Service Bulletin

Bulletin No.: 18-NA-115
Date: July, 2024

TECHNICAL

Subject: **Cold Start Misfire and/or Rough Idle – DTC P0300 May Be Set**

This Service Bulletin replaces PIP4959G. Please discard all versions of PIP4959.

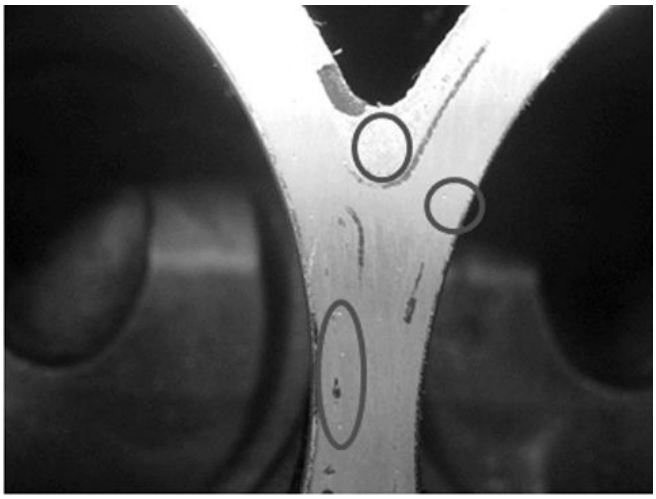
Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		From	To	From	To		
Buick	Enclave	2009	2025	All		3.6L (LLT, LFY)	All
	Regal	2018	2019			3.6L (LGX)	
	LaCrosse Allure	2009 2009	2019 2011			3.0 (LF1, LFW) 3.6 (LFX, LLT)	
Cadillac	ATS	2013	2019			3.6 (LFX, LF4, LGX)	
	CTS	2010	2019			3.0 (LF1, LFW) 3.6 (LF3, LFX, LLT, LGX)	
	CT5	2020	2025			3.0 (LGY)	
	CT6	2016	2020			3.6 (LGW, LGX)	
	SRX	2010	2016			2.8 (LAU) 3.0 (LF1, LFW) 3.6 (LFX, LLT)	
	XTS	2013	2019			3.6 (LF3, LFX)	
	XT5	2018	2025			3.6 (LGX)	
	XT6	2020					
Chevrolet	Blazer	2019				3.6 (LGX)	
	Camaro	2010				3.6 (LFX, LLT, LGX)	
	Caprice PPV	2012	2017			3.6 (LFX)	
	Captiva Sport		2015			3.0 \(LF1, LFW)	
	Colorado	2015	2025			3.6 (LFX, LGZ)	
	Equinox	2010	2017			3.0 (LF1, LFW) 3.6 (LFX, LLT)	
	Impala	2012	2019			3.6 (LFX)	
	Traverse	2009	2025			3.6 (LLT, LFY)	
GMC	Acadia	2007				3.6 (LLT, LGX)	
	Canyon	2015				3.6 (LFX, LGZ)	
	Terrain	2010	2017			3.0 (LF1, LFW) 3.6 (LFX, LLT)	

Involved Region or Country	North America, Argentina, Brazil, Bolivia, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela, Europe, Uzbekistan, Middle East, Iraq, Israel, Japan, Cadillac Korea (South Korea), China, Taiwan, Thailand, Singapore, Philippines
Condition	Some customers may comment that during a cold start, the engine will misfire and/or have a rough idle and the Malfunction Indicator Lamp (MIL) may be illuminated. They may also comment that the condition goes away after the engine warms up. The technician may observe on a scan tool DTC P0300 (Engine Misfire Detected) set in the K20 Engine Control Module.
Cause	Possible engine cylinder block porosity causing a pinhole at the liner to deck face casting area, allowing engine coolant to leak into the affected cylinder. The technician may observe on a scan tool DTC P0300 Engine Misfire Detected set in the K20 Engine Control Module.
Correction	Inspect for the cause of this condition by performing the Service Procedure below.

Service Procedure

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.

