



Preliminary Information

PIP5853C TCCM Drivability DTCs and Possible Low Battery Charge Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Chevrolet	Silverado 4500HD, 5500HD, 6500HD	2019 - 2023	All	All	All	All

Involved Region or Country	North America
Condition	<p>The vehicle may have a concern with the TCCM. causing DTC to set (see below) and possible a discharged battery.</p> <p>DTCs setting in the K69 Transfer Case Control Module:</p> <ul style="list-style-type: none"> C0396 SYM00 Range Actuator Position Sensor Circuit P215A SYM5A Vehicle Speed Signal - Wheel Speed Signal Not Plausible U0121 SYM00 Loss communication with Brake Control Module B0790 SYM00 Transfer Case Neutral Range Indicator Control Circuit C0550 SYM00 Electronic Control Unit C2A24 SYM00 Transfer Case Shift Pending Signal Not Plausible P0606 SYM00 Control Module Processor Performance C0398 SYM00 Range Actuator Position - Range Position Correlation P279C SYM00 Transfer Case High or Low Range Detected In Neutral Range B2725 SYM00 Transfer Case Range Selection Switch Circuit
Cause	Possible low voltage or poor ground to the TCCM and/or internal diode concern in the TCCM.

Correction:

There may also be a concern of a no shift with no DTC'S

When attempting an Actuator relearn there will be no noise heard from the actuator

In some instances, DTC C0398 may set following a failed re-learn attempt using either GDS2 or a manual relearn. During the GDS2 relearn an "Incorrect Power Mode" message may be displayed

If this is found Inspect for ignition 1 voltage at the Transfer Case Control Module at connector X4 terminal 25. It may be necessary to volt drop this circuit to see the low voltage

If there is no concern seen with the connections at the Transfer Case Control Module (K69) then inspect for a spread or damaged terminal at the X61A IP Junction Block connector X4 Terminal 25

If a damaged terminal is found, please repair using the appropriate terminated lead

Also, there may be an issue at G110

This ground may be loose; however, it will feel tight due to the anti-corrosion paint that has been applied. This paint will not only make the ground feel tight but will also seep behind the ground and cause a poor connection

If no concern is seen with the ignition 1 voltage G110 should be removed and inspected for a poor connection, for the presence of anti-corrosion paint behind the eyelet, or for a too long bolt installed.

See the pictures below





If no issue is found there may be a diode issue internal to the Transfer Case Control Module Diode

To test the diode follow the procedure below

Verify the TCCM internal diode function. With the TCCM connectors disconnected and the key off, set multimeter to Diode Test Setting, Red lead to the X2-6 terminal and the Black lead to the X2-4 terminal and record reading.

Next swap the leads red lead to X2-4 and Black lead to X2-6, record reading.

If both voltage readings are 1.65 +/- .33 volts.

There is no need to replace the TCCM if the voltages are 1.65 +/- .33 volts

Clear the codes and return the vehicle to the customer

If one or both readings is below 1.32, replace TCCM and retest for fault code.

Engineering is looking into the concern, and information will be updated when obtained.

Note: Some of these codes can be set by multiple failed shift attempts with this transfer case; we do need to have some movement. This could be as little as turning the steering wheel stop to stop, for both 4 high and 4 low range. This transfer case does not use a synchronizer, it is a gear to gear set up. Please refer to the following information from the Owner's Manual.

Per the Owner's Manual:

Shifting Into 2 High from 4 High

The ignition must be on and the vehicle must be moving less than 16 km/h (10 mph).

Turn the knob to 2 m.

The indicator light will remain on the selected setting when the shift is complete.

If the vehicle is moving more than 16 km/h (10 mph), the indicator light will flash and the shift will not occur.

If the shift does not occur, turn the knob back to the original position and attempt the shift again.

Shifting Into 4 Low

The ignition must be on and the vehicle speed must be less than 4 km/h (3 mph) with the transmission in N (Neutral).

Turn the knob to 4 n.

Wait for the 4 n indicator light to stop flashing before shifting the transmission into gear.

The indicator light will remain on the selected setting when the shift is complete.

If the vehicle is moving more than 4 km/h (3 mph), the indicator light will flash and the shift will not occur.

If the shift does not occur, turn the knob back to the original position and attempt the shift again.

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	Time
8486168*	TCCM Drivability DTC's and Possible Low Battery Charge Diode test	0.3 Hr.
*This is a unique Labor Operation for Bulletin use only.		

Version History

Version	4
Modified	05/17/2022 - Created On. 07/27/2022 - Updated to correct labor operation 09/28/2022 - Updated to add additional information from owner's manual 04/05/2023 - Updated to add additional diagnostic information



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