



Service Bulletin

File in Section: 06 - Engine

Bulletin No.: 12-06-04-003

Date: December, 2012

TECHNICAL

Subject: Diagnosis and Repair - Malfunction Indicator Lamp (MIL) Illuminated, Reduced Engine Power Message Displayed, DTC P2135 Set

Models: 2009-2011 Buick Lucerne
2006-2008 Chevrolet Malibu
2006-2011 Chevrolet Impala
2006-2009 Pontiac G6
Equipped with Engine RPO LGD, LZ4, LZ8 or LZE

Attention: If a vehicle is encountered with this condition, DO NOT replace the throttle body. Instead follow this procedure below.

Condition

Some customers may comment on an illuminated malfunction indicator lamp (MIL), with a Reduced Engine Power message displayed.

The technician may observe on a scan tool DTC P2135: Throttle Position (TP) Sensor 1-2 Correlation set as Current or in History.

Cause

This condition may be caused by the difference between the TP Sensor 1 and TP Sensor 2 exceeding a calibrated value for more than 2 seconds.

Correction

Caution: Handle the electronic throttle control components carefully. Do not drop, or immerse any of the electronic throttle control components in cleaning solvents of any type.

Warning: Approved safety glasses and gloves should be worn when performing this procedure to reduce the chance of personal injury.

1. With a scan tool, verify that DTC P2135 is set as Current or in History.
 - ⇒ If DTC P2135 is set as Current or in History, proceed to Step 2.
 - ⇒ If DTC P2135 is not set as Current or in History, refer to Diagnostic Trouble Code (DTC) List - Vehicle or Symptoms - Engine Controls in SI.
2. Turn OFF the ignition.
3. Open the hood.

Notice: If at any time during this procedure the throttle body or the intermediate gear is dropped, abort this procedure and REPLACE it with a new throttle body assembly.

4. Remove the throttle body and discard the throttle body gasket. Refer to Throttle Body Assembly Replacement in SI.
5. Remove any loose debris and dirt from the throttle body assembly and the TP sensor cover. Inspect the throttle body for damage.

Caution: Do not use any solvent that contains Methyl Ethyl Ketone (MEK). This solvent may damage fuel system components.

6. Clean the throttle body bore and the throttle plate using a clean shop towel with GM Top Engine Cleaner, P/N 1052626 (in Canada, P/N 993026), or ACDelco Upper Engine and Fuel Injector Cleaner, P/N X66-P, or an equivalent product.



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Notice: DO NOT mount the throttle body in a vise. The throttle body can be set on the top of a soft protected workbench area.

7. Hold the throttle body with your hand, so that the throttle position (TP) sensor cover is facing upward as shown.



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8. Secure a rubber band around the throttle body and TP sensor cover as shown.

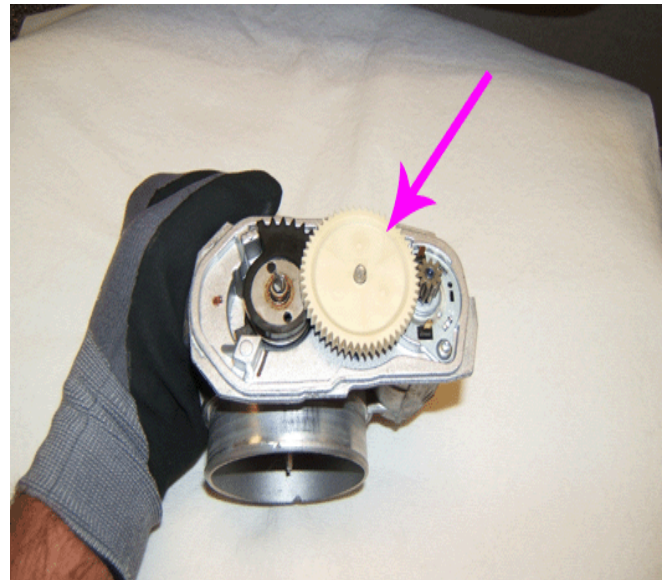
Notice: DO NOT PRY ON THE MACHINED SEALING SURFACE OF THE THROTTLE BODY INLET DUCT.

9. Use a flathead screwdriver to remove the clips. Turn over the throttle body if needed. **Discard** the clips.



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10. Hold the throttle body with your hand, so that the TP sensor cover is facing upward. Remove the rubber band securing the TP sensor cover. Grasp the TP sensor cover and carefully lift it **straight up** and separate it from the throttle body.

