MaxxForce® 15 (2011)

Overview: *Engine Warning & Protection System*

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General Overview: Engine Warning And Protection System

The Engine Warning and Protection System (EWPS) feature is designed to protect the engine from damage by monitoring critical engine data such as engine speed, coolant temperature, oil pressure and coolant levels. This feature will alert the operator using a combination of visual and audible warnings when critical engine parameters have been exceeded.

This document will address the unique engine warning and protection system functionality for the MaxxForce® 15.

Description and Operation

Operation

The EWPS feature uses an amber warning lamp and a red stop lamp located in the gauge cluster for visual display indications that critical engine parameters have been exceeded. An audible beep is provided as an additional EWPS operator warning.

Red Stop Lamp (RSL)

The RSL turns ON when a malfunction occurs which may result in vehicle damage and could affect safe vehicle operation. The vehicle should be safely pulled over and parked as soon as possible.

The EWPS is capable of providing up to two levels of protection. The second level corresponds to the highest severity. It is essential that the operators be trained to recognize and understand the warnings associated with the EWPS feature.

1st Level (Warning)

- The gauge cluster sounds 3 short audible beeps

2nd Level (Shutdown) – Optional

- The RSL flashes in the gauge cluster

- The gauge cluster sounds a continuous audible beep

- The engine shuts down 30 seconds (programmable) after the RSL begins to flash

The EWPS feature may also de-rate the engine to protect itself from damage. Engine speed and power may be affected during this event

If the engine shuts down, it can be restarted by cycling the key switch; however, the engine will shut down after 30 seconds if the second level is still being exceeded

Programmable Parameters

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

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 Pgrm	Recommended Settings
Engine Warning And Protection System Mode (7700)	This parameter determines how the EWPS Feature reacts if critical engine operating limits are exceeded. If set to (1) – The EWPS feature provides a visual and audible indication if critical engine operating limits exceed a threshold. If set to (2) – The EWPS feature provides 2 levels of protection. • (Less Severe) – A visual and audible indication occurs if critical engine operating parameters exceed the 1st threshold. • (More Severe) – The EWPS feature will shut down the engine if critical engine operating parameters exceed the 2nd threshold.	**0:** Standard Warning **1:** 3-Way Warning **2:** 3-Way Protection	YES	**2:** 3-Way Protection
EWPS Shutdown Time (7731)	This parameter sets the time from which the red stop lamp (RSL) begins to flash before the engine shuts down. This allows the operator time to safely pull over and park the vehicle. For example, if set to a value of 30 the engine will shut down 30 seconds after the RSL begins to flash	30 to 3,276 seconds	YES	30 seconds
Vehicle Over Speed Level 1 (7723)	This parameter sets the speed at which the 1st vehicle over speed warning will occur.	0 to 124 mph	YES	Customer Chosen
Vehicle Over Speed Level 2 (7724)	This parameter sets the speed at which the 2nd vehicle over speed warning will occur.	0 to 124 mph	YES	Customer Chosen

Parameter Setup

EWPS 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 engine parameters might be best configured to the vehicle.

EWPS Example

The customer desires EWPS with engine shutdown enabled. Engine protection levels, warnings and shutdowns along with a visual warning if a sensor has failed are requested. Set programmable parameters to the values shown in the table below:

Parameter Name	Action Required
Engine Warning And Protection System Mode (7700)	Set to 2
EWPS Shutdown Time (7731)	Set to 30

Frequently Asked Questions

Can I restart the engine immediately after the EWPS feature has shut the engine down?

Yes, just cycle the key switch and restart the engine. However, if the critical operating condition is still present then the engine will shut down again after 30 seconds (programmable time).

Definitions/Acronyms

The following terms are referenced in this document:

Acronym	Definition
EWPS	Engine Warning And Protection System
RSL	Red Stop Lamp