

Revisions to this document are noted
by a stripe in the left-hand margin

WATCH #445, Rev. A
August, 2015
Page 1 of 3

SUBJECT: Improved Fuel Economy with Neutral at Stop

MODELS AFFECTED: 1000 and 2000 Series Transmissions

Introduction:

Concurrent with the January 2013 release of 5th Generation Controls, Allison Transmission, Inc. will be implementing software and calibration changes to permit Neutral at Stop to function on 1000 and 2000 Series transmissions. The Neutral at Stop option on the 1000 and 2000 Series transmissions is enabled with an additional modified Valve Body hardware component that is not included in 1000 and 2000 Series transmissions without the Neutral at Stop feature. Refer to [Figure 1](#) (without Neutral at Stop) and [Figure 2](#) (with Neutral at Stop).

Feature Description and Benefits:

The Neutral at Stop feature automatically reduces the load on the engine when the vehicle is at a full stop and the transmission is still in a forward range. Neutral at Stop is designed to reduce fuel consumption and improve transmission cooling during idle conditions at stop. This feature is useful for city traffic and duty cycles with frequent stops that force the engine to idle.

Vehicle Requirements:

Neutral at Stop may be used on:

- Buses, coaches, motorhomes, on-highway trucks and on/off-highway trucks.
- Vehicles equipped with an air brake system.
- Vehicles meeting the acceptable weight, N/v, and several other installation requirements. Consult your Allison representative for additional details.

Neutral at Stop requires:

- Neutral at Stop is activated via a pressure switch that activates the specified wire in the Input/Output (I/O) package.
- Two (2) additional wires (circuits 131 and 137) are required in the wiring harness between the transmission and the TCM. Circuit 131 is located at TCM Pin 31 and circuit 137 is located at TCM Pin 37.

The Neutral at Stop option is made available through the calibration of the TCM when using certain vocational groups and packages. The use of Neutral at Stop also requires additional wiring and internal transmission hydraulic hardware in 1000/2000 Series transmissions.

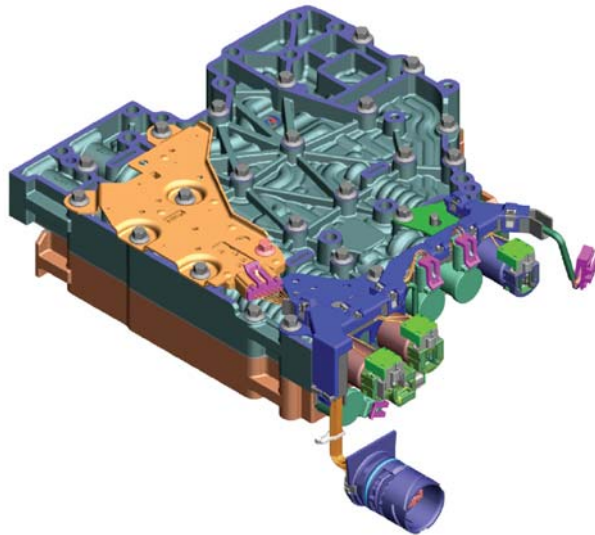


NOTE: The TCM calibration requires an I/O Package that includes Neutral at Stop. The calibration must have the parameter enabled and the correct GPI Package selected.



CAUTION: For transmissions equipped with the Neutral at Stop valve body hardware and additional wiring, the Neutral at Stop option **MUST** be enabled and activated or transmission system problems may result.

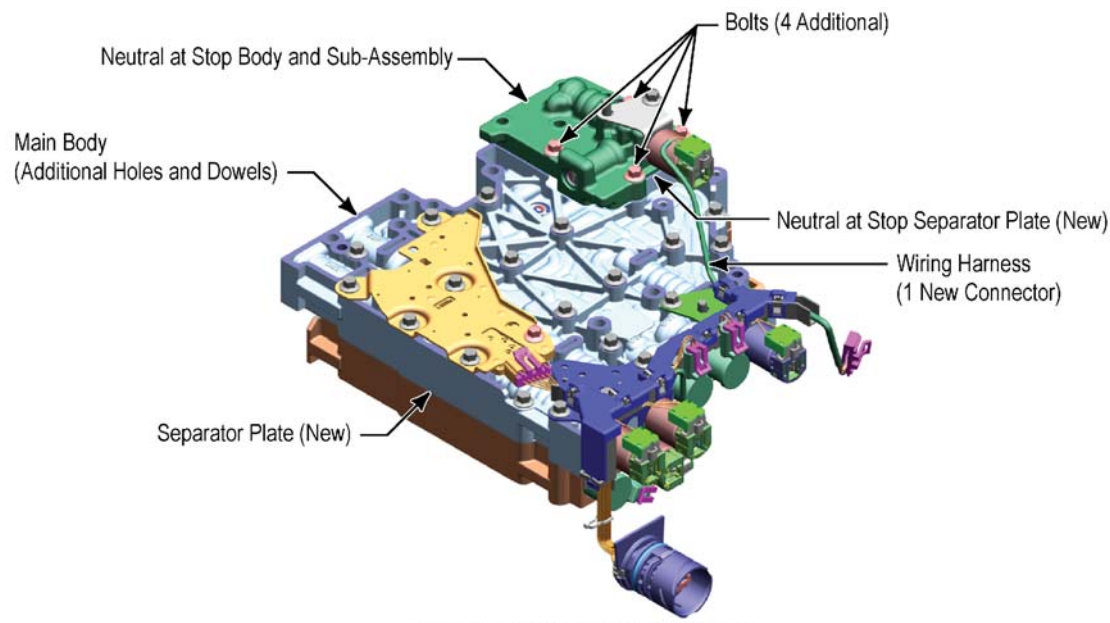
1. When setting up Neutral at Stop using the Allison Calibration Configuration Tool (ACCT), users must view the *Input* page of the ACCT and specify the Neutral at Stop answer in the *Engine Load Reduction Functions* parameter. Choose the answer Neutral at Stop, VIA GPI AS DEFINED IN THE SELECTED GPIO PACKAGE. Additionally, select a GPIO Package that has a wire assigned to input function AS Neutral at Stop.
2. When specifying Neutral at Stop in the transmission hardware, use the *1000/2000 Family CSS configurator* on the Allison Transmission Extranet to ensure that the transmission is built with the necessary hydraulic system components.



PRODUCTION (Without Neutral at Stop)

361390

Figure 1. Valve Body Assembly (Without Neutral at Stop)



PRODUCTION (With Neutral at Stop)

361400

Figure 2. Valve Body Assembly (With Neutral at Stop)