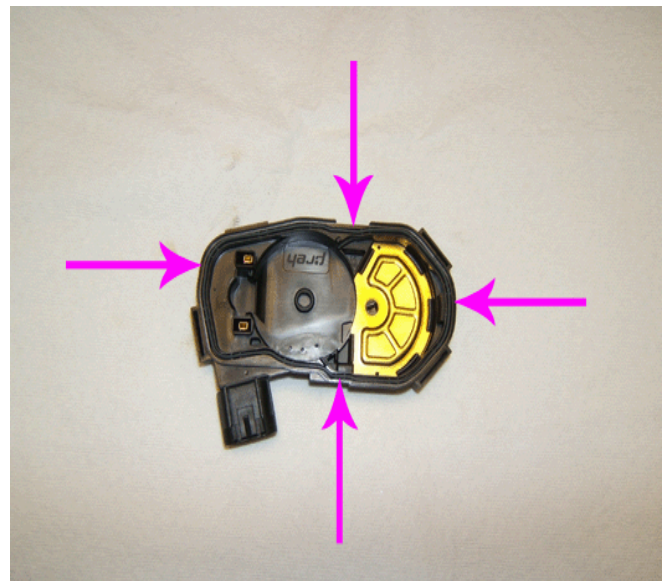


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Notice: DO NOT allow the intermediate gear to fall out.

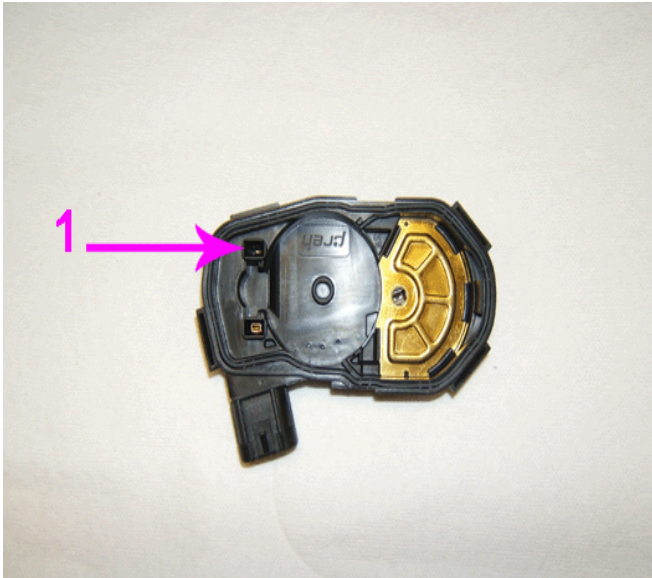
11. Maintain the throttle body in an upward position. Use your thumb to maintain contact with the intermediate gear. Place the throttle body on the workbench.

⇒ If the intermediate gear falls out and impacts a hard workbench surface or the floor, abort this procedure and **REPLACE** with a new throttle body assembly.

