

Flame Present But No Indication

OIL IGNITERS

Is there a flame indication?

Visually verify if the flame is present.

If no flame is present, see reverse side of this Troubleshooting Guide.

If a flame is present, but no flame indication is shown, continue with next step.

Is igniter SunSpot module OK?

Check igniter SunSpot module front plate.

With igniter off, the only light indication should be the power light.

- No power indication – check fuse and power source.
- Ionization indication – indicates bad module or short:
 1. Switch modules with a good module to see if light indication moves with module. If indication moves with module – replace module.
 2. If light indication does not move, this indicates a short. In the following manner, determine the location of short or faulty component (constantly checking module indication):
 - Remove flame rod assembly from igniter. Check and clean tip.
 - Remove flame rod tip – replace.
 - Remove high temperature extension – replace.
 - Check wire terminator connection – replace.
 - Check flex conduit wiring/connection – replace.

**If module is OK,
go to next step below.**

Module shows OK.

Check the flame rod system. Remove the flame rod and rub the flame rod tip on the metal grating. The ionization and flame light indication should come on locally and in the burner management system (BMS). If not, see previous step and check wiring to BMS.

Are the oil and air pressure settings correct?

Check the oil and air pressure settings.

Is the igniter combustion air setting correct?

See reverse side of this Troubleshooting Guide for setting.

Is the flame rod voltage correct?

Check SunSpot voltage readings on terminals 9 and 10 on the module's base.

Normal readings are 2-5 VAC and 90 VDC or below.

Slowly decrease or increase igniter combustion air to get indication. Voltages will change.

Retest the igniter group start-up to ensure light-off and indication.

No Flame Present

OIL IGNITERS

Is there a flame indication?	Visually verify if the flame is present. If a flame is present, but no flame indication is shown, see reverse side of this Troubleshooting Guide. If no flame is present, continue with next step.
Is igniter sequence correct?	Check igniter sequence. Are automated valves operating correctly? Is instrument air open and at 60 psig minimum? If equipped, are the automated isolation valves opening?
Are hoses properly seated and valves open?	Is the quick disconnect on the oil and air hose secured to the atomizer? Are ALL manual valves open?
Strainer and filters	Check and clean.
Are the oil and air pressure settings correct?	Start the igniter group and check the oil and air pressure settings.
Is there a spark?	Check ignition system:
Remove and test sparker, if no spark.	<ul style="list-style-type: none">• Transformer• Electrical connections/wiring• Wire terminator• High temperature extension• Spark plug insulator/gap (Gap 0.180" to 0.250"), if equipped• Plasma ignition plug wear – replace if necessary
Is the igniter combustion air setting correct?	<ul style="list-style-type: none">• Check the combustion air pressure at the 1/8" tap between the igniter and gate valve.• Close gate valve and check pressure at end of igniter.• In most cases, igniter air setting should be 2" to 4" wc above the pressure at the end of the igniter.• Pressure-fired units – the combustion/cooling air igniter valve is utilized to balance system pressure for igniters. The blower outlet damper is used to control igniter pressure (approx. 2" to 6" wc above furnace pressure) relative to furnace pressure.
Is the atomizer plugged?	Remove the atomizer and disassemble. Check and clean the nozzle ports and fogging holes. Check inner oil tube for plugging – clean if necessary.
Are the quick disconnects plugged?	In the previous step, if the atomizer and oil tube showed a considerable amount of debris, it is possible that the quick disconnects will need to be checked and cleaned.