



Service Bulletin

Bulletin No.: 18-NA-072

Date: March, 2020

TECHNICAL

Subject: Reduced Engine Power, Reduced Engine Power Displayed on Driver Information Center (DIC), Malfunction Indicator Lamp (MIL) Illuminated - DTC P228C

Attention: This bulletin only applies to vehicles that utilize E85 fuel.

This bulletin replaces PIP5385D. Please discard PIP5385D.

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Buick	LaCrosse	2012	2016			3.6L (LFX)	
	Regal	2012	2017			2.4L (LEA)	
	Verano	2012	2017			2.4L (LEA)	
Cadillac	ATS	2013	2015			3.6L (LFX)	
	SRX	2012	2016			3.0L (LFW) 3.6L (LFX)	
Chevrolet	Caprice PPV	2012	2017			3.0L (LFW) 3.6L (LFX)	
	Captiva (VIN L)	2012	2015			2.4L (LEA) 3.0L (LFW)	
	Captiva	2016	2018			3.0L (LFW)	
	Equinox	2011	2017			2.4L (LEA) 3.0L (LFW) 3.6L (LFX)	
	Impala Models	2012	2020			3.6L (LFX)	
GMC	Terrain (VIN L)	2011	2011			3.0L (LFW)	
	Terrain	2012	2017			2.4L (LEA) 3.6L (LFX)	

Involved Region or Country	North America, Middle East, Israel, Europe, China, GM Korea, Japan, Thailand, Brazil, Peru
Additional Options (RPOs)	E85 Fuel Compatible (RPO FHS)
Condition	Some customers may comment on the following conditions: " Reduced engine power " Reduced Engine Power message displayed on DIC " MIL illuminated Some customers may also comment that the MIL and Reduced Engine Power message displayed clears after cycling the ignition key. Some technicians may find DTC P228C (Fuel Pressure Regulator Control Performance - Low Pressure) has set again in the Engine Control Module (ECM) as current or history. Some technicians may also find a prior repair of the high-pressure fuel pump.
Cause	This condition may be caused by excessive use of E85, causing a plunger internal to the fuel pump to stick.
Correction	Note: To help keep the engine running efficiently, fill the tank with gasoline, up to E15, after filling the tank with E85 one or two times. If the code is set, proceed with the Service Procedure below.

Service Procedure

1. Take a large fuel sample from the fuel system in a clean glass or metal container.
 2. Inspect for any contaminants in the fuel.
 - ⇒ Place the container on a level surface for approximately 5 minutes in order to allow settling of the particulate contamination.
 3. Verify there are no physical contaminants present in the fuel sample:
 - " If contamination is found in the fuel sample, inspect the fuel tank and strainer for buildup or blockage then completely clean the fuel system and add E-10/15 fuel. Refer to *Fuel System Cleaning* in SI.
- ⇒ Contamination in the fuel is not warrantable.
- " If contamination is not found in the fuel sample and/or SI diagnostics leads to a high pressure fuel pump concern, replace the high-pressure fuel pump and related lines per SI. Refer to *Fuel Pump Replacement* in SI.

Advise the customer to run a tank of premium or Top Tier E-10/15 fuel (1 tank) through the system to effectively clean all fuel system components after repair.

Parts Information

For part numbers of fuel pump lines, refer to the Electronic Parts Catalog (EPC).

Causal Part	Description	RPO	Part Number	Qty
x	Pump, Fuel (High Pressure) E85 (FHS)	All (HFV6)	12690072	1
x	Pump, Fuel (High Pressure) E85 (FHS)	LEA (4 CYL)	12691097	1

Warranty Information

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

Labor Operation	Description	Model	Labor Time
4081958*	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	LaCrosse	1.8 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Regal	0.7 hr
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Verano	0.7 hr
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	ATS	4.6 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	SRX	1.8 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Caprice PPV	3.2 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Captiva (VIN L) 2.4L	1.0 hr
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Captiva (VIN L) 3.0L	1.8 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Captiva	3.1 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Equinox 2.4L	1.1 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Equinox 3.0L/3.6L	1.8 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Impala Models	1.8 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Terrain (VIN L) 3.0L	1.8 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Terrain 2.4L	1.1 hrs
	Fuel Sample Inspection and High-Pressure Fuel Pump Replacement	Terrain 3.6L	1.8 hrs
*This is a unique Labor Operation for bulletin use only.			

Version	5
Modified	Released March 07, 2018 March 20, 2018 – Updated the Condition, Service Procedure and Warranty Information sections. April 13, 2018 – Updated the Correction, step 3 of the Service Procedure and Parts Information. January 23, 2019 – Added 2019 to Impala and added a Note to Correction section. March 04, 2020 – Added the 2020 Impala, updated the Involved Region or Country section and updated the Warranty statement.

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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