



# Service Bulletin

Bulletin No.: 21-NA-113

Date: September, 2022

## TECHNICAL

**Subject: Malfunction Indicator Lamp (MIL) Illuminated During Engine Crank - DTC P0046 Set**

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Chevrolet	Silverado	2017	2018			L5P	
	Silverado 2500HD/3500HD	2019	2023			L5D	
	Silverado 4500HD, 5500HD and 6500HD	2019	2023				
GMC	Sierra	2017	2018			L5P	
	Sierra 2500HD/3500HD	2019	2023				

<b>Involved Region or Country</b>	North America, Middle East, Israel, Palestine
<b>Condition</b>	Some customers may comment that the MIL is illuminated. Some technicians may find DTC P0046 (Turbocharger Boost Control Position Performance) set in the Engine Control Module (ECM).
<b>Cause</b>	This condition may be caused by a low voltage condition during cranking that does not allow the turbocharger to complete the turbocharger actuator learn procedure.
<b>Correction</b>	If the code has been verified, refer to the Service Procedure below.

### Service Procedure

**Important: Service agents must comply with all International, Federal, State, Provincial, and/or Local laws applicable to the activities it performs under this bulletin, including but not limited to handling, deploying, preparing, classifying, packaging, marking, labeling, and shipping dangerous goods. In the event of a conflict between the procedures set forth in this bulletin and the laws that apply to your dealership, you must follow those applicable laws.**

**Note:** The M103 Turbocharger Vane Position Actuator arm is returned to the top rest position by a spring inside the actuator. A small amount of spring resistance felt is normal.

The M103 Turbocharger Vane Position Actuator arm rest position is vertical. The arm bottom of travel position is horizontal.

1. Ignition OFF and all doors closed for 2 min.
2. Verify the turbocharger actuator arm can easily be pushed down from the top rest position without binding to the bottom of travel position.
  - ⇒ Verify the return spring returns the actuator arm to the top rest position.

3. If the turbocharger and actuator are working as designed, perform a relearn using GDS2:
  - Module Diagnostics
  - Engine Control Module
  - Configuration/Reset Functions
  - Learn Functions
  - Turbocharger Boost Control Initial Position Learn
4. Perform the scan tool control function: Turbocharger Vane Position » From 20 to 90% and back to 20%.
5. Verify the scan tool parameter: Turbocharger Vane Position = The value should increase and decrease according to the setting in the scan tool.
  - If this corrects the condition, both of the batteries should be checked individually for low voltage or loose clamps along with any electrical connections.
  - If this procedure does not repair the vehicle, refer to SI.

## Parts Information

No parts are required for this repair.

## 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
4088018*	Turbocharger Actuator Learn Procedure	0.8 hr
*This is a unique Labor Operation for Bulletin use only.		

Version	3
Modified	Released May 17, 2021 Revised January 10, 2022 – Added Model Year 2022 Revised September 09, 2022 – Added Model Year 2023

