Service Bulletin

Bulletin No.: 19-NA-246
Date: November, 2019

TECHNICAL

Subject: **Engine Runs Rough, Misfire, Malfunction Indicator Lamp (MIL) Illuminated - DTC P0300 Set**

This bulletin replaces PIP5661. Please discard PIP5661.

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Buick	Envision	2019	2019			2.0 LTG	All
	Regal						(AWD Only)
Cadillac	ATS						All
	CTS						All
Chevrolet	Camaro						All
	Traverse						All

Involved Region or Country	United States, Canada, Mexico, Korea, Japan, Russia, Australia
Condition	Some customers may comment on one or more of the following conditions: • Rough running engine • Misfire • MIL Illuminated Some technicians may find DTC P0300 (Engine Misfire Detected) set in the Engine Control Module (ECM).
Cause	This condition may be caused by the talc powder, inside the rubber boot of the coil, having a lower dielectric strength compared to dielectric grease. ⇒ Talc was applied to prevent sticking of the rubber boot to the porcelain plug for serviceability.

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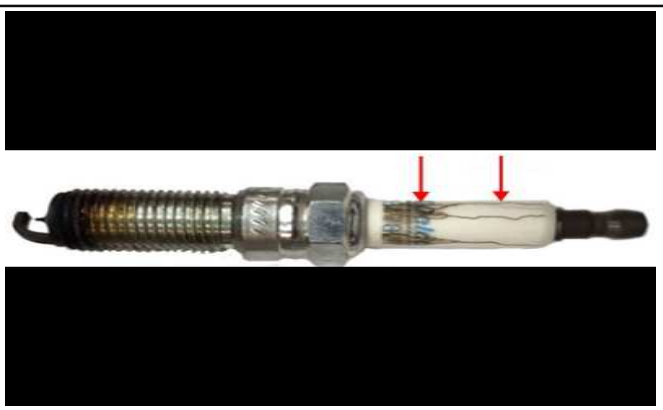
Correction	 5423956 1. Inspect all the spark plugs for signs of carbon tracking. 2. Perform a cylinder leak down test on the affected cylinder(s), making sure the misfire is not caused by piston leakage and leakage into the crankcase. Refer to *Cylinder Leakage Test* in SI. • If there is no high cylinder leakage found, refer to the Spark Plug Inspection Procedure section in this bulletin. • If there is high cylinder leakage found, refer to the Piston and Engine Cylinder Bore Inspection section in this bulletin.

Information

This document assists the technician with diagnosis and repair of a misfire for specific scenarios as follows:

Scenario #1 - Misfire being caused by spark plug carbon tracking.

Correction - Replace all four spark plugs, all four ignition coils, apply dielectric grease to the spark plug boots.

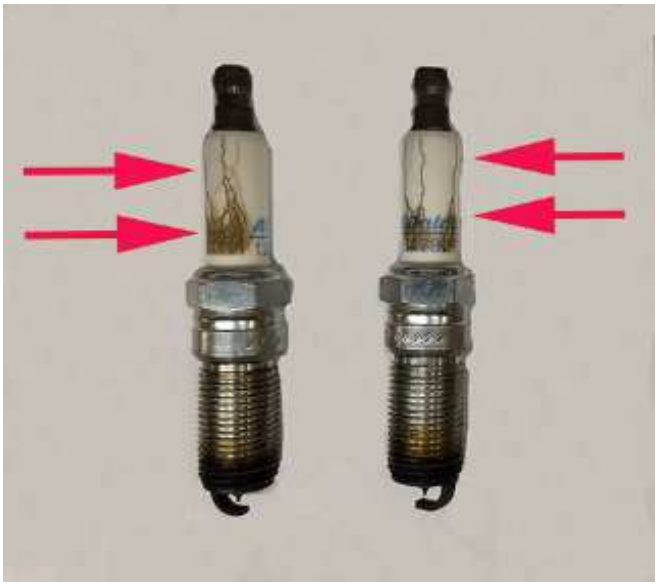
Scenario #2 - Misfire is being caused by a damaged piston and the cylinder wall is damaged.

Correction - Replace the engine assembly (engine comes with spark plugs), all four ignition coils (apply dielectric grease to the spark plug boots), the fuel injector of the cylinder(s) that had damaged pistons and other components necessary when an engine assembly is installed.

