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Coding Information

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Title: 6th Gear Disable Information and Diagnostics

Applies To: DuraStar and TerraStar Vehicles with T-Handle Shifters

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

11/18/2013 - Initial Article Release
07/21/2015 - Corrected Coding

Description

This iKNOW describes the operating conditions of the 6th gear disable switch and indicator. The switch is located in either the instrument cluster or the switch pack. The purpose of the switch is so the operator can prevent the transmission from shifting to 6th gear(0.61:1). This makes the high gear limit of the transmission 5th gear(0.71:1) until the switch is returned to the off position. This can be useful in towing, fully loaded, or mountainous operating conditions to prevent the transmission from experiencing excessive shift cycling.

Operation

When the operator depresses the 6th gear disable switch in either the cluster or the switch pack, while the key is in the run position, the following events occur:

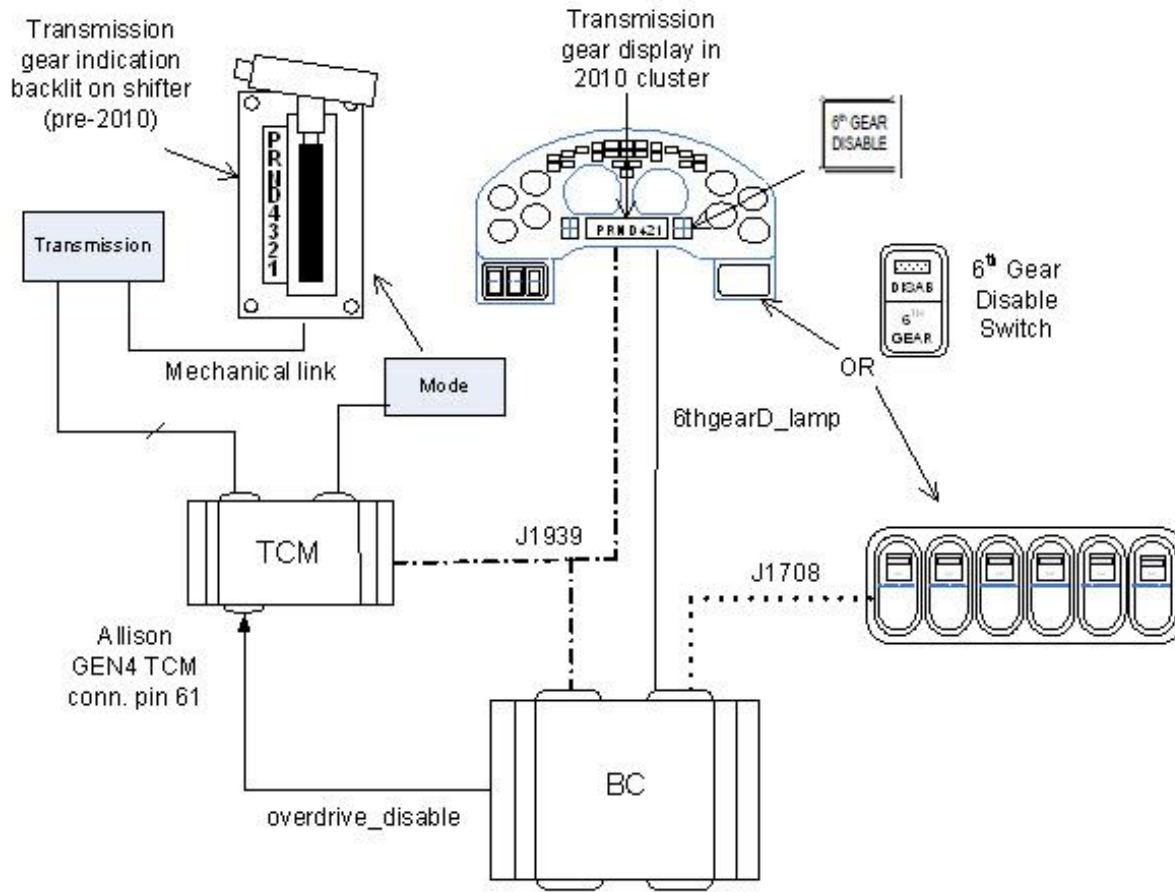
- Signal is sent to the B/C indicating the operator is requesting to disable 6th gear operation
- Body controller sends a ground from 1601_E4 Sixth_Gear_Disable to Pin 61 of the Allison Gen 4 TCM
- Indicator in 6th gear disable switch will illuminate solid
- Body controller sends a power from 1601_E16 Sixth_Gear_Disable_LED_Ind_Cmd to 1510_A

If there is a circuit problem with the low side driver from the body controller(1601_E4), the indicator in the switch will perform a fast flash.

Circuit Diagram

[6th Gear Disable Circuit Diagram](#)

System Overview



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