



Service Bulletin

Bulletin No.: 25-NA-037

Date: April, 2025

TECHNICAL

Subject: Diagnostic Tip on Abnormal Engine Ticking or Tapping Noise from Cam Carrier Area And Possible Misfire or Rough Run - DTC P0300 and/or P050D

This bulletin replaces PIP5847B. Please discard PIP5847B.

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission :
		from	to	from	to		
Cadillac	CT4	2020	2025			L2R, L3B	
Chevrolet	Colorado	2023	2025				
	Silverado 1500	2019	2021				
	Silverado 1500 LTD (RPO J21, VIN Digit 5 = W/Y)	2022	2022				
	Chevrolet Silverado 1500 - New (RPO J22, VIN Digit 5 = A/D)						
	Silverado 1500	2023	2025				
GMC	Canyon	2023	2025				
	Sierra 1500	2019	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	2025				

Involved Region or Country	North America, Middle East
Condition	<p>Some customers may comment on one or more of the following concerns:</p> <ul style="list-style-type: none"> • Abnormal engine tapping noise from Cam Carrier area • Engine misfire <p>Some technicians may comment on one or more of the following DTCs set in the Engine Control Module (ECM):</p> <ul style="list-style-type: none"> • P0300 • P0301 • P0302 • P0303 • P0304 • P050D

Cause	This condition may be caused by excessive movement in Exhaust Roller Follower roller due to needle bearing axle pin wear.
Correction	Inspection of the Exhaust Hydraulic Lash adjusters and Exhaust Rockers (Followers) will be required. Refer to the Service Procedure.

Service Procedure

Utilizing a stethoscope, verify 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. Refer to *Camshaft Carrier Removal and Installation in SI*.

Once the Cam Carrier has been removed, remove the Exhaust Rockers from the cylinder head and Exhaust Hydraulic Lash Adjuster to inspect. While holding the outer body of the Exhaust Rocker in one hand, try to push the roller up and down while holding the body of the exhaust rocker. If there is noticeable clearance in the bearing assembly the exhaust rocker is worn and needs to be replaced. If questionable compare the clearance in the bearing assembly against a known good intake rocker.

It is not typical for multiple exhaust rockers to experience this failure mode. However, if one failed exhaust rocker is found replace the entire set. It is very important to inspect each exhaust rocker in detail to determine which location is experiencing the failure. Depending on the progression of the failure mode the exhaust rocker can exhibit different amounts of clearance as shown below:



Acceptable Clearance



Not Acceptable Clearance

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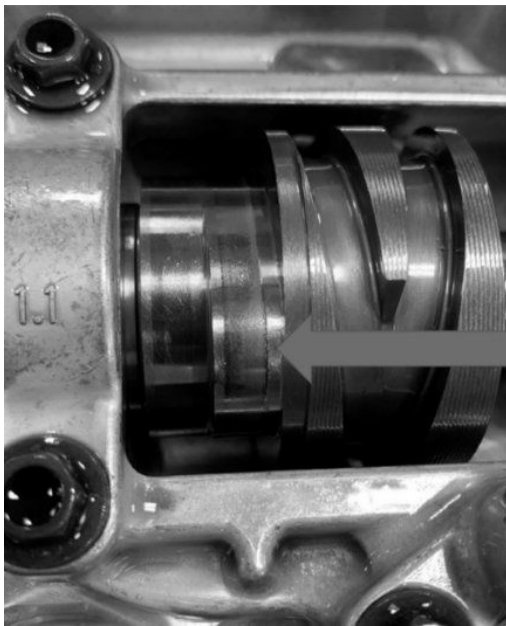
Seized Bearings

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6854486

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 loose roller bearings are found in engine oil pan reference TSB 22-NA-074 to determine if any internal engine damage has occurred.



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Note: The Exhaust Camshaft should be inspected at this time for damage or premature wear caused by this concern. All camshaft lobes should have similar wear patterns, if the lobe of a failed exhaust rocker shows signs of premature wear or scoring, replace the camshaft. Reference adjacent camshaft lobes without a failed exhaust rocker for example.

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

Install the Camshaft Carrier assembly. Refer to *Camshaft Carrier Removal and Installation in SI*.

Parts Information

Note: Only select the parts that coincide with the repair performed. Replace the part with the P/N outlined in the Electronic Parts Catalog (EPC) in accordance with the vehicle VIN.

Note: Follow the procedure in SI for additional parts that may be required for the repair.

Causal Part	Description	Part Number	Qty
X	ARM ASM,EXH VLV RKR	12731971	As Required
N/A	ADJUSTER-HYD VLV LASH	12663277	

Warranty Information

Note: Only select the warranty that applies to the repair performed.

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
4061050	Camshaft Carrier Replacement	Use the Published Labor Operations Time
4061270	Hydraulic Valve Lash Adjuster Replacement	

Version	1
Modified	Released April 30, 2025

Additional Keywords: knock, knocking, noise, tap, tick, ticking, exhaust, follower, lifter, MIL, misfire, miss, noise, P050D, P0300, P0301, P0302, P0303, P0304, PIP5847, roller

