



Service Bulletin

Bulletin No.: 16-NA-222

Date: June, 2019

INFORMATION

Subject: Information for Engine Concerns Resulting from Lack of Scheduled Maintenance, Improper Service or Aftermarket Calibrations

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Buick	GM Passenger Cars and Trucks	2020 and Prior				All	
Cadillac							
Chevrolet							
GMC							

Involved Region or Country	North America and N.A. Export Regions
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Information

Notice: Engines that are repaired for the conditions outlined in this bulletin should not be considered warranty. Any warranty claims submitted with these conditions may be debited.

Debits will be issued for the following reasons per the Service Policies and Procedures Manual:

- Failure or damage due to vehicle use, wear, exposure, lack of maintenance, alterations or improper servicing is not covered.
- Non-Return of Parts.
- Inspection Results by WPC.

Please refer to the latest version of Bulletin 99-00-89-019: Global Warranty Management (GWM) Warranty Parts Center (WPC) Parts Return Program for more information.

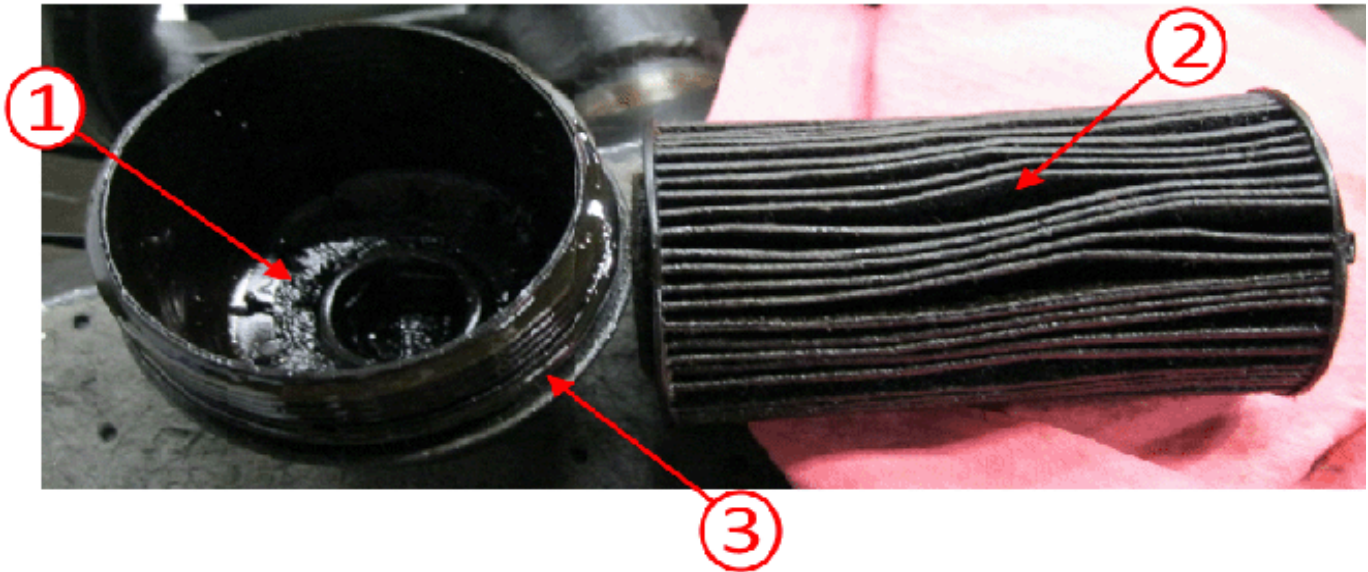
Following the recommended vehicle maintenance schedule is required in order to reduce the possibility of engine oil sludge build-up, contamination and/or any other conditions that may result in poor engine performance and/or internal engine damage.

Following proper service procedures is necessary to reduce the risk of foreign debris entering the engine, which may also cause poor engine performance or internal damage.

Conditions/Symptoms

Conditions That May Result from not Following Scheduled Maintenance

Oil filter blocked by debris and oil sludge.



