



Troubleshooting Guide

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Control Panel Will Not Turn On

Potential Reason

Low or dead battery

Troubleshooting Steps

Ensure Master Battery Disconnect is switched to "ON" position

If control panel still will not turn on

Charge Battery by plugging unit into power.
Alternatively, boost battery.

If control panel still will not turn on

Contact Thermal Intelligence

Engine Turns Over But Will Not Start

Potential Reason

Inadequate Fuel Supply/Air in Fuel Lines

Troubleshooting Steps

Pump Primer button until it becomes firm. Attempt to start unit.

If unit still will not start

Loosen bleed screw on fuel filter, allowing air to escape. With screw open press primer button until fuel comes out. Once fuel comes out, tighten screw, press primer button until firm, attempt to start engine.

If unit still will not start

Check fuel lines for damage or leaks causing air to enter the system.

If unit still will not start

Move to next page

Engine Turns Over But Will Not Start - Continued

Potential Reason

Inadequate Fuel Supply Due to Failed Lift Pump

Troubleshooting Steps

Ensure Master Battery Disconnect is off, then turn on and listen for “click, click” of the lift pump (runs for 5 seconds). Easy to hear with engine compartment door open.



If lift pump does not engage, check the following: ensure battery is not dead, ensure E-stop button is not pressed. Confirm wires/connectors into lift pump are well seated and not damaged.



Open bleed screw on primary fuel filter, then turn on Master Battery Disconnect. Fuel should run out of the bleed screw while the lift pump is engaged.



If still not working, check Control Panel engine temperature and ensure it does not say -40C as that is an indicator that the PLC is not connected to the engine ecu. If it says -40C, again check to ensure the E-stop is working correctly (it cuts communication with engine ecu). If working correctly, troubleshoot electrical connections and harness.



If battery is good, e-stop is not engaged, the Control Panel can see the engine ECU, and lift pump does not come on or is intermittent, replace lift pump.

Engine Turns Over But Will Not Start - Continued

Potential Reason

Engine codes present

Troubleshooting Steps

From the main screen, click on the “next” button, then click the “more” button, then click the “SmartTalk” button, finally, click on the “DTC Codes” button

From this screen users can see the “active” codes. If nothing present, press the “next” button to see any past codes. Codes in either section may be a reason for the unit not starting. Refer to Engine Diagnostic Manual to cross reference the codes with description of issue.

For codes such as “fuel leak in high pressure system,” mechanics should be able to troubleshoot. Some codes may require the use of a diagnostic computer to fully determine and fix the issue.

Engine Will Not Start

Lift pump is working (clicking) but starter won't turn over or only clicks

Potential Reason

Potential Low Battery/Engine ECU Lockout

Troubleshooting Steps

If battery voltage is low, the starter will click but not turn over, charge/boost battery and attempt to start.

If unit still will not start

If battery voltage is sufficient and starter does not even click after glow plug countdown, the engine ECU may have locked out the starting function. First confirm that the E-stop button is not engaged or faulty in some way.

Contact Thermal Intelligence if issue persists

Heater Was Running But Shut Down and Now Will Not Start

Potential Reason

Clogged Fuel Filter

Troubleshooting Steps

If a "Fuel Filter" alarm does not engage, that does not mean that the fuel filter isn't clogged. Drain the bottom of the fuel/water separator (watch for water). Prime unit and attempt to restart.

If no other codes or engine codes exist and unit will not restart

Replace primary fuel filter and fuel/water separator filter. Attempt to restart

If no other codes exist and unit will not restart

Loosen bleed screw on fuel filter, allowing air to escape. With screw open press primer button until fuel comes out. Once fuel comes out, tighten screw, press primer button until firm, attempt to start engine multiple times.

Contact Thermal Intelligence if issue is not resolved

Heat Is Set To “ON” (It’s Really Cold Outside) But Output Air is Cooler and Engine Load is Not Increasing to Maximum

Potential Reason

Solid State Relays Not Functioning Correctly

Troubleshooting Steps

In extreme cold temperatures the solid state relays on the BASECAMP can take a while to warm up in order to "fire" correctly and allow power to the heater elements. If after 10-15 minutes the problem has not rectified itself, take the outlet end of the duct and place it next to the SSR Heat Sink (8" x 8" Black Box located on the back of the control panel, this is accessed by opening the engine compartment door on the same side of the heaters as the inlet/outlet chutes). After a few minutes of slightly warmer air the unit should ramp up to full load.

If problem persists

Contact Thermal Intelligence

Engine Violently Chugs or Shakes When Heater Load Is Ramping Up

Potential Reason

Generator is out of Phase

Troubleshooting Steps

Proper electrical phasing is set at Factory. If engine is chugging during heater ramp up the likely reason is someone has switched phasing in the generator terminal box. NOTE: This is only on Stamford Generators.

Contact Thermal Intelligence for instruction.

"Engine RPM Fail" Alarm

Potential Reason

This alarm is simply a catch-all anytime the engine stops running unexpectedly. This includes an engine only running for a few seconds while starting.

Troubleshooting Steps

If the unit did not shut down due to low fuel level, it is best to begin troubleshooting using pages 4-6 of this document

"Engine Over Temperature" Alarm Activated and Unit Shut Down

Potential Reason

Port Covers Not Removed/Fan Issue

Troubleshooting Steps

The Basecamp must have both inlet and outlet air covers removed in order to maintain proper engine temperature. The Basecamp CANNOT be operated without the port covers removed. Remove covers and restart engine, unit will return to normal operation. If covers are removed, but air flow is less than normal, check ducting run for impediments/blockages and clear as necessary.

If alarm returns after restarting

If port covers are removed, and engine is running but NO air is coming out of the outlet chute, unit may have a failed fan belt or fan bearing. Unit will be inoperable until belt or fan bearing is replaced.

If issue remains after making the fan operable

Contact Thermal Intelligence

"Coil Bank Over Temperature" Alarm

Potential Reason

Outlet Sensor Failure/Fan Not Operable

Troubleshooting Steps

Check for Operational Temperature Sensor

Coil Bank over temperature will cause the heat function to turn off to protect the unit. Check outlet temperature reading on the control panel for accuracy. Open engine compartment next to the outlet chute and check deutsch connector attached to the outlet temperature sensor. Unplug and plug back in, also check to make sure wires are not loose. Loose wires can cause an intermittent spike in temperature reading causing the alarm. If issue persists, contact Thermal Intelligence for replacement temperature sensor.

OR

Check for Operational Fan

If the heat is switched to "on" and the fan belt or bearing fail then the coil bank will overheat due to the lack of airflow. Fan must be made operational to resume normal function.

To clear alarm once repairs are performed, press the "Heat On" button

If alarm remains

Contact Thermal Intelligence