

# MaxxForce<sup>®</sup> DT, 9 and 10 (2010)

Overview: *Engine Fan Control*

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## General Overview: Engine Fan Control

The Engine Fan Control (EFC) feature is designed to permit engine fan control configuration for particular engine applications. The primary purpose of the engine fan is to allow the engine to run at its regulated operating temperature increasing engine performance. It is also used to assist in cooling the refrigerant for the A/C condenser.

Programmed fan control can reduce engine fan noise, fan loading on the engine and improve fuel economy under certain operating conditions.

This document will address the unique EFC functionality for the MaxxForce® DT, 9, 10.

## Description and Operation

### Operation

The EFC feature operates automatically, with the exception of the optional manual fan override switch. If the vehicle is equipped with a manual fan override switch, the operator may activate the fan at 100% fan speed at any time. The manual fan override switch is located in a switch pack.

## Programmable Parameters

The following programmable parameters are available with the EFC feature.

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 Fan Control Mode (9000)	This parameter determines the functionality of the Engine Fan Control (EFC) feature. <ul style="list-style-type: none"> <li>▪ <b>If set to (1)</b> - The feature includes: <ol style="list-style-type: none"> <li>1. Cooling fan turns ON at 100% and OFF based on engine coolant temperature.</li> </ol> </li> </ul>	<b>0:</b> Disable <b>1:</b> ON/OFF Coolant Temp Control <b>2:</b> ON/OFF Temp Control and Retarder	YES	This parameter setting is chosen based on the fan type installed on the vehicle.
Fan ON Temperature for Engine Cooling Control (9002)	This parameter sets the engine coolant temperature threshold for engine fan ON command; when the Engine Coolant Temperature (ECT) exceeds this threshold, the fan will turn ON.  <b>WARNING: Changing of this parameter may have an adverse effect on the engine life if done improperly.</b>	-40° C (-40°F) to 150° C (302°F)	YES	100°C (212°F)

Parameter Value	Description	Possible Values	Cust Pgrm	Recommended Settings
Fan OFF Temperature for Engine Cooling Control (9003)	This parameter sets the engine coolant temperature threshold for engine fan OFF command; when the ECT drops below this threshold, the fan will turn OFF. <b>WARNING: Changing of this parameter may have an adverse effect on the engine life if done improperly.</b>	-40° C (-40°F) to 150° C (302°F)	YES	95.5°C (204°F)
Total Time Fan Duty Cycle Protection is Enabled (9018)	This parameter sets the minimum time the fan will remain ON at each activation if the fan has been cycled ON-OFF-ON too frequently. This is to protect the fan drive lining from wear and tear due to excessive and rapid fan cycling.	0 to 120 seconds	NO	30 seconds
Extended Fan On Time During Fan Duty Cycle Protection (9019)	This parameter sets the period of time where the extended fan ON time parameter (9018) is in effect.	120 to 1800 seconds	NO	120 seconds

## Parameter Setup

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 for your vehicle.

Possible applications for the fan include.

- Manual fan override – An additional manual fan override switch is required.

## Frequently Asked Questions

N/A

## Definitions/Acronyms

The following terms are referenced in this document:

Acronym	Definition
EFC	Engine Fan Control
ECM	Engine Control Module
ECT	Engine Coolant Temperature