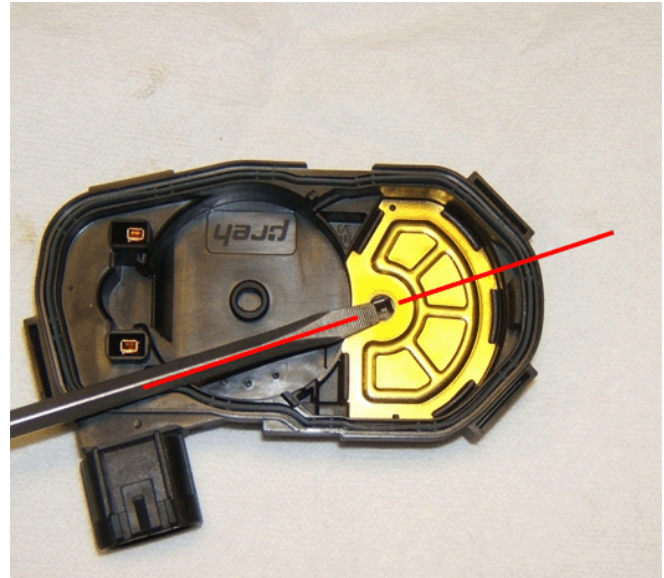


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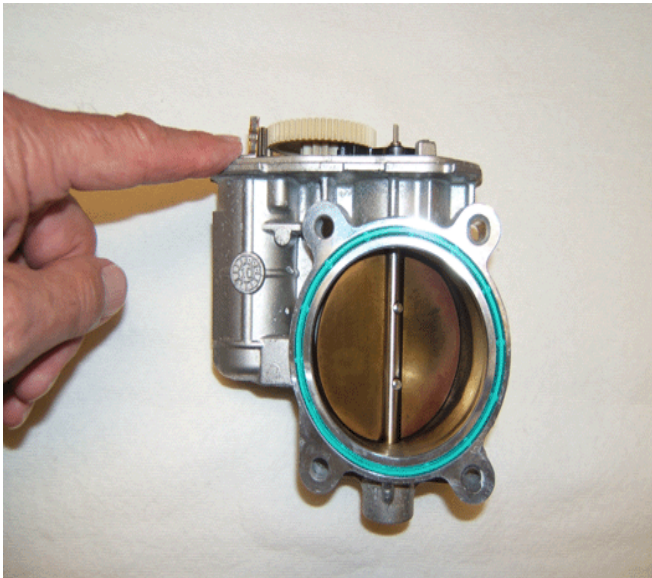
12. Inspect the TP sensor cover and verify that the TP sensor cover gasket **has remained** in the TP sensor cover as shown. Ensure that the gasket is accounted for and remains with the old TP sensor cover.



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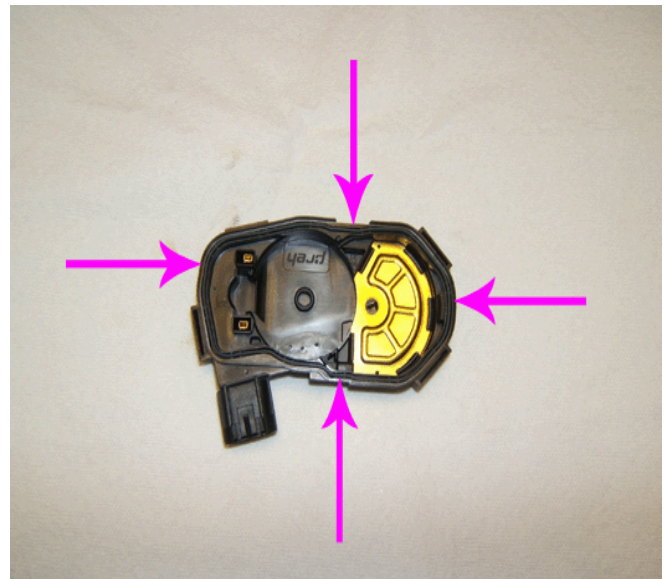
13. Observe the TP sensor cover for missing female throttle actuator motor terminals (1). Verify that the female throttle actuator motor terminals **have remained** in the TP sensor cover and **have not** been retained on the throttle actuator motor male terminals as shown. Discard the old TP sensor cover, gasket and terminals.

⇒ If one or both of the TP sensor cover female throttle actuator motor terminals have been retained on the throttle actuator motor male terminals, remove and discard those female terminals.

14. Remove the new TP sensor cover from the protective shipping wrapper.

15. Place the TP sensor cover in the position as shown. Confirm the TP sensor drive slot orientation is aligned in the TP sensor cover as shown.

⇒ If the TP sensor drive slot orientation is not aligned as shown, use a small flathead screwdriver to gently rotate the TP sensor drive slot **clockwise** to the wide open throttle (WOT) position as shown.

