

THERMAL MANAGEMENT OPERATION

The purpose of this technical information document is to outline the function and operation mode of the new Thermal Management feature that's been designed into the STXDF Trowel. When the thermal management becomes active the trowel operator should understand what is occurring and if any operator action is required

Description of STXDF Thermal Management Mode

Thermal Management mode is designed to reduce the blade speed if the engine coolant or hydraulic fluid temperatures reach a higher than normal temperature. The trowel blade speed will slowly be reduced until the machine temperatures stabilize. This mode monitors engine coolant temperature and both the left and right side hydraulic cooler temperatures. If any of these three temperature readings exceed a limit, the system will start reducing machine load by gradually slowing blade speed.

Operator Interface during Thermal Management Mode

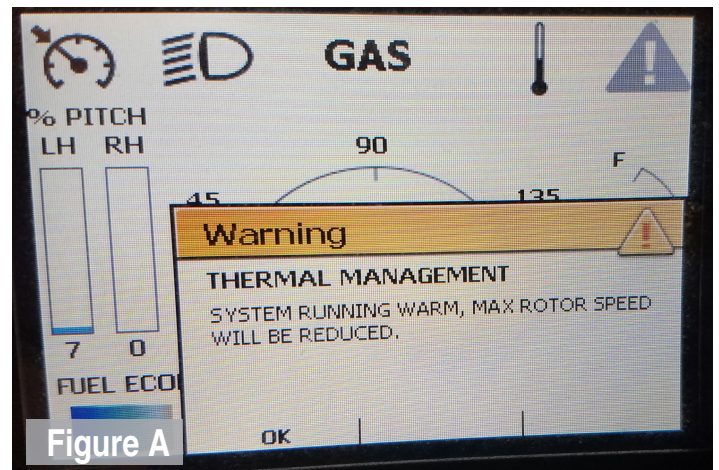
While Thermal Management is actively reducing the blade speed, the operator will not be able to increase the blade speed with the Max Blade Speed setting control knob. The operator can manually reduce the blade speed while Thermal Management is active. If thermal Management Mode should stay on for an extended period the operator should monitor the engine and hydraulic temperatures.

The unit will operate in Thermal Management Mode without any problems as this is considered a normal operation. Job site variables such and load on the trowel and ambient temperature will play a lead role in the thermal management system becoming active.

As the system cools below the limits listed ~~to the~~ **right**, blade speed will gradually be returned to original preset max blade speed.

Diagnostic Display Messages

When Thermal Management mode first goes active the operator will be notified on the diagnostic display with this message shown in Figure A.



The temperature limits are:

Engine Coolant: 217° F

Inlet (Right) Hydraulic Cooler: 200° F

Outlet (Left) Hydraulic Cooler: 175° F

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The operator may also see fault messages related to the high temperatures such as shown in Figure B.

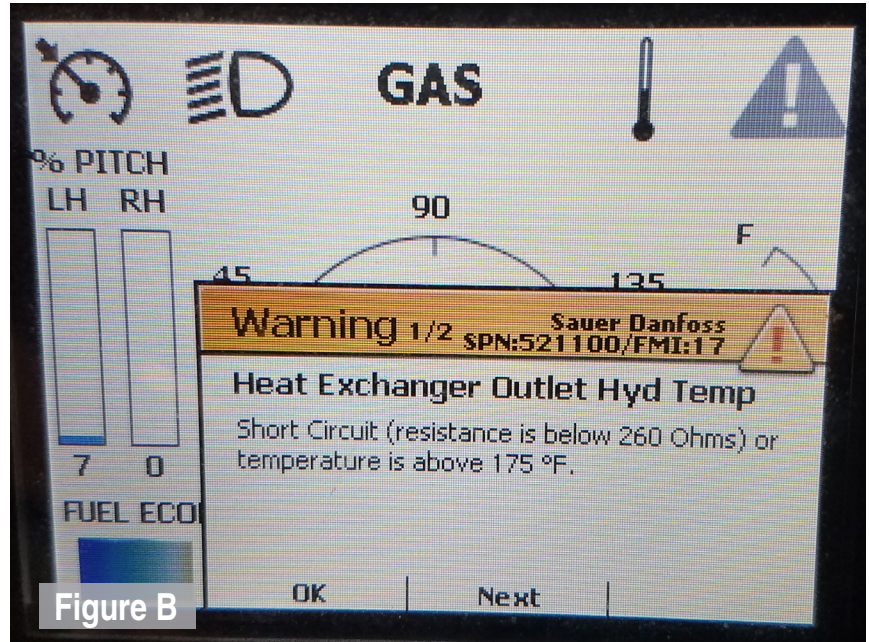


Figure B

After the operator clears these warning and fault messages, he will be notified that Thermal Management is actively slowing the blade speed while this red "THERM MGNT" message blinks in the bottom center of the main diagnostic display page (Figure C).

Once the system has cooled sufficiently and blade speed has returned to normal this red blinking message will shut off.

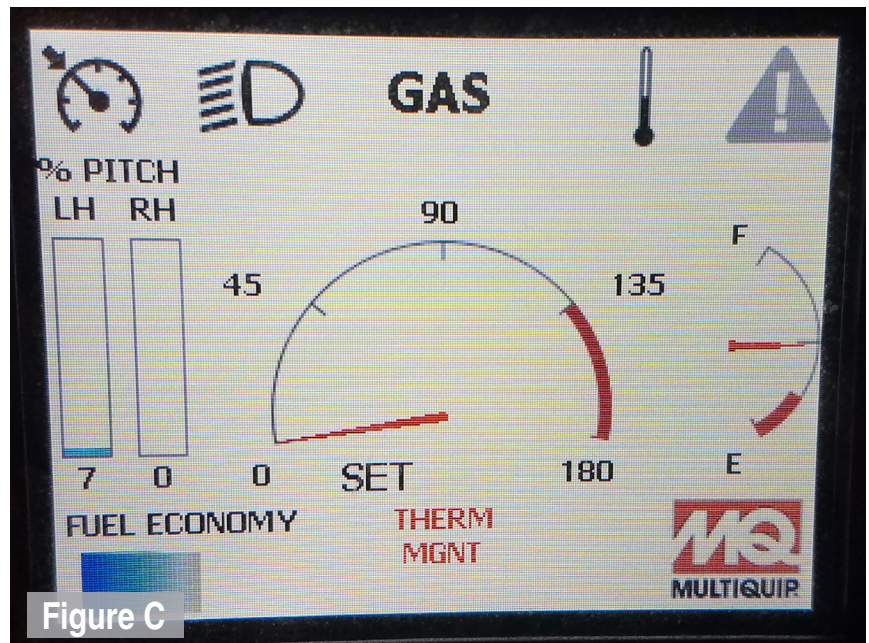


Figure C