1. A misfire on cold start up only and/or a rough idle with medium to high misfire counts, always occurring on one or two cylinders, with the condition going away after the engine warms up can be suspect for coolant entry at the liner to deck face casting. To inspect for the location of the possible cause of the condition, add coolant dye to the engine cooling system.
2. Run the engine through a complete operating temperature warm up (the thermostat should be fully open at 107°C (225°F).
3. Pressurize the cooling system on a cold soak engine (after being warmed up to operating temperature).
4. Inspect the suspect cylinder(s) with a blacklight borescope for evidence of the coolant dye.
5. It may be difficult to see the actual source (e.g., a pin hole) but the leaking coolant will usually stream down the liner so that it can be seen with a borescope. Do not confuse residual fuel on the piston crown/surface as engine coolant.
   ⇒ If the borescope inspection is inconclusive, it may be necessary to remove the cylinder head for further visual inspection.
6. With the cylinder head removed, perform a visual inspection. Reference the following pictures provided. The first two pictures represent normal examples of deck pitting and are not the cause of the misfire and/or rough idle condition.

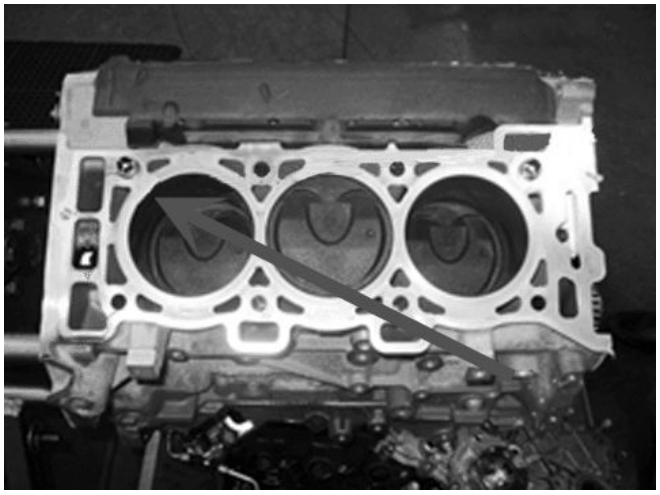


3632858

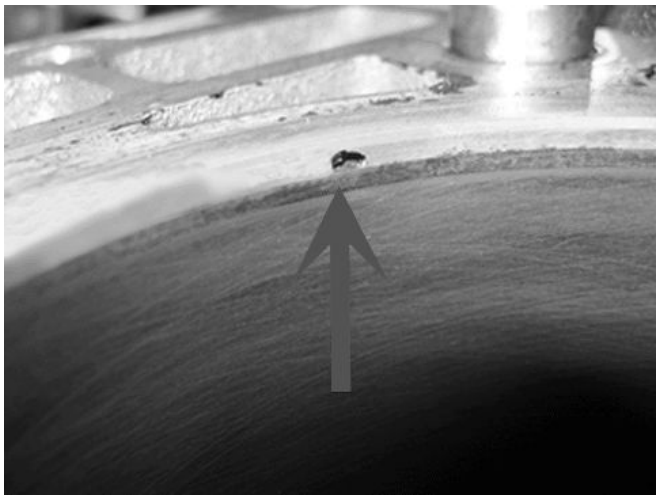
3632860

7. The two following pictures represent an example and the location of how actual engine cylinder

block porosity appears. This would be a cause of the condition.



3632865



3632864

Shown at the deck face to cylinder liner interface location is an area of engine cylinder block porosity that has caused an engine coolant leak path into the cylinder, causing medium to high misfire counts when the engine is cold.

⇒ If this condition is verified, the engine must be replaced.

Dealers required to contact the Product Quality Center (PQC) should refer to: Service Bulletin 20-NA-138 (U.S.) or 16-NA-338 (Canada): Warranty Administration – Engine and Transmission Assembly Replacement in SI and reference this Corporate Bulletin.

Warranty Information

For vehicles repaired under warranty, use:

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

Version Information

Version	5
Modified	Released April 13, 2018 Revised October 01, 2018 – Added certain Model Year 2016-2019 vehicles and engine RPO LFY, LGX and LGZ. Revised September 02, 2020 – Added the 2020 and 2021 Model Years and 2019-2021 Blazer, 2020-2021 CT5, 2016-2020 CT6, 2019-2021 XT5, 2021 XT6 models, updated the Involved Region or Country section and updated the PQC Bulletin references at the end of the Service Procedure. Revised May 02, 2022 – Added the 2018-2019 Buick Regal and 2022 Model Year for certain vehicles and updated the Involved Region or Country section. Revised July 23, 2024 – Added the 2023-2025 Model Years to certain vehicles.