

## **Service Bulletin**

# TECHNICAL

### Subject: Diagnostic Tip for Diesel Fuel System Contamination, Malfunction Indicator Lamp (MIL) Illuminated - DTC P026D, P2A00, P0171, P0172 and/or P0300 Set

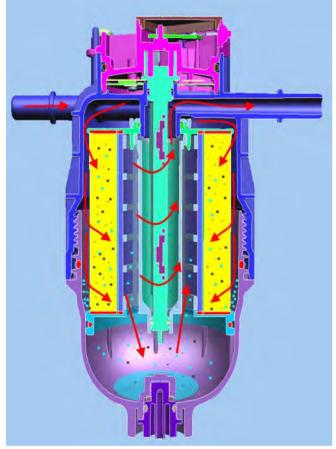
Brand:	Model:	Model Year:		VIN:		Freeiner	Tronomiosion
		from	to	from	to	Engine:	Transmission:
Cadillac	Escalade Models	2021	2023			3.0L Turbo Diesel (LM2)	
	Cruze	2014	2015			2.0L Diesel (LUZ)	17) 
Chevrolet	Cruze	2018	2019			1.6L Diesel (LH7)	
	Equinox	2018	2019				
	Silverado	2017	2018			6.6L Turbo Diesel (L5P)	
	Silverado 1500 - 4WD (New Model, 12th VIN Digit = 7)	2019	2019			3.0L Turbo Diesel (LM2)	
	Silverado 1500	2020	2021			3.0L Turbo Diesel (LM2)	
	Silverado 1500 LTD (RPO J21, VIN Digit 5 = W / Y)	2022	2022				
	Silverado 1500 New (RPO J22, VIN Digit 5 = A / D)						
	Silverado 1500	2023	2023			3.0L Diesel (LZ0)	
	Silverado 2500/3500	2019	2023			6.6L V-8 Duramax Turbo Diesel (L5P)	
	Silverado 4500HD, 5500HD and 6500HD	2019	2023			6.6L V-8 Duramax Turbo Diesel (L5D)	
	Silverado LD	2019	2019			6.6L V-8 Duramax Turbo Diesel (L5P)	
	Suburban	2021	2023			3.0L Turbo Diesel (LM2)	
	Tahoe	2020	2023			3.0L Turbo Diesel (LM2)	

Brand:	Model:	Model Year:		VIN:		Engino	Transmission:
		from	to	from	to	Engine:	Transmission:
GMC	Sierra	2017	2018			6.6L V-8 Duramax Turbo Diesel (L5P)	
	Sierra 1500	2020	2021			3.0L Turbo Diesel (LM2)	
	Sierra 1500 Limited (RPO J21, VIN Digit 5 = 8 / 9)	2022	2022				
	Sierra 1500 New (RPO J22, VIN Digit 5 = H / U)						
	Sierra 1500	2023	2023			3.0L Diesel (LZ0)	
	Sierra 2500/3500	2019	2023			6.6L V-8 Duramax Turbo Diesel (L5P)	
	Terrain	2018	2019			1.6L Diesel (LH7)	
	Yukon	2021	2023			3.0L Turbo Diesel (LM2)	

Involved Region or Country	North America, Israel			
	Some customers may comment that the MIL is illuminated.			
Condition				
	5168457 Note: If removing the fuel filter from the filter housing, clean the outside of the fuel filter assembly prior to removing the fuel/water filter from the housing.			
	Some technicians may find metal particles in the fuel system during diagnostics.			
	<b>Important:</b> If the fuel/water filter has been removed for inspection, <b>Do Not</b> install the filter back into the housing until the fuel/water separator reservoir has been cleaned. Refer to the Information on Fuel/Water Filter Removal section below.			
	Some technicians may also find one or more of the following DTCs set in the Engine Control Module (ECM):			
	<ul><li>P0171: Fuel System Lean</li><li>P0172: Fuel System Rich</li></ul>			
	P026D: Injection Quantity Too High			
	P0300: Engine Misfire Detected			
	P2A00: HO2S Performance Sensor 1  If you encounter such a situation, <b>DO NOT</b> replace the fuel system as described in			
Correction	Service Bulletin #16-NA-102. Please perform the following fuel system flushing procedure prior to performing further diagnostics.			
	Once the fuel system has been flushed, continue with diagnostics as described in SI.			

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.

#### Information on Fuel/Water Filter Removal



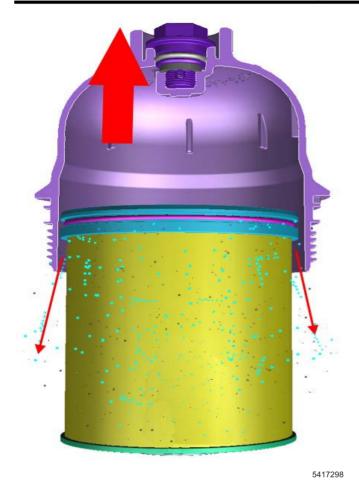
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Water or other like contaminates in the fuel will create driveability concerns and loss of engine power. If water and/or debris is present in the fuel system, the fuel cannot cool and lubricate the components properly, causing overheating, rust and corrosion. This can result in component failure. Water and debris can enter the fuel system in several ways, either through a contaminated refueling source, plugged venting or through long term condensation in the vehicle fuel tanks.



