

Subject: Engineering Information - Service Engine Soon Lamp Illuminated On Driver Information Center (DIC), Transmission Not Shifting Properly and/or Slipping, DTC P0796, P2714 Set

Attention: Proceed with this EI ONLY if the customer has commented about this concern AND the PIE number is listed in the Global Warranty Management / Investigate History link (GWM/IVH). If the customer has not commented about this condition or the EI does not show in GWM/IVH, disregard the PIE and proceed with diagnostics found in published service information. THIS IS NOT A RECALL refer to Service Bulletin 04-00-89-053 for more details on the use of Engineering Information bulletins.

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Chevrolet	Colorado	2021	2021	-	-	Equipped with 3.6L Engine (RPO LGZ)	Equipped with 8 SPD Transmission (RPO M5T)
	Silverado 1500	2020	2021			Equipped with 5.3L, 2.7L Engine (RPOs L84, L3B)	Equipped with 8 SPD Transmission (RPO MQE)
GMC	Canyon	2021	2021			Equipped with 3.6L Engine (RPO LGZ)	Equipped with 8 SPD Transmission (RPO M5T)
	Sierra 1500	2020	2021			Equipped with 5.3L, 2.7L Engine (RPOs L84, L3B)	Equipped with 8 SPD Transmission (RPO MQE)

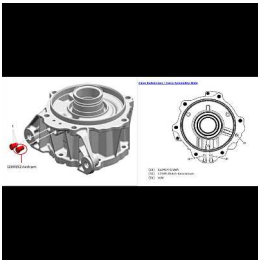
Involved Region or Country	North America
Condition	<p>Important: If the customer did not bring their vehicle in for this concern, DO NOT proceed with this EI.</p> <p>Some customers may comment on having one or more of the following conditions:</p> <ul style="list-style-type: none"> - Service Engine Soon Lamp illuminated on Driver Information Center (DIC) - Transmission not shifting properly - Slipping <p>Technicians may find one of the following DTC's set:</p> <ul style="list-style-type: none"> ● P0796 - Transmission Control Solenoid Valve 3 Stuck Off ● P2714 - Transmission Control Solenoid Valve 4 Stuck Off
Cause	GM Propulsion Engineering is attempting to determine what portion of vehicles are coming in with DTCs P0796/P2714 and have a line solenoid stuck by sediment, that can be fixed by cycling the line VFS manually and changing the fluid. As a result, this information will be used to "root cause" the customer's concern and develop/validate a field fix.

Correction

If you encounter a vehicle with the above concern, perform the following steps and contact one of the engineers listed below with your findings.

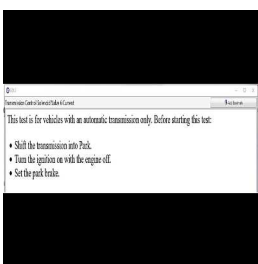
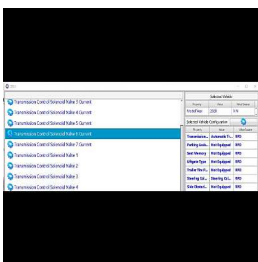
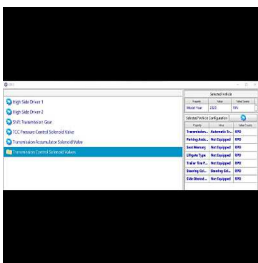
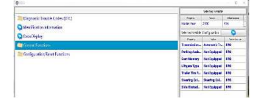
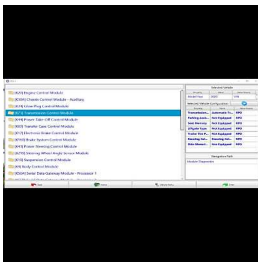
1. Prior to starting the normal P0796/P2714 Service Procedure, perform the following:
 - 1.1. Sample the transmission fluid from the transmission oil level set plug and inspect the fluid for discoloration and/or burnt odor.