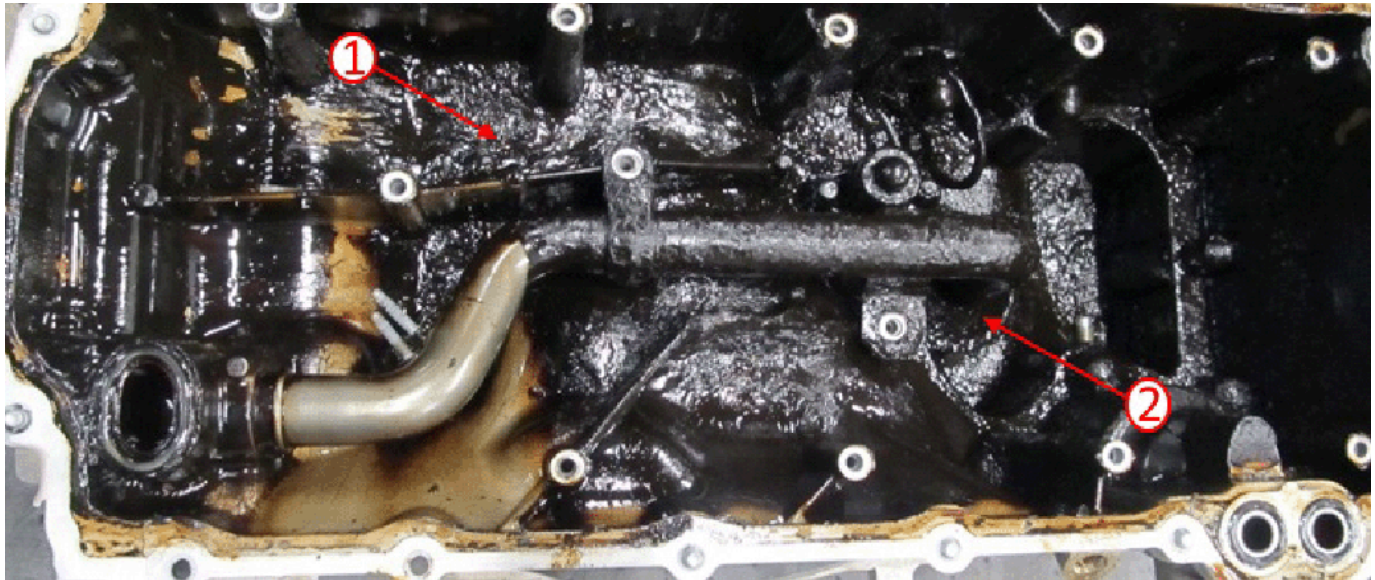
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Note: Using care, some oil filters may need to be cut open in order to validate the condition of the filter.

- On vehicles equipped with an oil filter cartridge, inspect the cap (1) for sludge.
- Oil filter pleats (2) with heavy debris or sludge.
- Damage, holes, tears, improper installation, or missing seals (3).

For additional information, refer to the latest version of Bulletin 10-06-01-003: Diagnostic Information on Internal Engine Noise or Damage After Oil Filter Replacement in SI.

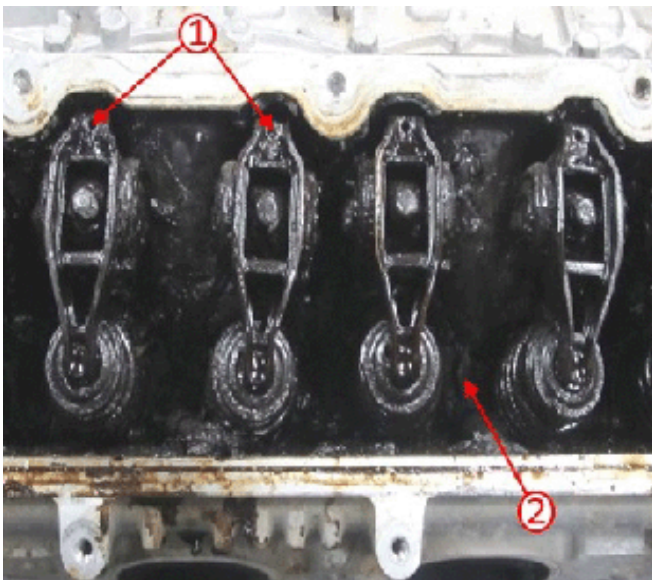
Sludge build up in the bottom of the oil pan.



