

International® T14 (2023)

Overview: *Split Shaft*

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General Overview: Split Shaft

This feature provides programming for Split Shaft PTO support.

This optional feature is used in conjunction with AESC and is targeted for applications that use a transfer case or auxiliary driveshaft.

This document will address the unique Split Shaft PTO functionality for the T14 transmission.

Description and Operation

NOTE: Refer to the vehicle operation and maintenance manual, as well as the T14 transmission operation and maintenance manual, for additional information on operation and indications.

The Split Shaft PTO feature provides TCM programming allowing the owner/operator to select the customer programmable parameters for the desired vehicle configuration.

Inputs to the body control module (BCM) will generate a message to the TCM notifying the TCM that split shaft operation is being activated.

Look at the configuration in DLB to determine which connectors and pins are configured as inputs.

Body controller features must be programmed correctly to support split shaft PTO functionality.

Programmable Parameters

“Customer Programmable” parameters can be adjusted differently than the production assembly plant setting to meet customer’s needs. If parameter is indicated as non - customer programmable, the parameter setting is preset from the factory and can’t be changed without dealer authorization.

Parameter Name	Description	Possible Values	Customer Prgm?	Recommended Setting
TCM PTO Split Shaft Configuration (PSSC) (D53B 000)	Specifies if the vehicle is equipped with a split shaft power take-off	1,Without PTO split shaft 2,With PTO split shaft	Fleet	Customer
TCM Split Shaft Deactivation with Brake Pedal (SD) (D00F 000)	If the vehicle is operating with an activated split shaft-mounted PTO and the brake pedal is pressed, this parameter defines which position the clutch will move to. In other words, keeping the clutch closed will keep the PTO running despite the brake pedal being pressed while opening the clutch will deactivate the PTO.	1,Open clutch 2,Keep clutch closed	Fleet	Customer Chosen
TCM PTO Preselected Gear (PTOSG) (D008 000)	The preselected gear that is automatically engaged when a split shaft PTO is activated. The default value 0 means that no gear is preselected, and the system will engage direct gear when activating a split shaft PTO.	NA	Fleet	Customer Chosen
PIM Transfer Case Input Mode Select (B10F 01E)	This parameter sets the split shaft mode for AESC operation. If set to (Driveline Engaged): Split shaft is disabled. If set to (Split Shaft Engaged): Split shaft is enabled.	- Driveline Engaged - Split Shaft Engaged	YES	Customer Chosen NOTE: Must be set to Split Shaft Engaged if Split Shaft operation is desired.
PIM Vehicle Speed Source Selection When Split Shaft is Active Under development	This parameter sets the speed signal source during split shaft operation	- Wheel Speed Selected When Split Shaft is Enabled - Output Shaft Speed Selected When Split Shaft is Enabled	YES	Customer Chosen

Parameter Name	Description	Possible Values	Customer Prgm?	Recommended Setting
PIM Transfer Case Input Mode Select (B10F 01E)	This parameter sets the split shaft mode for AESC operation. <ul style="list-style-type: none"> If set to (Driveline Engaged): Split shaft is disabled. If set to (Split Shaft Engaged): Split shaft is enabled. 	- Driveline Engaged - Split Shaft Engaged	YES	Customer Chosen NOTE: Must be set to Split Shaft Engaged if Split Shaft operation is desired.
CEM1 Constant Engine Speed Limiter with Split Shaft PTO (MSS) (1056 000)	Provide a constant engine speed limiter for split shaft PTO. Applied if a Split Shaft PTO is engaged. Engagement of the split shaft PTO is reported to the ECM with a CAN message, SPN 3462, from the BCM. A split shaft PTO is installed between gearbox and rear axle and cuts the propulsion to that rear axle, so split shaft PTO is a stationary PTO.		Dealer	Customer Chosen
BCM Split shaft Feature is under development				

Frequently Asked Questions

NA

Definitions/Acronyms

Acronym	Definition
BCM	Body Control Module
DLB	Diamond Logic Builder
TCM	Transmission Control Module
PIM	Powertrain Interface Module
PTO	Power Take Off
AMT	Automated Manual Transmission