NAVISTAR ENGINE GROUP

# MaxxForce® 7 (2007-2009)

## 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, 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 EWPS functionality for the MaxxForce® 7.

# Description and Operation

## Operation

The EWPS feature uses a red stop lamp (RSL) 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 as 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 RSL flashes in the gauge cluster
- 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

> *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*

## Feature Interactions

The EWPS feature interacts with the following engine features:

- Vehicle Speed Governor – The vehicle over speed warning indication provided by EWPS may occur at different vehicle speeds depending on the accelerator vehicle.

## 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.

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 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. | **0:** Standard Warning (Overspeed, Overheat)<br>**1:** 3-way Warning (Overspeed, Overheat, Low Oil Pressure, Low Coolant)<br>**2:** 3-way Protection (Overspeed, Overheat, Low Oil Pressure, Low Coolant)<br>**3:** 2-way Warning (Overspeed, Overheat, Low Oil Pressure) | YES | Set to 0 |

## 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.

### EWPS Example

The customer desires EWPS with engine shutdown enabled and standard vehicle over speed warnings. Both with engine protection levels, warning and shutdown, along with a visual warning if a sensor has fail 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 "0" |

## 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 |