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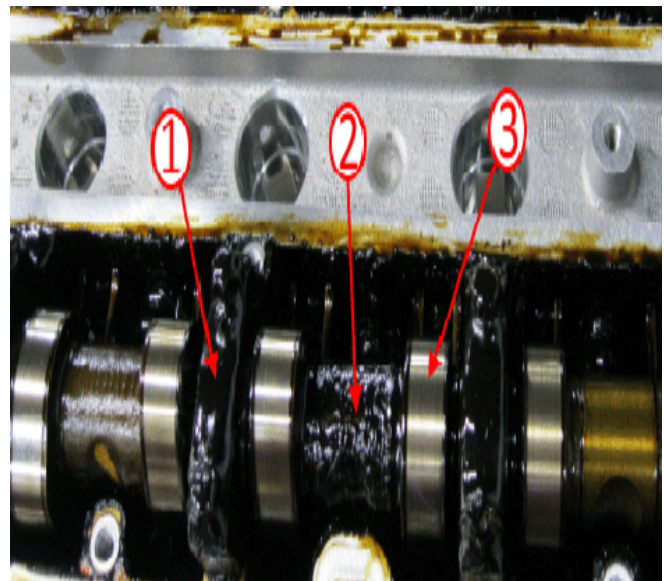
- Sludge (1) or debris found in the bottom of the pan blocking the pick up tube (2) screen.
- Light debris in the oil pump pick-up tube screen is normal, from normal engine wear.
- Some determination must be used to validate what is or what is not considered normal wear.

The valve covers blocked at the engine breather, vacuum or oil return ports.



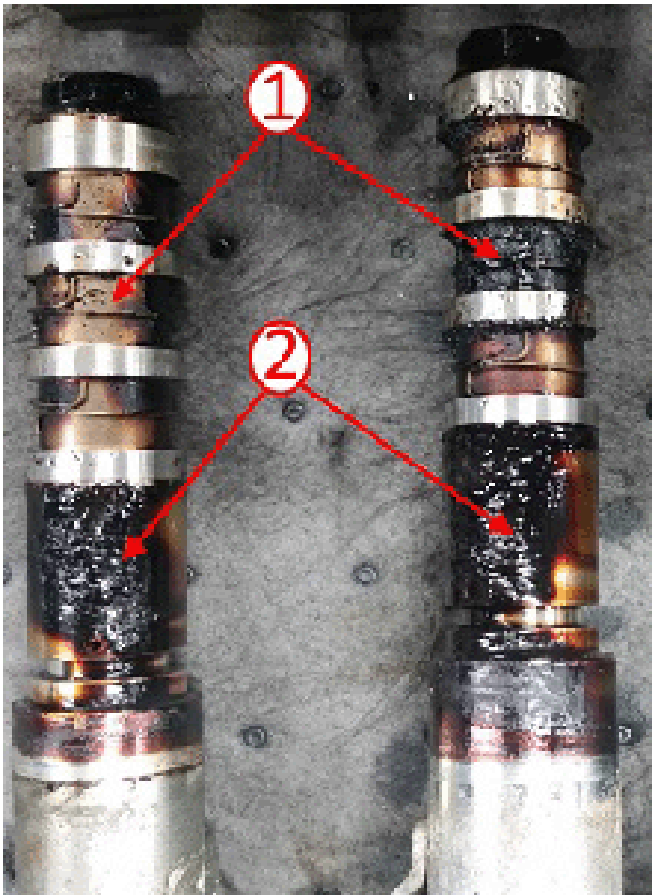
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- The rockers and rocker oil supply ports (1) blocked.
- The return ports blocked by sludge (2).



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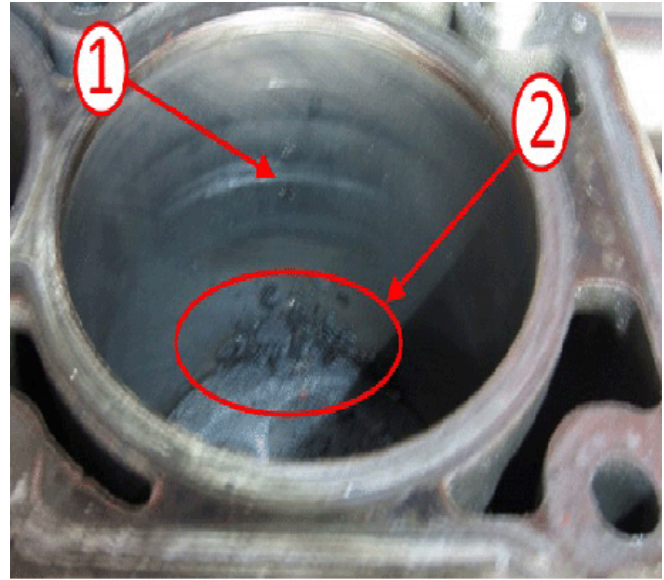
- Sludge build up on the camshaft (2) and camshaft caps (1).
- Scratches or gouges on the journals or lobes (3) of the camshaft causing a low or loss of oil pressure condition.
- Lack of oil on the lifter tappet creating ticking noise.