Scenario #3 - Misfire being caused by a damaged piston and the cylinder wall is not damaged.

Correction - Replace all four spark plugs, all four ignition coils (apply dielectric grease to the spark plug boots), the fuel injector of the cylinder(s) that had damaged pistons, all four piston kits, all ring sets for all four pistons, all rod bearings, all four connecting rod assemblies and other components necessary when pistons are replaced.

Spark Plug Inspection Procedure



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If any carbon tracking is seen on any of the spark plugs, replacement of all four spark plugs and all four coils is required.

Important: All the boots will require grease. Refer to the Dielectric Grease Application section below.

Dielectric Grease Application

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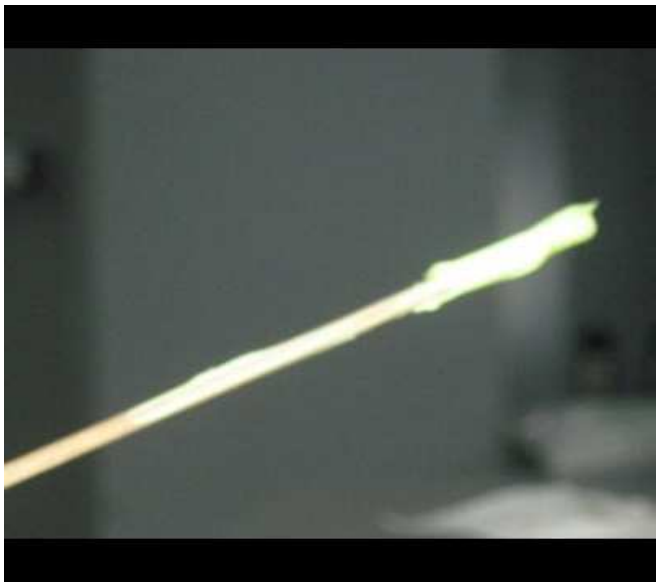
Use Molykote G-5008 Dielectric Grease.



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1. Inspect all the ignition coils for grease or if additional grease is required.
   ⇒ If additional grease is required, place a small amount on a applicator stick or equivalent.

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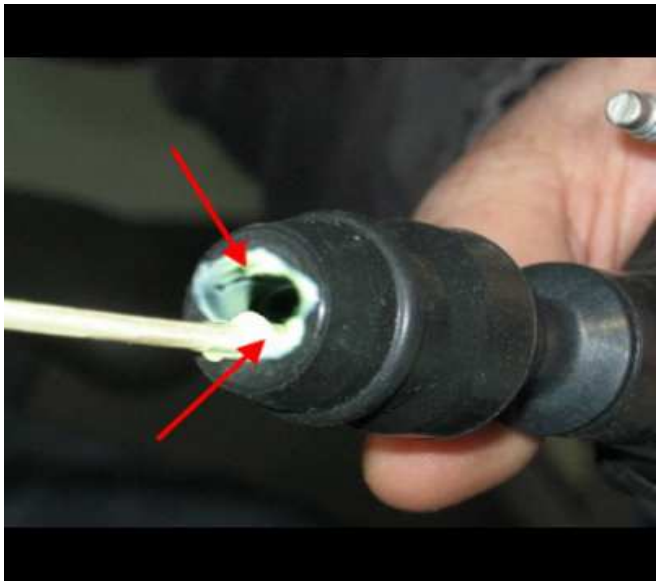
Note: Small amounts of grease “over spread” are allowed on the spring.