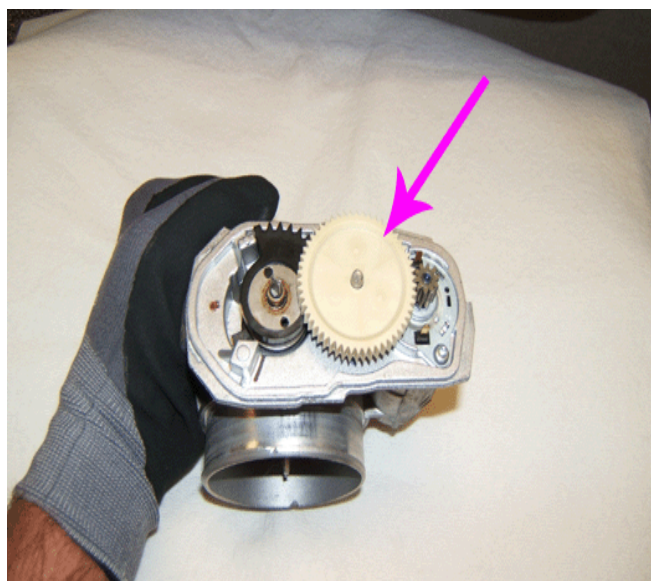


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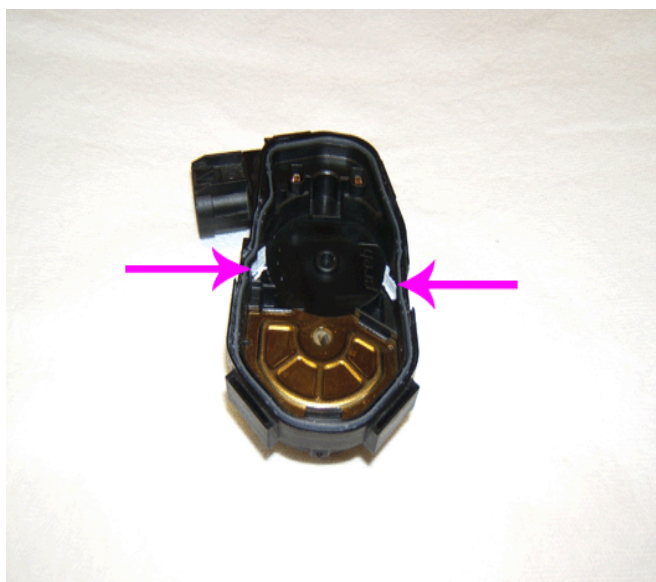
16. Verify that the TP sensor cover gasket is secure and properly positioned.



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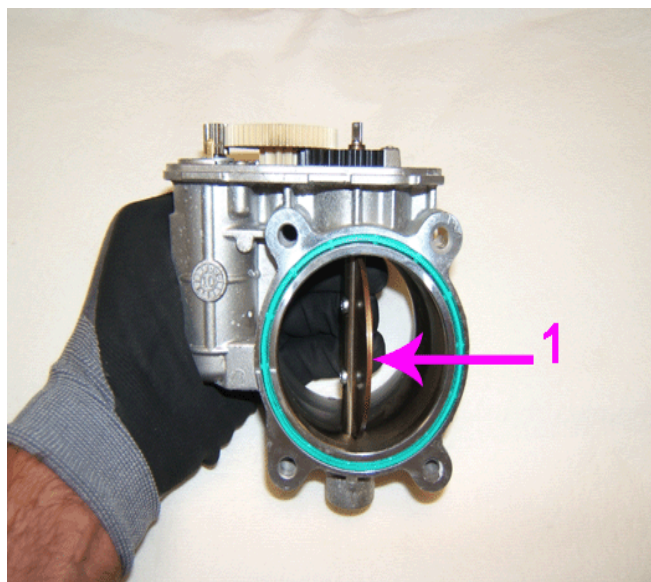


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Notice: The three TP sensor cover alignment tabs are highlighted in white for identification purposes only.

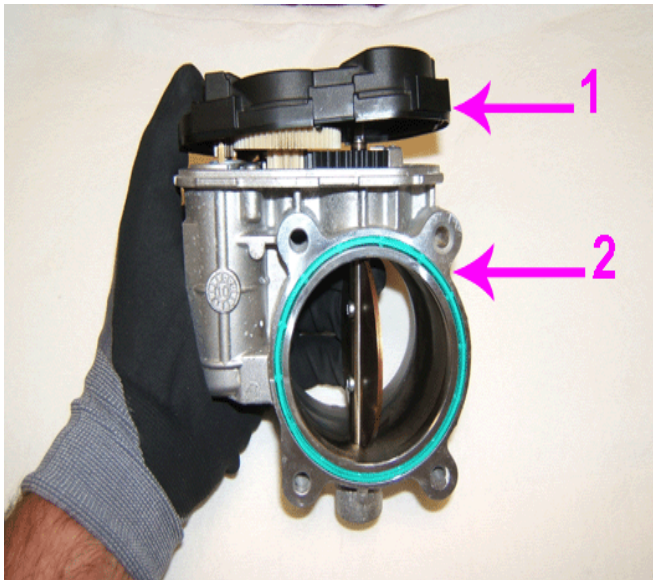
17. Verify that all three of the TP sensor cover alignment tabs are present and are not damaged.

