

MaxxForce[®] 7 (2010)

Overview: *Exhaust Brake System*

TABLE OF CONTENTS

General Overview: Exhaust Brake System 1
Description and Operation 1
Programmable Parameters 1
Frequently Asked Questions..... 2
Definitions/Acronyms 2

General Overview: Exhaust Brake System

The Exhaust Brake System is used to supplement the function of the primary braking system. This feature helps to decelerate the vehicle and maintain a steady speed on declines. The Exhaust Brake System can also reduce wear of vehicle brakes and maximize fuel efficiency.

This document will address the unique Exhaust Brake System functionality for the MaxxForce® 7.

Description and Operation

The MaxxForce® 7 Exhaust Brake System is controlled by a dash mounted Exhaust Brake Enable switch (EBE). The EBE switch is capable of communicating status changes between the Body Controller (BC) and the J1939 data link. The EBE switch can also be a hardwired input to the Engine Control Module (ECM).

Operation

When the EBE switch is in the ON position, the Exhaust Brake System operates when the following interlock conditions are true:

- EBE status is ON
- Torque converter is locked
- Drivetrain engaged
- ABS is not active
- APS signal less than a predetermined value
- Fueling is less than a predetermined value
- No ABS, APS, or BPP faults present.

Depending on which Vehicle Retarder Control Mode is selected; the exhaust brake will only operate after the accelerator pedal is released or after the brake pedal is applied, when the feature is enabled.

Programmable Parameters

The following programmable parameters are available with the Exhaust Brake System. Full benefits of this feature will be realized when programming is done based on the vehicle conditions expected.

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
Vehicle Retarder Control Mode (70003)	<p>This parameter determines the exhaust brake mode.</p> <p>If set to (0) - The Exhaust Brake functionality is disabled.</p> <p>If set to (1) - Latch Mode: If PTO and cruise are not ON when the driver releases the accelerator pedal, exhaust brake status will automatically activate ON.</p> <p>If set to (2) - Coast Mode: The Exhaust Brake is enabled only when the brake pedal is depressed.</p>	<p>0: Disable</p> <p>1: Latch</p> <p>2: Coast</p>	YES	Customer Chosen

Frequently Asked Questions

My driver states the exhaust brake operates only when the brake pedal is depressed?

The VRE parameter is set to coast (2). The exhaust brake operates after the brake pedal is depressed. When the VRE parameter is set to latch (1), the exhaust brake operates after the accelerator pedal is released and PTO or Cruise is not ON.

Definitions/Acronyms

The following terms are referenced in this document:

Acronym	Definition
EBE	Exhaust Brake Enable
ABS	Anti Lock Brake System
APS	Accelerator Pedal Position Sensor
BC	Body Controller
BPP	Brake Pedal Position Sensor
ECM	Engine Control Module
CAN	Controller Area Network
PTO	Power Take Off