



# Service Bulletin

Bulletin No.: 23-NA-170

Date: March, 2024

## INFORMATION

**Subject: Diagnostic Tips for Seized or Hard to Rotate Engine, Internal Engine or Transmission Noise Thump, Knock, Rattle and/or Starter Fuse Blown**

**This bulletin replaces PIP5900. Please discard PIP5900.**

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:	
		from	to	from	to			
Cadillac	CT5	2022	2024			6.2L (LT4)		
	Escalade	2021				6.2L (L87)		
		2023				6.2L (LT4)		
Chevrolet	Camaro	2019	2024			6.2L (LT1, (LT4)		
	Corvette	2019				6.2L (LT1, LT4, LT2)		
	Express	2021				6.6L (L8T)		
	Silverado 1500 (New Model)	2019	2019			4.3L (LV3) 5.3L (L82) 5.3L (L84) 6.2L (L87)		M1L M1M M5U N8X MF6 MGL MHO MHS MHT MHU MHW MHX MI2 MI4 MLM MQB MQD MQE MTH MYC MYD
	Silverado 1500	2020	2021					
	Silverado 1500 LTD (RPO J21, VIN Digit 5 = W/Y)	2022	2022					
	Silverado 1500 New (RPO J22, VIN Digit 5 = A/D)							
	Silverado 1500	2023	2024	6.6L (L8T)				
	Silverado 2500HD/3500HD	2020		5.3L (L84) 6.2L (L87)				
	Suburban	2021		5.3L (L84) 6.2L (L87)				
Tahoe	2021	5.3L (L84) 6.2L (L87)						
GMC	Savana	2021	2024	6.6L (L8T)				
	Sierra 1500 (New Model)	2019	2019	4.3L (LV3) 5.3L (L82) 5.3L (L84) 6.2L (L87)				
	Sierra 1500	2020	2021					
	Sierra 1500 Limited (RPO J21, VIN Digit 5 = 8/9)	2022	2022					
	Sierra 1500 New (RPO J22, VIN Digit 5 = H/U)							
	Sierra 1500	2023	2024	6.6L (L8T)				
	Sierra 2500HD/3500HD	2020		5.3L (L84) 6.2L (L87)				
	Yukon	2021						

<b>Involved Region or Country</b>	North America, Europe, Kazakhstan, Uzbekistan, Russia, Middle East, Iraq, Israel, Palestine, Argentina (Mercosur), Brazil (Mercosur), Bolivia (West), Chile (West), Colombia (West), Ecuador (West), Paraguay (West), Peru (West), Uruguay (West), Venezuela (West), Other Central America, Japan, Cadillac Korea (South Korea), GM Korea Company, China - SGM, Taiwan, Thailand (ASEAN), Singapore, Philippines, Australia/New Zealand, Caribbean, Egypt, Other Africa, South Africa
<b>Condition</b>	<p>Some 4.3L, 5.3L, or 6.2L engines may not crank due to being seized with possible starter fuse being open.</p> <p>Various engine noises such as but not limited to:</p> <ul style="list-style-type: none"> <li>• Thumping (which may be perceived as upper engine noise or possibly from the transmission as shown in the video above.)</li> <li>• Growling</li> <li>• Knocking</li> <li>• Rattling</li> </ul> <p>Engine may also exhibit a condition of stalling or being hard to rotate once at operating temperature. Engine could also be locked up and unable to restart. However, upon engine cooling down to ambient temperature the engine may re-fire and run normally. This can be a sign of an early bearing failure.</p>
<b>Cause</b>	This condition may be caused by a crankshaft bearing failure and/or possible damaged thrust bearing.
<b>Information</b>	<p><b>Bearings Diagnosis:</b></p> <p>If any of the above issues are present and the condition has been identified as an internal engine concern, the following may be helpful:</p> <p><b>Note:</b> If the engine has not had its first oil change it is possible to see some light glitter in the oil. This could be build debris from the manufacturing process that is flushed out after the engine has been in operation. Further inspection in this case will be necessary.</p> <ul style="list-style-type: none"> <li>– Inspect the engine oil and filter for excessive metal debris, specifically bearing material.</li> </ul> <p>⇒ If bearing debris has been identified, then it will be necessary to remove the engine oil pan for further inspection of the crankshaft rod and main bearings.</p> <p>If it has been found there is damage to the crankshaft bearings, please follow the latest versions of Technical Service Bulletins 22-NA-074 and 18-NA-073 for further repair direction.</p> <p><b>Diagnostic Aids: Stationary Vehicle:</b></p> <ul style="list-style-type: none"> <li>• At a warm idle, increase the engine RPM to 1500 - 1800, and release to see if the noise intensity increases and decreases</li> <li>• The use of a stethoscope or Pico scope may show the noise is in the bellhousing or rear of the transmission.</li> <li>• Remove the engine oil filter and inspect for metallic and bearing material. Pouring the engine oil through a white shop towel may be helpful. If material is found perform a crankshaft end play measurement following published Service Information. Replace or repair the engine as necessary.</li> <li>• <b>DO NOT</b> back the torque converter off from the engine and run the engine in an effort to isolate the noise to the engine or transmission. Many evaluations indicate the noise is eliminated when the transmission disconnected however replacing the transmission does not resolve the noise condition. Doing so may also cause engine and or transmission damage.</li> <li>• If excessive crank end play is not found the engine accessory drive belt should be removed and the engine ran again to see if the noise eliminated. If the noise is eliminated check the accessory drive belt driven components for possible issues.</li> </ul> <p>If it has been found there is damage to the crankshaft bearings, please follow the latest versions of Technical Service Bulletins 22-NA-074 and 18-NA-073 for further repair direction.</p>

	<p><b>Starter Concerns:</b></p> <ul style="list-style-type: none"> <li>• If you find it necessary to replace the engine assembly, upon completion of the engine replacement, ensure that the engine starts and runs as designed and there are no other concerns.                     <ul style="list-style-type: none"> <li>– If the starter fuse is or was blown replace the starter fuse and ensure the vehicle starts up and operates as designed</li> </ul> </li> <li>• If you noticed that the starter fuse was blown it will be necessary to replace the starter fuse once new engine is installed. Do not replace the starter assembly. After fuse replacement, if you find that there may be a starter concern refer to diagnostic information in service information for further details.</li> </ul>
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**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.**

<b>Version</b>	4
<b>Modified</b>	<p>Released September 19, 2023</p> <p>Revised September 22, 2023 - Revise Model section and added Additional Countries to Involved Region or Country section.</p> <p>Revised January 16, 2024 - Added 2024 Model Year to Applicable Models.</p> <p>Revised March 11, 2024 - Added Transmission RPO, Update Correction section to add a video and additional Information, Update Information section to add a Note under Bearing Diagnosis section, Added Diagnostic Aids: Stationary Vehicle section.</p>