18. Grasp and hold the throttle body in the upward position. Lightly depress the intermediate gear to verify that it is fully seated and the gears are engaged.

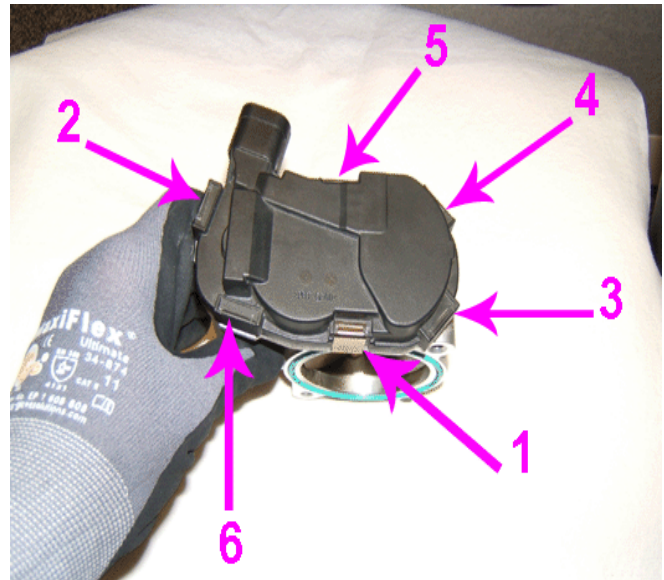


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19. Rotate the throttle body plate to the WOT position (1).



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20. Position and **evenly** install the TP sensor cover (1) to the throttle body (2). Hold the TP sensor cover in position and for ease of the clip installation, secure a rubber band around the throttle body and TP sensor cover.



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21. Install the first TP sensor cover clip (1) in the position shown.

22. Install the remaining TP sensor cover clips in the sequence shown.
23. Install a **NEW** throttle body gasket.
24. Install the throttle body, bolts and nuts. **Finger tighten** the fasteners.
25. Connect the electrical connector to the throttle body.
26. Turn ON the ignition. Clear the DTC with a scan tool.
27. Observe the scan tool TP Sensor 1 and 2 Agree/Disagree parameter while slowly depressing the accelerator pedal to WOT and then slowly returning the pedal to closed throttle. Repeat the procedure several times. Rapidly depress the accelerator pedal from the rest position to the wide open throttle position (WOT) and release pedal. Repeat the procedure several times. The TP Sensor 1 and 2 Agree/Disagree parameter should display **Agree**.
- ⇒ If TP Sensor 1 and 2 Agree/Disagree parameter displays **Agree**, proceed to Step 28.
 - ⇒ If TP Sensor 1 and 2 Agree/Disagree parameter displays **Disagree**, replace the throttle body assembly.
28. Tighten the throttle body fasteners.
- Tighten**
The fasteners to 10 N•m (89 lb in).
29. Install any remaining components that were removed during this procedure.
30. Perform the Throttle Learn Reset Procedure. Refer to Throttle/Idle Learn > Throttle Learn > Reset Procedure in SI.

Part Information

Part Number	Description	Quantity
19300180	Throttle Position (TP) Sensor Cover	1

- For 2010-2011 vehicles repaired under the 3 year/ 36,000 mile (60,000 km) Bumper-to-Bumper warranty (in Canada, Base Warranty Coverage), use:
- For 2010-2011 vehicles repaired under the 3 year/ 50,000 mile (80,000 km) California Emission Coverage (Code E) warranty, use:

Warranty Information

- For 2006 vehicles repaired under the 2 year/ 24,000 mile (40,000 km) Emissions warranty, use:
- For 2006 vehicles repaired in Canada under the 3 year/60,000 km Emissions warranty, use:
- For 2006 vehicles repaired under the 7 year/ 70,000 mile (120,000 km) California Emission Coverage (Code E) warranty, use:
- For 2007-2009 vehicles repaired under the 5 year/ 100,000 mile (160,000 km) Powertrain Coverage (Code P) warranty, use:

Labor Operation	Description	Labor Time
J7949*	Throttle Position (TP) Sensor Cover Replacement	1.2 hrs**
*This is a unique labor operation for bulletin use only. It will not be published in the Labor Time Guide. **This time includes diagnosis, throttle body removal, cleaning and installation, TP Sensor cover replacement and performing the Throttle/Idle Learn > Throttle Learn > Reset Procedure.		

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