

MaxxForce[®] DT, 9, 10 (2010)

Overview: *Cruise Control*

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General Overview: Cruise Control

The Cruise Control feature controls vehicle speed by controlling engine speed utilizing the Engine Control Module (ECM) memory. Cruise Control offers driving comfort by providing a method for the operator to set and maintain a constant vehicle speed without using the accelerator pedal. This is especially useful when the operator is required to drive on roads at a constant speed for many miles.

This document will address the unique Cruise Control functionality, for the MaxxFace® DT, 9, 10.

Description and Operation

Operation

The Cruise Control feature uses two switches to control the six main Cruise Control functions (Resume, Set, Accel, Coast, Bump Up and Bump Down).

- The first switch is the ON/OFF switch that allows the operator to enable or disable the system. The ON switch LED indicator turns ON and the text message "CRUISE" appears in the gauge cluster when the system is enabled.
- The second switch is the RESUME/ACCEL - SET/COAST switch that allows the operator to increase or decrease the vehicle speed set point. The text message "CRUISE SET" appears in the gauge cluster when the Cruise Control is active and set. Functionality, of the buttons, is different depending on if the button is momentarily pressed or if the button is pressed and held.

SET/COAST is labeled SET/CRUISE on some models; however, SET/COAST will be used in this document

These same controls (RESUME/ACCEL and SET/COAST) are also used for the engine speed control Power Take-Off (PTO) feature. Therefore, commands from the switches may become part of PTO if the vehicle is traveling at lower speeds and conditions are appropriate for PTO operation. See PTO In Cab or Remote Engine Speed Control Feature documents for further details.

To activate cruise control

- Cab mounted cruise enable switch (CRUISE ON) must be set to ON.
- Vehicle speed must be above the Minimum Cruise Control Speed parameter setting and below the Maximum Cruise Control Speed parameter setting.

To set cruise control

- With cruise enable switch set to ON, accelerate to the desired vehicle speed.
- Momentarily press and release SET/COAST to select the current vehicle speed as the Cruise Control set speed.

To increase or decrease cruising speed

- Press and hold RESUME/ACCEL to accelerate the vehicle and increase the current Cruise Control set speed.
- Press and hold SET/COAST to decelerate the vehicle and decrease the current cruise control set speed.
- Momentarily bump RESUME/ACCEL to incrementally increase the Cruise Control set speed.
- Momentarily bump SET/COAST to incrementally decrease the Cruise Control set speed.

To deactivate cruise control

- Press the service brake or clutch pedal.
- Press CRUISE switch OFF.

To resume cruise control

- Momentarily press and release RESUME/ACCEL to reactivate Cruise Control to the previous set speed.

Do not use the Cruise Control system when unpredictable driving conditions are present. Such conditions include heavy traffic, roads that are winding, icy, snow covered, slippery or with a loose surface. These conditions may cause wheel slippage and loss of vehicle control, resulting in property damage, personal injury or death.

Improper use of the Cruise Control system can result in collision causing property damage, serious injuries or death. Be sure to read, understand and follow all operating instructions carefully.

Feature interaction

The Cruise Control feature interacts with the following engine features:

- Engine Speed Control (PTO) – There is no direct interaction with PTO, but it is important to understand that Cruise Control and PTO use the same switches. Refer to the PTO In Cab or Remote Engine Speed Control feature documents for more information.
- Cruise Control and Accelerator Pedals – The Maximum Cruise Control Speed and the Accelerator Vehicle Speed Limit parameters can be used to encourage driver behavior.
- Engine Retarder – The engine retarder functionality related to Cruise Control is described in the Engine Retarder features document.

- Vehicle Speed Governor - Cruise Control speed settings may be affected by the vehicle speed governor. Refer to the Vehicle Speed Governor feature document for more information.

Programmable Parameters

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 can't be changed without dealer authorization.

Parameter Value	Description	Possible Values	Cust Prgm	Recommended Settings
Cruise Control Mode (7600)	Select this parameter if the benefits of cruise control are desired.	0: Disable 1: Enable	YES	Customer Chosen
Cruise Control Vehicle Speed Low Limit (7603)	This parameter sets the lowest vehicle speed at which the Cruise Control feature may remain active or be activated. It is intended to block the operator from cruising in urban areas.	25 - 100 MPH	YES	Customer Chosen
Cruise Control Vehicle Speed High Limit (7604)	This parameter sets the highest vehicle speed at which the Cruise Control feature may remain active or be activated. This parameter can be used to encourage driver behavior.	30 - 127 MPH	YES	Customer Chosen (See Note 1 & 2)

Parameter Setup

Cruise Control Application

This section describes one feature application and how the programmable parameters can be effectively configured for this application. This is not a comprehensive list, and does not include all possible applications that an owner/operator might encounter.

Please review the description and operation section and the programmable parameters for a better understanding of how the various Cruise Control parameters might be best configured to the vehicle.

Cruise Control Example

The customer desires basic Cruise Control operation. Set programmable parameters to the values shown in the table below:

Parameter Name	Action Required
Cruise Control Mode (7600)	Set to 1 (On)
Cruise Control Vehicle Speed Low Limit (7603)	Set to 30 mph
Cruise Control Vehicle Speed High Limit (7604)	Set to 70 mph

Frequently Asked Questions

Can the engine retarder feature be used to help cruise control maintain the vehicle speed?

Yes, the cruise control automatic engine retarder feature will engage the engine retarder at a programmable speed above cruise control maximum vehicle speed. This allows for better speed control and can reduce vehicle brake system wear. The engine brake switch must be ON for this feature to work correctly. Refer to the “Engine Retarder” document for more information.

Definitions/Acronyms

The following terms are referenced in this document:

Acronym	Definition
ECM	Engine Control Module
PTO	Power Take Off