



Preliminary Information

PIP5847B Diagnostic Tip: Abnormal Engine Ticking or Tapping Noise From Cam Carrier Area And Possible Misfire Or Rough Run With DTC P0300 or P050D

Proactive

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Chevrolet	Silverado	2019 - 2024	All	All	2.7 L3B	All
GMC	Sierra	2019 - 2024	All	All	2.7 L3B	All

Involved Region or Country:	North America
Condition:	Abnormal engine tapping noise from Cam Carrier area and possible misfire with DTC P0300 or P050D.
Cause:	Excessive movement in Exhaust Roller Follower roller due to axle pin wear.

Correction

If you encounter a vehicle with an abnormal engine tapping noise coming from the Cam Carrier area and possibly be accompanied by a misfire concern with one or more DTC's, P0300-P0304 or P050D.

Use a stethoscope see if the engine noise can be isolated to the exhaust side of the Cam Carrier. If the engine noise has been isolated to the exhaust side of the Cam Carrier, this could be caused by a worn Exhaust Roller follower and would require the removal of the Cam Carrier assembly for further inspection. (Please refer to published Service Information for Cam Carrier removal)

Once the Cam Carrier has been removed inspect each of the Exhaust Follower rollers for increased wear or up and down movement in the roller. The excessive up/down movement is an indication of increased axle pin wear and in worst cases the rollers can come out of position leading to a bent valve or damaged valve stem.

(Picture below showing bent valve due to worn Exhaust Roller Follower)



(Picture below shows a typical method used to check for worn roller followers)



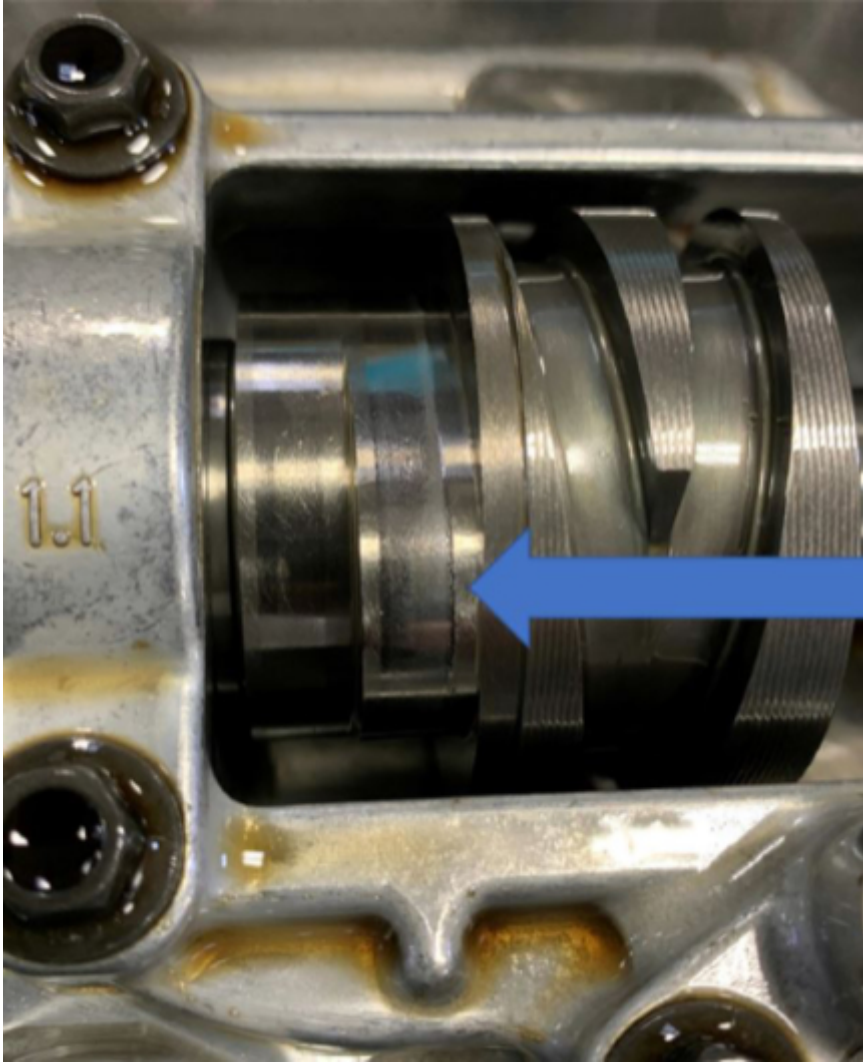
(Picture below shows example of excessive axle pin wear)



Note: Inspect the cylinder head area for any loose roller bearings and remove before reassembly. Each of the roller followers will have a total of 10 roller bearings.

If a worn Exhaust Roller Follower is found, replace all 8 of the Exhaust Hydraulic Lash adjusters and Exhaust Followers. Also the Exhaust Camshaft should be inspected at this time for damage or premature wear caused by this concern.

(Blue arrow in picture below showing Exhaust Cam lobe wear due to worn roller follower)



Note: This PI will become a bulletin as additional information becomes available.

Additional SI Keywords

knock, knocking, noise, tap, tick, ticking,

Version History

Version	3
Modified	04/05/2022 - Created on. 08/02/2023 Updated to include 2023 model year 11/17/2023 Updated to include DTC p050D and 2024 Model Year.



GENERAL MOTORS

© 2023 General Motors. All Rights Reserved.