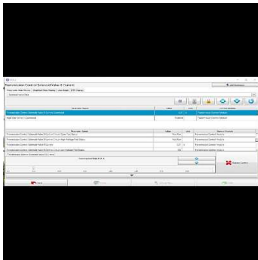
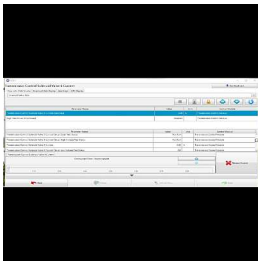
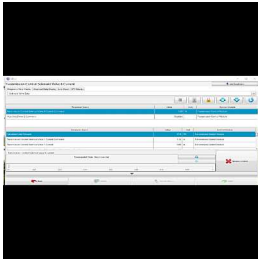
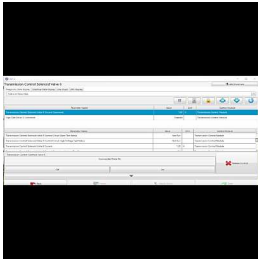
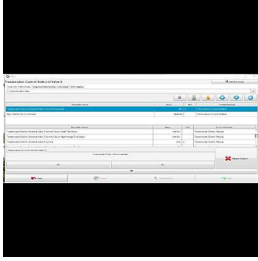
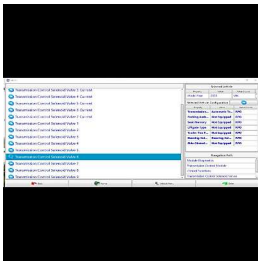
Note: If the fluid is burnt and/or discolored, end the test and follow SI information for transmission repair. If fluid is acceptable proceed with the test.



- 1.2. Install a pressure gauge in the 12345R/C2 port, C2 port shown in the picture above.
 - 1.3. Idle engine with vehicle in Park and record pressure.
 - 1.4. If the pressure is above 50 PSI/345 kPa, run the normal P0796/2714 Service Procedure, if less than 50 PSI/345 kPa go to step #2.
2. Set up GDS for test.
 3. Start and run the engine to build line pressure, continue with the engine **OFF** and the Ignition **ON**.
 4. With GDS, access TCM/ Control Functions/ Transmission Control Solenoid Valves/ Transmission Control Solenoid Valve 6 – line pressure.

GDS Tool Screenshots





5. Manually cycle the line solenoid from min to max current, 10 cycles with one cycle consisting of:
 - **MAX** current command (1.2 A) hold for a minimum of 3 seconds (longer is OK – max 5 seconds)
 - **MIN** current command (0 A) hold for a minimum of 3 seconds (longer is OK)

Note: The time delay between commands is to prevent reverse pumping through the solenoid; may have to go in and out of output control function due to output control timer limit to reach 10 cycles.
6. Re-test vehicle to see if condition remains – restart, idle engine in Park, and check line pressure; if below 50 PSI, repeat from step #4 (once). Pressure should rise above 50 PSI once solenoid is cleared of debris by step 4 action. Once pressure rises, proceed to step 7.
7. Remove the Transmission Oil Pan and inspect.

Note: For Transmission Oil Pan removal on Silverado-Sierra models it will be necessary to replace one time use exhaust gaskets on (RPO L84) engines. Left-side PN# 15035747 and Right-side PN# 15077362.

- 7.1. If evidence of failed clutch material is in the fluid – follow current P0796/P2714 service procedure in SI.
If fluid is clean and step 6 is OK (line pressure above 50 PSI/345 kPa).
- 7.2. Inspect area around Line Solenoid exhaust port and clean if necessary (see document 3806380).
- 8. Re-install the Transmission Oil Pan and fill with new fluid and send the customer on their way.
 - 8.1. If fluid is clean and step 2 was Not OK (line pressure below 50 PSI) — follow current P0796/P2714 service procedure in SI.

Contact Information

The Contact Information has been redacted.

Please include the following information if leaving a message:

- Technician name
- Dealer name and phone number
- Complete VIN and repair order (R.O) number

On the repair order, document the date and time the call was placed (even if the engineer was not reached).

If engineering is unable to return the call within one hour, proceed with diagnosis and repair based on information found in SI.

Warranty Information

If engineer was contacted or required information was provided, use:

Labor Operation	Description	Labor Time
8486008*	Engineering Information - Inspect Transmission Fluid	0.5 hr
Add	Manually Cycle the Line Solenoid	0.5 hr

Version	1
Modified	Released June 18, 2021