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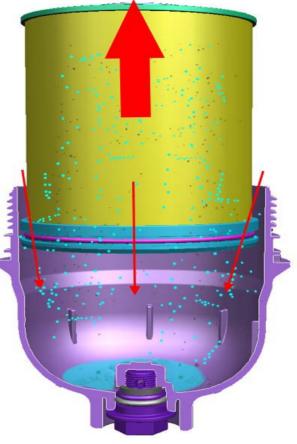
1. Remove the fuel/water filter from the housing using care not to separate the filter from the fuel/water separator reservoir.



2. Using care, separate the filter from the fuel/water

in a clean/dry drain pan.

separator reservoir by placing the filter downwards



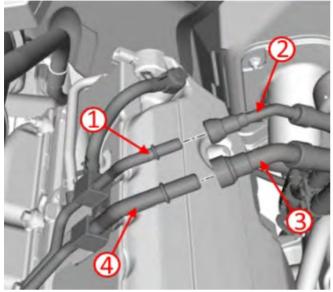
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- If the filter is facing upwards, debris left on the sides of the filter may escape past the O-ring seal during removal and settle in the fuel/water separator reservoir.
- Water and/or debris left in the fuel/water separator reservoir will flow past the filter, directly into the fuel system when re-started.
- Debris that is allowed past the filter and into the fuel system can cause fuel injection issues that may set DTCs P2A00, P026D, P0300, P0172. Replacement of fuel injectors without a complete cleaning of the fuel system will only be a temporary fix until the debris gets into the new injectors.
- 3. Inspect the fuel/water separator reservoir and filter for heavy debris.
  - If heavy debris is found in the filter, clean the fuel/water separator reservoir and continue to the Fuel System Flushing Procedure below.
  - If no signs of debris are found, clean the fuel/ water separator reservoir, install a new filter and refer to SI for further diagnostics.

#### **Fuel System Flushing Procedure**

**Note:** Performing the test may aid in determining the source and section of the fuel system causing the contamination.

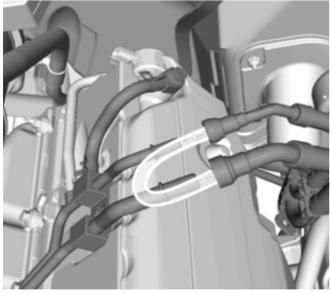
1. If removed, re-install the fuel filter.



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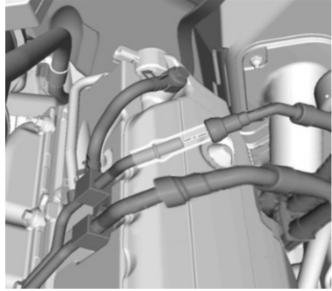
- 2. Disconnect the chassis side fuel feed hose (3) from the engine side fuel feed pipe (4).
- 3. Place the end of the chassis side fuel feed hose into a clean container and run the fuel pump to clean any debris left in the fuel lines, approximately 2-3 gallons (7.6-11.4L).
- 4. Clean the fuel/water separator reservoir.
- 5. Install a new fuel filter.
- 6. Disconnect the chassis side fuel return hose (2) from the engine side return pipe (1).

**Note:** The white "Tubing" shown in the graphics below depict the route of the clear line, not the length.



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- 7. Install a clear line between the fuel supply hose and the fuel return hose.
- 8. Run the fuel pump until the fuel runs clear in the line.



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- 9. Connect the fuel supply hose to the engine supply pipe.
- 10. Install a clear line in series at the fuel return hose to the engine return pipe.
- 11. Run the fuel pump until the fuel runs clear in the line.

Reconnect all fuel lines and retest for any codes or symptoms in the vehicle.

#### **Parts Information**

No parts are required for this repair.

Version	10
	Released December 10, 2018
	Revised June 24, 2019 – Added 2020 to Model Year.
	Revised August 14, 2019 – Added 2019 and 2020 Silverado HD Models.
	Revised October 03, 2019 – Added Information on Fuel/Water Filter Removal section.
	Revised October 14, 2019 – Removed LCF and added 2020 Silverado/Sierra 1500 with LM2.
Modified	Revised September 09, 2020 – Added DTCs to the Subject, Condition and Information on Fuel/Water Filter Removal sections.
	Revised October 20, 2020 – Added the 2021 Model Year to Silverado and Sierra Models and additional engine descriptions.
	Revised May 06, 2021 - Add Note to Condition section to clean the Filter Housing Assembly.
	Revised January 10, 2022 - Added 2022 to Model Year.
	Revised September 06, 2022 - Added 2023 to Model Year.

GM bulletins are intended for use by professional technicians, NOT a "<u>do-it-yourselfer</u>". 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, <u>DO NOT</u> 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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