

# International® T14 (2023)

## Overview: *Driver Proof Functions*

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## General Overview: Driver Proof Functions

Programming for Driver Proof functions.

There are 4 Driver Proof Functions. Protecting the clutch from excessive wear, blocking manual mode and manual gear shifts above a programmable vehicle speed, allowing automatic downshifts in manual mode, and limiting start gear to no higher than calculated start gear in TCM.

This document will address the Driver Proof 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.*

If the driver is using the accelerator pedal in a manner that is using the clutch in a slipping drive condition, for a long time, there is a risk for increased clutch wear. If this is the case, there is a setting for forcing the clutch to a non-slipping driving condition.

While the vehicle is in motion in automatic mode, the driver can temporarily select a gear other than the one selected from the system by bumping up or down the stalk shifter. The transmission can be programmed to engage the most efficient gear for the current driving situation to prevent increased fuel consumption.

**Driver Proof Auto Engage Clutch:** If the accelerator pedal position is constant and the clutch continues to slip, the clutch will be automatically engaged, when setting "0xD00C - Driver Proof Auto Engage Clutch" to 2 - Enabled. Maneuverability is affected in a negative way when activating this function. Due to the impaired drivability this function is not active in maneuvering mode or when in Reverse.

**Speed Limit for Blocking Manual Gear Changes:** Controls the speed limit above which manual mode and manual gear changes are inhibited if the parameter D035 "Driver Proof Fuel Consumption" is enabled (set to 2 or 3).

**Driver proof fuel consumption:** If the driver selects manual mode to operate the engine at a less efficient engine speed, there is a possibility to force the system to automatic mode. There are two levels in the parameter "0xD035 -

Driver Proof Fuel Consumption". The levels are "2 - Force Auto, Manual Gearshifts Not Allowed" and "3 - Force Auto, Manual Gearshifts Allowed".

**Speed Limit for Blocking Manual Gear Changes:** There is a speed limit to transfer from manual to automatic. The parameter "0xD00E - Speed Limit for Blocking Manual Gear Changes" sets the speed where the system is pushed from Manual to Automatic (D). The speed limit is typically set to 30 m/h. The reason for allowing Manual Mode (M) below a certain speed is for increased drivability when fuel consumption is not prioritized.

**Driver Proof Energy Start Gear:** If enabled, the start gear is limited to the value calculated by TCM to limit clutch energy and avoid a launch gear that is too high.

**Automatic Down shift In Manual Allowed:** If this parameter is enabled, the gearbox will automatically make downshifts in manual mode to avoid engine stalling. If it is disabled, the driver is in complete control of manual mode downshifts.

### Programmable Parameters

The following programmable parameters are required for Driver Proof configuration in the TCM. These parameters should be programmed to match what is desired on the vehicle.

Parameters indicated as "Customer Programmable" can be adjusted differently than the production assembly plant setting to meet the customer's needs. If the parameter is indicated as non-customer programmable, the parameter setting is preset from the factory and cannot be changed without authorization.

#### Parameters for Driver Proof Functions

Parameter Value	Description	Possible Values	Cust Pgrm	Recommended Settings
Driver Proof Auto Engage Clutch (D00C)	If the accelerator pedal position is constant and the clutch continues to slip, the clutch will be automatically engaged. Maneuverability is affected in a negative way, but excessive clutch wear is avoided.	1, Disabled 2, Enabled	YES	1, Disabled
Speed Limit for Blocking Manual Gear Changes (D00E)	Controls the speed limit above which manual mode and manual gear changes are inhibited if the parameter D035 "Driver Proof Fuel Consumption" is enabled (set to 2 or 3).	0 to 55 mph	YES	30
Driver Proof Fuel Consumption (D035)	Controls inhibition of manual mode and manual gear changing in automatic mode ("bumping"). Note that inhibition will only be active at speeds higher than the limit defined by parameter D00E. If set to disabled, both manual mode and bumping will always be allowed.	1, Disabled 2, Force Auto, manual gearshifts not allowed 3, Force Auto, manual bump up/down shifts	YES	1, Disabled

Parameter Value	Description	Possible Values	Cust Pgrm	Recommended Settings
	If set to Force Auto Manual Gearshifts Not Allowed, both manual mode and bumping will be inhibited. If set to Force Auto Manual Gearshifts Allowed, manual mode will be inhibited but not bumping.	allowed but not manual mode		
Driver Proof Energy Start Gear (D093 000)	Used to, when enabled, prevent the driver from choosing a Start Gear above the calculated Start Gear by TCM2	1, Disabled 2, Enabled	YES	1, Disabled
Automatic Downshift in Manual Allowed (D030 000)	If this parameter is enabled, the gearbox will automatically make downshifts in Manual Mode.	1, Disabled 2, Enabled	NO	2, Enabled

## Frequently Asked Questions

NA

## Definitions/Acronyms

Acronym	Definition
TCM	Transmission Control Module
PIM	Powertrain Interface Module
AMT	Automated Manual Transmission