



Service Bulletin

File in Section: -

Bulletin No.: 17-NA-221

Date: April, 2018

TECHNICAL

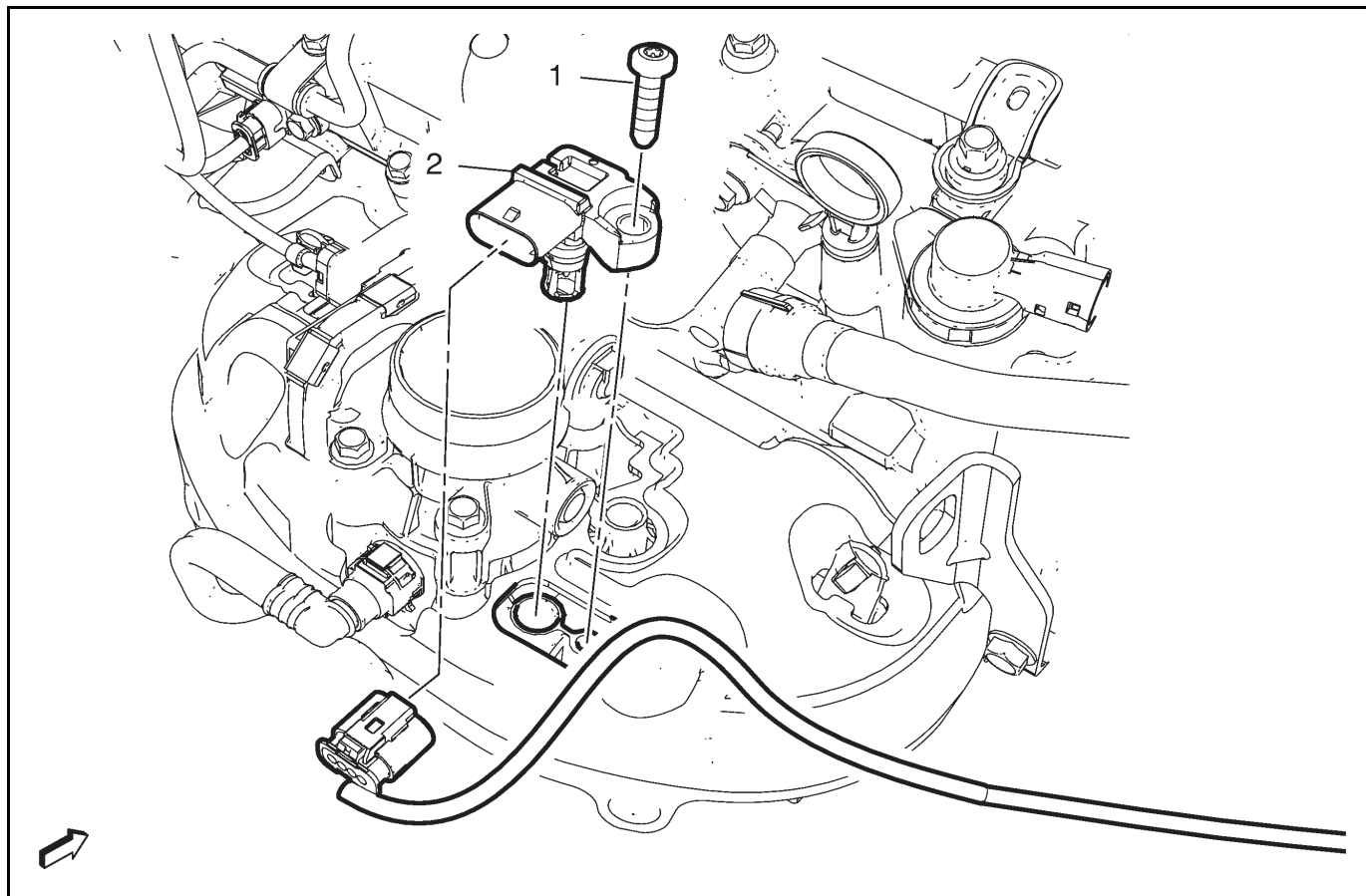
Subject: Poor Engine Performance in Extremely Cold Weather Conditions for LE2 Engines, Charge Air Cooler (CAC) Icing - Malfunction Indicator Lamp (MIL) Illuminated, DTC P0299, P0236, P2227, P00C7 Set

