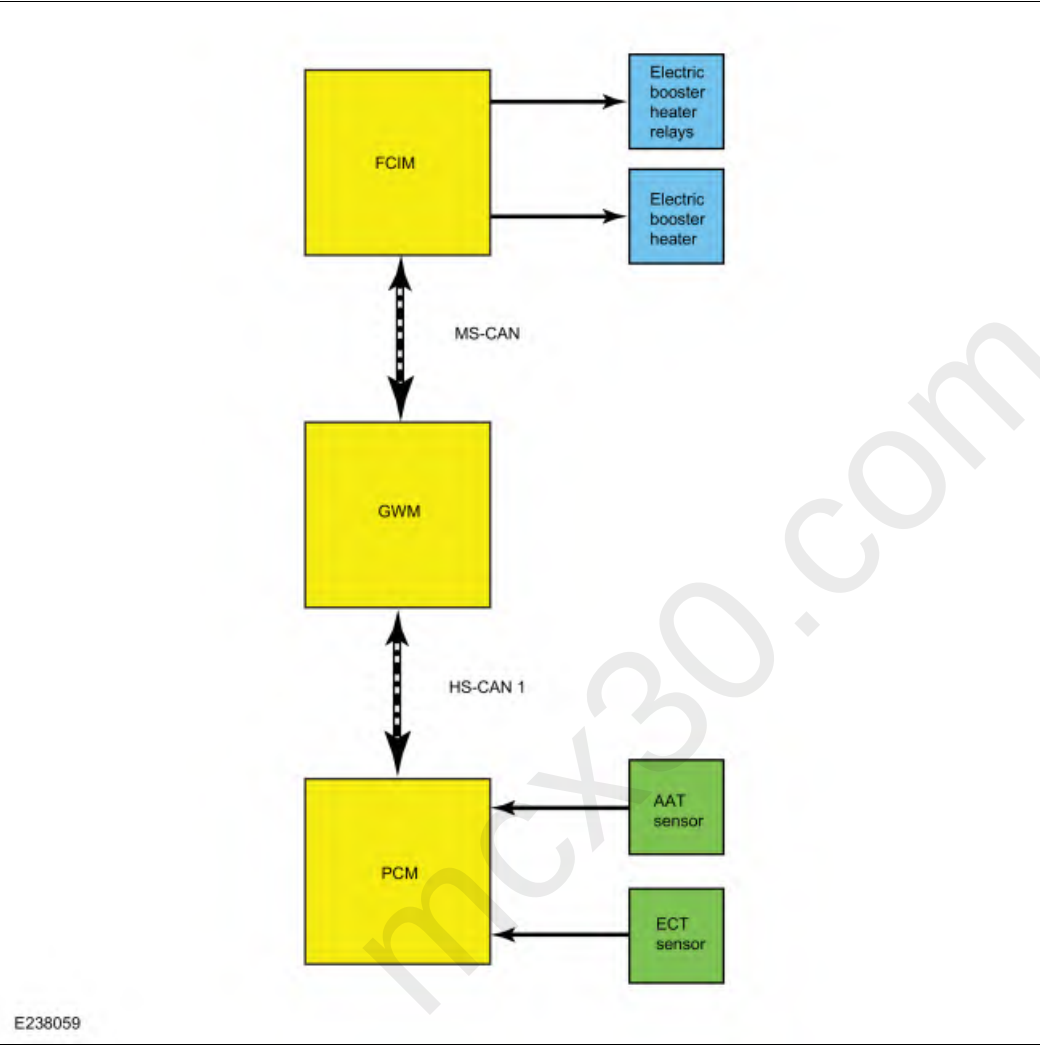


Supplemental Climate Control - System Operation and Component Description

System Operation

System Diagrams



Item	Description
1	FCIM
2	GWM
3	PCM
4	Electric booster heater
5	Ambient Air Temperature (AAT) sensor
6	ECT sensor
7	Electric booster heater relays

Network Message Chart

Module Network Input Messages - FCIM

Broadcast Message	Originating Module	Message Purpose
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Broadcast Message	Originating Module	Message Purpose
Engine coolant temperature	PCM	This message contains raw value from the engine coolant temperature sensor.
Ambient air temperature	PCM	This message contains raw value from the ambient air temperature sensor.

Electric Booster Heater Operation

The electric booster heater ensures that the passenger compartment can be quickly warmed up when ambient temperatures are low. It is a heater element made up of ceramic resistors that is mounted in the climate control housing. It directly heats the airflow into the passenger compartment rapidly in the case of low ambient temperatures.

The current is switched via three electric booster heater relays located in the BJB. The electric booster heater power and ground is supplied via a plug-in connection.

The FCIM energizes the electric booster heater relays when the operating parameters have been met. The electric booster heater relays are activated or deactivated individually or together by the FCIM as needed.

Electric booster heater operating parameters:

- Engine is running
- HVAC controls have been switched to the highest temperature setting
- Engine coolant temperature is below approximately 75°C (167°F)
- Ambient air temperature is below approximately 12°C (53.6°F)
- Sufficient generator capacity is available

The electric booster heater is deactivated when an engine coolant temperature of approximately 85°C (185°F) or an ambient air temperature of approximately 15°C (59°F) is exceeded.

Component Description

Electric Booster Heater

The electric booster heater, also known as the PTC heater, is made up of three separate ceramic resistor elements.
