



# Service Bulletin

File in Section: -

Bulletin No.: 18-NA-072

Date: April, 2018

## 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 |      |    | LFX (3.6L)                               |               |
|           | Regal              | 2012        | 2017 |      |    | LEA (2.4L)                               |               |
|           | Verano             | 2012        | 2017 |      |    | LEA (2.4L)                               |               |
| Cadillac  | ATS                | 2013        | 2015 |      |    | LFX (3.6L)                               |               |
|           | SRX                | 2012        | 2016 |      |    | LFW (3.0L),<br>LFX (3.6L)                |               |
| Chevrolet | Caprice<br>PPV     | 2012        | 2017 |      |    | LFW (3.0L),<br>LFX (3.6L)                |               |
|           | Captiva<br>(VIN L) | 2012        | 2015 |      |    | LEA (2.4L),<br>LFW (3.0L)                |               |
|           | Captiva            | 2016        | 2018 |      |    | LFW (3.0L)                               |               |
|           | Equinox            | 2011        | 2017 |      |    | LEA (2.4L),<br>LFW (3.0L),<br>LFX (3.6L) |               |
|           | Impala<br>Models   | 2012        | 2018 |      |    | LFX (3.6L)                               |               |
| GMC       | Terrain<br>(VIN L) | 2011        | 2011 |      |    | LFW (3.0L)                               |               |
|           | Terrain            | 2012        | 2017 |      |    | LEA (2.4L),<br>LFX (3.6L)                |               |

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Involved Region or Country</b> | North America and N.A. Export Regions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Additional Options (RPOs)</b>  | E85 Fuel Compatible (RPO FHS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Condition</b>                  | <p>Some customers may comment on the following conditions:</p> <ul style="list-style-type: none"> <li>• Reduced engine power</li> <li>• Reduced Engine Power message displayed on DIC</li> <li>• MIL illuminated</li> </ul> <p>Some customers may also comment that the MIL and Reduced Engine Power message displayed clears after cycling the ignition key.</p> <p>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.</p> <p>Some technicians may also find a prior repair of the high-pressure fuel pump.</p> |
| <b>Cause</b>                      | This condition may be caused by excessive use of E85, causing a plunger internal to the fuel pump to stick.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Correction</b>                 | 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 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 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 Emission coverage, 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  | 3                                                                                                                                                                                                                          |
| Modified | Released March 07, 2018<br>March 20, 2018 – Updated the Condition, Service Procedure and Warranty Information sections.<br>April 13, 2018 – Updated the Correction, step 3 of the Service Procedure and Parts Information. |