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Buick	Encore	2016	2018	SOP	Sept. 18, 2017	LE2	

Involved Region or Country	North America
Condition	<p>Some customers may comment that when driving short distances and/or slow speed driving cycles, their vehicle experiences one or several of the following conditions within the first 10 to 15 minutes of vehicle operation in extremely cold weather conditions (-18°C or less / 0°F or less):</p> <ul style="list-style-type: none">• Loss of power.• Smoke out the tail pipe.• Hesitation on acceleration.• Stalling condition.• Burning oil odor possibly caused by oil leak.• May also notice a Malfunction Indicator Lamp illuminated.• After driving for a period of time, the driveability issues seem to diminish.• Malfunction Indicator Light Illuminated. <p>This condition may also cause an increase in crankcase pressure, creating oil leaks at seals and gaskets.</p> <p>The technician may find one or more of the following DTCs set:</p> <ul style="list-style-type: none">• P0299• P0236• P2227• P00C7
Cause	This condition may be caused by ice accumulation in the charge air cooler, restricting air flow to the throttle body.
Correction	<p>If any of the above conditions are present, allow time for possible ice build up in the CAC to melt by allowing the vehicle to thaw in a warm climate.</p> <p>If any of the following conditions are validated to be caused by freezing/icing, replace the CAC.</p> <p>If not previously performed, an oil change may be necessary to remove any moisture from the engine. Prior to the oil change, run the engine at idle for an extended period of time to melt any ice in the engine.</p>

Intake Air Pressure and Temperature Sensor Inspection

Important: Only perform steps 1 - 6 if DTC P0299 is set.



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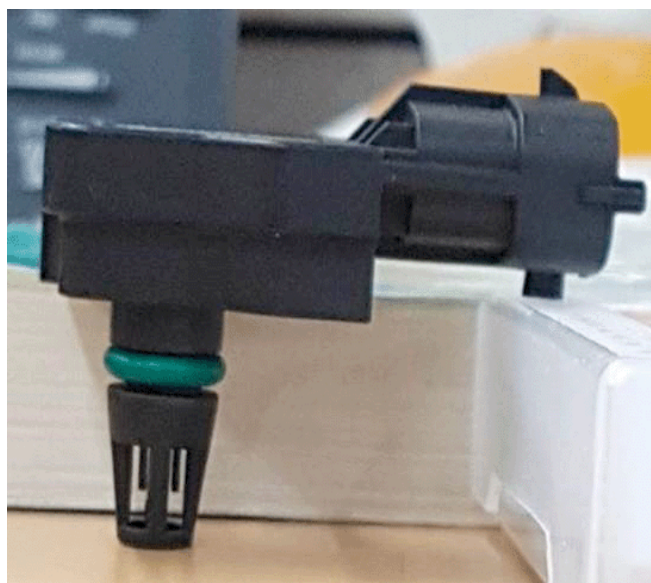
1. Remove the Intake Air Pressure and Temperature sensor (IAPT) (2). Refer to *Intake Air Pressure and Temperature Sensor Replacement* in SI.



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Important: Due to the sensitivity of the IAPT, **Do Not** use any chemical cleaners including water and **Do Not** use compressed air to remove contaminants.