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- Sludge (2) build up on the camshaft position actuator solenoids.
- Debris (1) on solenoid screen may cause engine performance concerns.

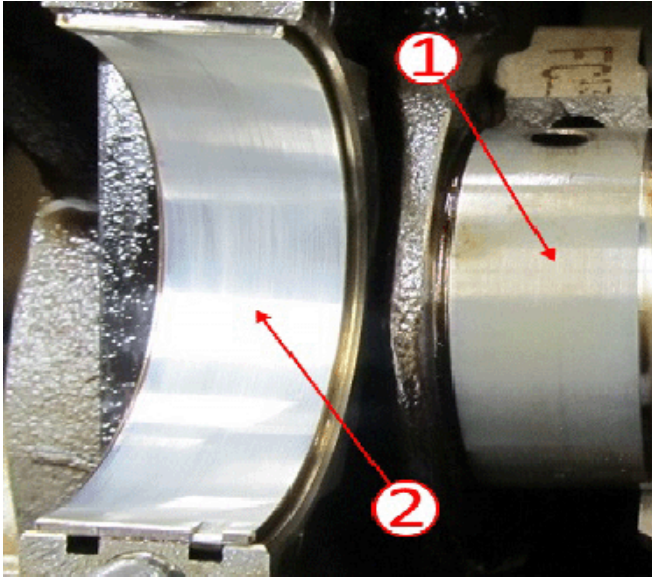
Conditions that May Result From Improper Service
 Improper installation of the air filter into the air filter housing or the use of aftermarket air filter.



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- Foreign debris bypassing the air filter and/or the air filter housing outlet ducts.
- Faulty installation of the air filter in the air box housing causing the dirt and debris (2) to enter the combustion chamber.
- Damage to the piston and the piston cylinder wall (1).

Main and rod bearing damage caused by foreign debris.



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- Dust and debris on the crankshaft, crankshaft bearings, rods (1) or rod bearings (2) caused the chrome finish of the journals to prematurely wear away causing the clearance to increase, possibly causing low oil pressure or a knocking noise.
- Scratches or gouges on the journals result in low or loss of oil pressure condition.
- Possible previous engine repair may result in some debris entering the engine through open ports that are normally sealed or closed off.

For additional information, refer to the latest version of Bulletin 00-06-01-012: Use of Surface Conditioning Disks When Cleaning Engine Gasket Sealing Surfaces and/or Reused Engine Parts in SI.

Conditions That May Result From Aftermarket Calibrations

Incorrect calibrations or modifications that may cause engine damage.



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- Piston damage (1) caused by a pre-detonation lean event.
- Improper engine warm up creates excessive heat to the piston causing them to seize to the cold cylinder walls cracking the piston lands (2).
- Aftermarket cold air filter, air filter housing and intake system not allowing proper engine warm up.

Note: Bulletin 09-06-04-026 is for gasoline V8 and HFV6 engines only.

For additional information, refer to the latest version of Bulletin 09-06-04-026: (Bulletin 09-06-04-026 is for gasoline V8 and HFV6 engines only) Identifying Non-GM (Aftermarket) Engine Calibrations for Gasoline Engines Using Tech 2 or GDS 2 in SI.

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- Inspection Results by WPC.

Please refer to the latest version of Bulletin 99-00-89-019: Global Warranty Management (GWM) Warranty Parts Center (WPC) Parts Return Program for more information.

Version	5
Modified	<p>August 31, 2017 – Added the 2018 Model Year.</p> <p>May 01, 2018 – Added a Note in Aftermarket Calibrations section for V8 and HFV6 gas engines.</p> <p>July 23, 2018 – Added the 2019 Model Year, first bullet in Notice under Information and additional bulletin reference information in text after the Note under Conditions That May Result From Aftermarket Calibrations.</p> <p>June 25, 2019 – Added the 2020 Model Year.</p>

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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