

# MaxxForce<sup>®</sup> 7 (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 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 MaxxForce® 7.

## Description and Operation

### Operation

The Cruise Control feature uses three 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 SET/COAST switch that allows the operator to decrease the vehicle set point and to set desired cruise vehicle speed. The text message "CRUISE SET" appears in the gauge cluster when the Cruise Control is active and set. Functionality of the button is different depending on if the button is momentarily pressed or if the button is pressed and held.
- The third switch is the RESUME/ACCEL switch that allows the operator to increase the vehicle speed set point and to resume to previous cruise vehicle speed. Functionality of the button 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/OFF) 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 press and release RESUME/ACCEL to incrementally increase the Cruise Control set speed.
- Momentarily press and release 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.

*The Cruise Control system must never be used on roads where you cannot drive safely at a steady speed, including city streets, winding roads and sharp curves, downhill grades, poor road conditions, such as gravel, dirt, ice or wet surfaces (wet surfaces may increase the risk of hydroplaning), or in fog, heavy rain or snowy conditions. These conditions may cause wheel slippage and loss of vehicle control, resulting in property damage, personal injury or death. Consult the Vehicle Operator's Manual for applicable details regarding use and operation.*

## **Feature Interaction**

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

## Programmable Parameters

The following programmable parameters are available with the Cruise Control feature. These parameters should be programmed in a manner, which provides the appropriate level of warning and protection to meet the customer's needs.

To meet the customer's needs, programmable parameters can be reset from the production plant settings. If the parameter is indicated as not programmable, the 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 to switch ON or OFF the cruise control feature.	0: Disable 1: Enable	YES	Customer Chosen
Cruise Control Vehicle Speed Ramp Rate (7602)	This parameter sets the rate that the vehicle speed will increase/decrease while being commanded to accelerate/decelerate.	0 to 15 MPH/SEC.	YES	
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.	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.	30 - 127 MPH	YES	Customer Chosen

## 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 system operation.

Set programmable parameters to the values shown in the table below:

Parameter Name	Action Required
Cruise Control Mode (7600)	Set to 1
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

None

## Definitions/Acronyms

The following terms are referenced in this document:

Acronym	Definition
PTO	Power Take Off