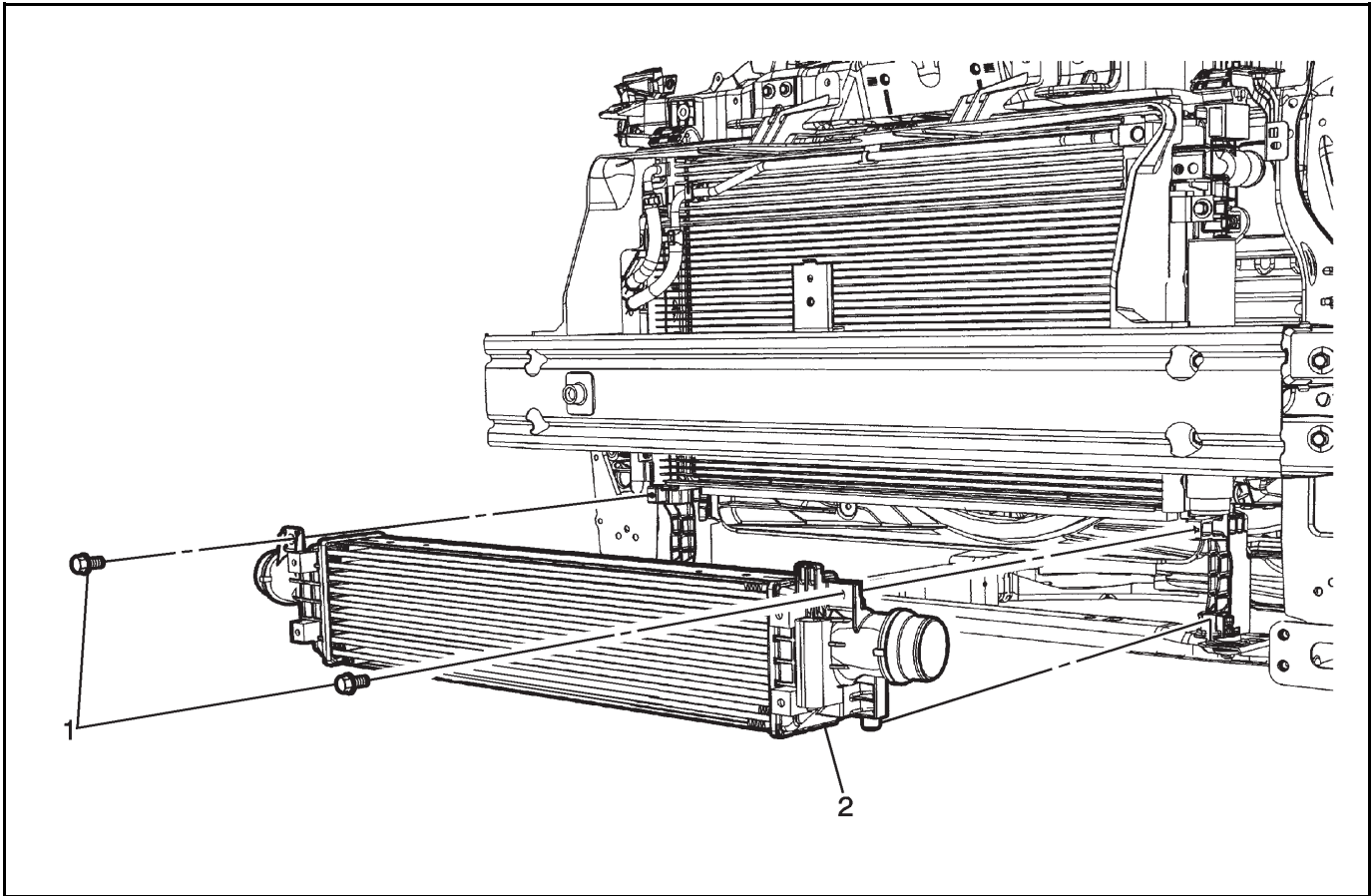
2. Inspect the IAPT sensor for any contaminants.



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3. Allow time for any ice build-up to melt by placing the sensor port down.
4. Clean the sensor with a clean towel.
5. Inspect the IAPT sensor for any contaminants.
6. Install the IAPT sensor.

Service Procedure



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1. Install CAC (2). Refer to *Charge Air Cooler Replacement* in SI.

Important: Do Not perform an oil change if the oil change was recently done.

- If the oil change was recently done and no signs moisture has been confirmed, Do Not proceed with procedure.
 - If the oil change was not previously done or moisture has been found in the oil, proceed with procedure.
2. If required, perform an oil change. Refer to *Engine Oil and Oil Filter Replacement* in SI.

Parts Information

Description	Part Number	Qty
Cooler, Charge Air	42574036	1
Filter, Oil	Refer to the Electronic Parts Catalog (EPC).	
Oil		

Warranty Information

For vehicles repaired under the Powertrain coverage, use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Labor Operation	Description	Labor Time
4081728*	Charge Air Cooler Replacement	1.1 hr
Add	IAPT Inspection	0.2 hr
Add	Oil Change	0.3 hr
*This is a unique Labor Operation for Bulletin use only.		

Version	3
Modified	August 14, 2017 - Add engine RPO to Subject. April 12, 2018 - Update to 2018 model year, add break point and IAPT information.

