

International® T14 (2023)

Overview: *Downhill Speed
Control*

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General Overview: Down Hill Speed Control

This feature provides programming for downhill speed control support.

This document will address the downhill speed control 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 downhill speed control feature provides TCM and BCM programming allowing the owner/operator to select the customer programmable parameters for the desired vehicle configuration.

General Description There are three distinct types of Downhill Speed Control (DHSC).

Manual DHSC: The least complex variant of DHSC is manual. This variant is activated by pressing a switch when the cruise control is not active.

Automatic DHSC: This variant is activated when the brake pedal is pressed. To be able to avoid auxiliary braking during slippery conditions automatic DHSC is disabled when the DHSC enable switch is in the 'Off' position in the dashboard.

Offset DHSC: This is the most complex variant of DHSC and can only be used in combination with Cruise Control (CC). This variant has a DHSC reference speed which is an offset to the cruise controller. When the cruise controller speed is changed, the DHSC speed is also changed and always keeping the same offset. The offset can be adjusted by the driver. The larger the interval between CC and DHSC speed is the more economic situation. There is also a momentum state which makes it possible for the driver to temporarily deactivate offset DHSC. This is usually used when the offset DHSC is braking, and the driver sees a coming uphill. In this case he/she can press the accelerator pedal to pause the braking and let the vehicle increase in speed before going uphill. The offset DHSC will get back to normal when the accelerator pedal is released.

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
Down Hill Speed Control Momentum Gain (D032 000)	When the vehicle is braking, with the Downhill Speed Control, and at the end of the downhill speed this function will release the brakes and increase the speed slightly to gain momentum to save fuel.	1, Disabled 2, Standard	Dealer	Customer Chosen
DHSC Max Offset (D063 000)	The maximum speed increase with regard to the cruise control set speed that is allowed for the DHSC feature (maximum possible value for the driver to set).	1 to 10 mph	YES	7 mph
DHSC Default Offset (D064 000)	The default DHSC engine brake offset when cruise control is active	1 to 10 mph	YES	5 mph
DHSC Type (D066 000)	Sets which type of downhill speed controller that should be enabled / disabled. Offset is the offset brake for cruise controller if locked the driver is unable to change the offset. Auto is activation via the brake pedal, new set point is set when the brake pedal is released	1, Disabled 2, Enabled - Auto, Manual and Offset 3, Enabled - Auto, Manual and Locked Offset 4, Enabled - Manual and Offset 5, Enabled - Manual and Locked Offset 6, Enabled - Locked Offset	Dealer	5, Enabled - Manual and Locked Offset
BCM PROG, DOWNHILL SPEED CONT (597431)	Adds 2 switches in the switch pack. One for DHSC enable and another for DHSC control.	Disabled Enabled	Yes	Customer Chosen

Frequently Asked Questions

NA

Definitions/Acronyms

Acronym	Definition
BCM	Body Control Module
TCM	Transmission Control Module
PIM	Powertrain Interface Module
AMT	Automated Manual Transmission
PCC	Predictive Cruise Control
DHSC	Downhill Speed Control
CCAP	Cruise Control with Active Prediction.