2. Apply a thin coating in the rubber boot of the coil, up to a depth of 15 mm.



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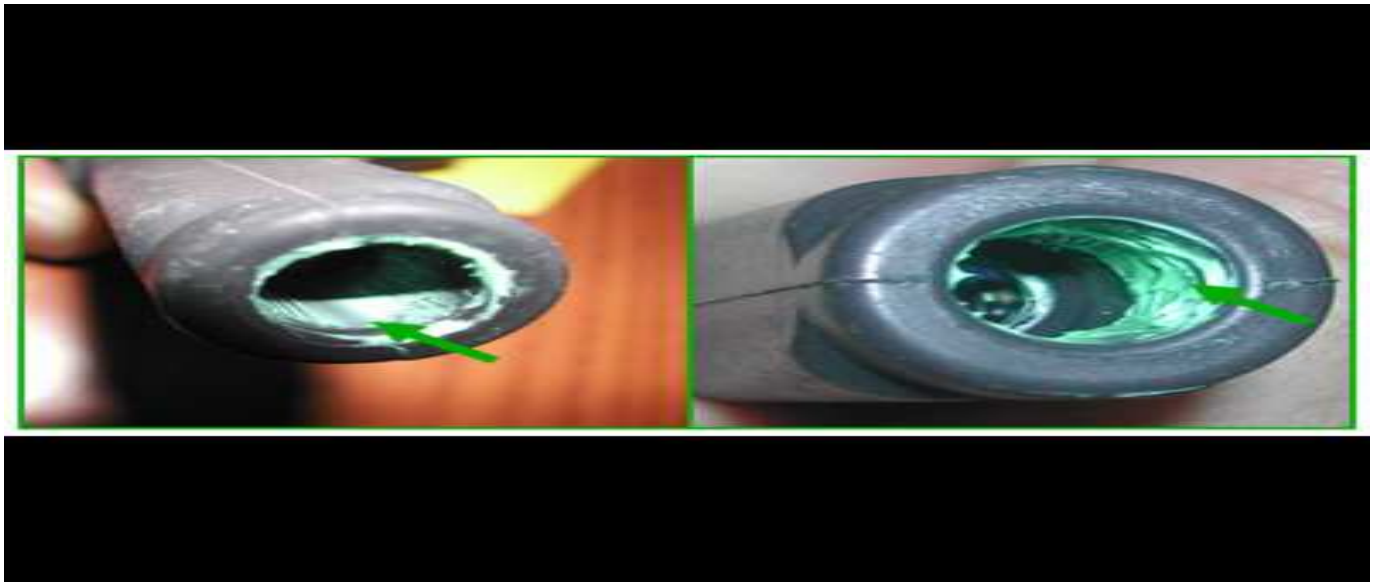
3. Remove any excess grease from around the end of the boot and ensure there is not an excessive amount within the boot.



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The graphic above depicts grease applied evenly to the inside of the boot, from the end of the terminal to the end of the boot.

Piston and Engine Cylinder Bore Inspection

Inspect the condition of all cylinder walls. Some light vertical marks may be visible on the cylinder wall. In these areas, check that the cross hatch marks are still visible in this marked area. If they are, the cylinder surface has not been compromised and the engine block can be used. If you can catch your fingernail on anything on the cylinder wall, the engine assembly must be replaced.

- If any of the cylinder walls are damaged, replace the engine assembly (engine comes with spark plugs), all four ignition coils (apply dielectric grease to the spark plug boots. Refer to Dielectric Grease Application section above), the fuel injector of the cylinder(s) that had damaged pistons and other components necessary when an engine assembly is installed.
- If the cylinder walls are not damaged, remove the pistons and inspect for a fractured piston between the top and second rings.

The pictures below are some examples of what might be found.

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If the cylinder walls are not damaged and one or more of the pistons are found fractured, replace all four spark plugs, all four ignition coils (apply dielectric grease to the spark plug boots. Refer to Dielectric Grease Application section above), the fuel injector of the cylinder(s) that had damaged pistons, all four piston kits, all ring sets for all four pistons, all rod bearings, all four connecting rod assemblies and other components necessary when pistons are replaced.

Note: When installing pistons, make sure to use the tapered ring compressor J-43953 special tool. Use care when installing the piston assemblies into the cylinder so the rings are not damaged.

Parts Information

Causal Part	Description	Part Number	Material Allowance
N/A	Molykote G-5008 Dielectric Grease*	GM service P/N 19260901 (Canadian P/N 19260902)	$1.38 (U.S.) $1.70 (Canada)
*There is enough material to do approximately 15 vehicles. Store the remaining material for future use.			

Warranty Information

Note: Only use the appropriate labor operation for the repair performed.

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
4020061	Spark Plug Replacement - Multiple	Use Published Labor Operation Time
4066890	Piston, Connecting Rod, and Bearing Replacement	
4067490	Engine Replacement	

Version	1
Modified	Released October 30, 2019

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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