-204

Date: October, 2022

TECHNICAL

Subject: Harsh Rattle, Grind and/or Tick Engine Noise

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Cadillac	XT4	2021	2022	1GYAZAR46NF149601	1GYFZER44NF148671	LSY	
	XT5			1GYKNBR4XNZ163120	1GYKNDR49NZ162598		
	XT6			1GYKPAR43NZ163271			
	CT4			1G6DV5RW5N0125321	1G6DN5RK4N0129230		
	CT5						
Chevrolet	Blazer			3GNKB8R4XNS100606	3GNKBHR46NS185167		
GMC	Acadia			1GKKNML46NZ163131	1GYKNDR49NZ162598		

Involved Region or Country	North America, Middle East
Condition	Some customers may comment that the engine makes a rattle, grind, and/or ticking noise.
Cause	This condition may be caused by the balance shaft and chain mesh.
Correction	<p>Note: This will affect vehicles with under 1,000 miles (1600 km) on the odometer.</p> <p>Refer to the information section for examples of engine noise.</p> <p>– If the noise has been validated to be coming from the balance shaft and chain, replace the engine.</p>

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.

Information

The following information describes possible LSY NVH Concerns:

Cam Tick/Knock:

In this file, you will hear injector noise as well as cam tick/knock. The injector noise is higher in frequency. The cam tick/knock is deeper in tone and does not occur as frequently. It is still impulsive, but again, not as high of a frequency. Noise will be most apparent on the top of the engine. This noise will be most apparent at idle conditions. It will also typically get worse as the engine approaches operating temperatures. This is normal engine operating noise, no engine replacement is required.

Injector Tick:

Injector tick in this file is the higher pitched ratcheting sound. Noise will be more obvious on the intake side of the engine. Injector tick will be present at all operating conditions, but it will be most apparent at idle due to lower engine masking noise. This is normal engine operating noise, no engine replacement is required.

Balance Shaft Chain Noise:

The balancer chain trashiness noise presents itself as broadband random noise. It will be most apparent by the wheel well, or if the car is lifted, towards the rear of the engine on the low side. The noise will still be heard at other points around the vehicle, but worst at the low end of the engine and near the wheel well. Noise is worst at idle condition. As the engine revs to higher speeds (even in park condition), the noise should get better. Although this will not cause engine damage, this is not normal engine operating noise, engine replacement is required.

The information found in this bulletin can be shared with customers that may inquire about this condition. In the event they have additional questions or concerns, please advise them to contact Customer Assistance.

Service Procedure

Refer to *Engine Replacement* in the Service Manual.

Parts Information

Causal Part	Description	Part Number	Qty
X	ENGINE, GASOLINE	12731745	1

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
4067490	Engine Replacement	Use the Published Labor Operations Time

Version	1
Modified	Released October 24, 2022

Additional Keywords: LSY, Rattle, Chain, Balance Shaft, Balancer Shaft, Noisy Engine, Loud Engine, Harsh Engine, Engine NVH, NVH

