



Service Bulletin

PRELIMINARY INFORMATION

Subject: Service 4 Wheel Drive Message With DTCs C0398 Or C0326 Setting When Vehicle Is Operated Below 32 degrees (0 C)

Models: 2014 Chevrolet Silverado 1500
2015 Chevrolet Silverado 1500, Suburban Tahoe
2014 GMC Sierra 1500
2015 GMC Sierra 1500 Yukon Yukon XL
2015 Cadillac Escalade
2015 GMC Canyon
4 Wheel drive equipped with RPO NQH, NP0 or NQ6

This PI was superseded to update Models and Recommendation/Instructions. Please discard PIP5250.

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition/Concern

Some customers may comment on a Service 4WD message in the DIC. Technicians may find that the vehicle has a C0398 or C0326 stored in the Transfer Case Control Module.

Recommendation/Instructions

Starting with 14192 a calibration change was made to the TCCM for 2014, 2015 Pick-Up and 2015 utilities. With this new calibration the TCCM records the RPS value after vehicle shutdown and compares that value on vehicle start up. If the stored value for shut down and value on startup disagree the C0398 sets as a hard fault and will not clear without a scan tool. In auto 4wd when the vehicle is shifted to park the TCCM commands the actuator motor to the 4WD HI position. After the key is turned to the off position the TCCM performs a kiss point test during which the following actions take place. The actuator brake is released (allowing movement of the shift shaft) the actuator is driven to 2wd then driven back to the 4wd position, the brake is applied (holding the shift shaft) RPS position recorded to memory in the TCCM then power turned off to the actuator motor. If the brake allows the shift shaft to rotate more than 5.0 degrees after the position was written to memory then on the subsequent start up the vehicle will set a C0398 and default to 4wd hi to prevent an unwanted or unintended shift to neutral. In some instances in extreme cold conditions the actuator brake does not reapply fast enough allowing the shift shaft to rotate outside the 5 degree window

FOR VEHICLES WITH NP0 Transfer case operated in areas where the ambient temperature is below 32 * F (0°C) setting DTC C0398 update the calibration in the TCCM and operate the vehicle in all available transfer case positions. If no DTCs reset return the vehicle to the customer. New Software was released for the TCCM on 2/16/2015 to correct this condition on NPO equipped vehicles only. If any diagnostic trouble codes reset then perform published diagnostics.

FOR VEHICLES WITH NQH OR NQ6 Ensure that the TCCM has the latest software/calibration files. DO NOT re-program with the existing software. Record the freeze frame records and clear the codes. Then operate the vehicle in all available transfer case positions.

If any diagnostic trouble codes reset then perform published diagnostics.

If no diagnostic trouble codes reset and if the vehicle is operated in areas where the ambient temperature is below 32 * F (0°C), then advise the customer that G.M. engineering is investigating this issue and this PI will be updated when a repair is available. Dealers with a technical assistance case will be sent a communication when a repair is available.

To prevent the condition from occurring while a fix is developed, please instruct the customers to perform the following

1. PRIOR to shutting ignition off select the 2wd position on the transfer case shift control knob/switch.

2. Instruct customers to wait for the DIC "Shift In Progress" message to go away and 2wd shift indicator light in the switch to turn on solid. This will ensure that the transfer case is in the 2wd position when the vehicle is shut off.
3. Turn ignition switch OFF.

After startup and during normal driving conditions customers may use any transfer case modes.

Note: If the transfer case shift control switch is left in any other position (4Hi, Auto or 4Lo) during shut down these code(s) could be set. If this is the case, transfer case range selection will only be allowed when DTCs are cleared.

If the above procedure does not work please call technical assistance at the number you have been provided.

Warranty Information

For vehicles repaired under warranty use:

Labor Operation	Description	Labor Time
2810135	2810135 Transfer Case Shift Control Module Reprogramming with SPS	0.4 Hours

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

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