TROUBLE SHOOTING SUGGESTIONS GAS, OIL OR GAS/OIL BURNER

GENERAL

1. Burner Fails to Start

A. Defective On/Off or fuel transfer switch. Replace.

B. Control circuit has an open control contact. Check limits, low water cutoff, proof of closure switch and others as applicable.

C. Bad fuse or switch open on in-coming power source. Correct as required.

D. Motor overloads tripped. Reset and correct cause for trip out.

E. Flame safeguard control safety switch tripped out. Reset and determine cause for apparent flame failure.

F. Loose connections or faulty wiring. Tighten all terminal screws and consult wiring diagram furnished with the burner.

G. Frozen oil pump shaft preventing blower motor operation. Replace oil pump.

H. Flame safeguard control starting circuit blocked due to flame relay being energized. Possible defective scanner--replace. Possible defective amplifier--replace. Scanner actually sighting flame due to leaking fuel valve--correct unwanted flame cause. Defective flame safeguard control--replace.

I. Defective blower motor. Repair or replace.

2. Occasional Lockouts for No Apparent Reason

A. Gas pilot ignition failure. Refer to pilot adjustment section and readjust to make certain that ignition is instant and that flame signal readings are stable and above minimum values. Use a manometer or 0 to 10" W.C. gas pressure gauge on pilot test tee to make certain that pressure is as recommended.

B. Check for proper settings on direct spark oil ignition electrodes. Make certain that gap is not too wide and that *light-off* oil pressure is as recommended in Section 3.

C. Gas pilot ignition and direct spark oil ignition. Verify that there are no cracks in the porcelain and that transformer end and electrode end plug in connections are tight.

D. Loose or broken wires. Check all wire nut connections and tighten all terminal screw connections in panel and elsewhere as appropriate.

E. With flame safeguard controls that incorporate the air flow switch in the non-recycling circuit, ensure that when main flame lights, the air flow switch is not so critically set as to allow occasional momentary opening of the air switch contacts.

F. Occasional low voltage supply. Have local utility correct. Make certain that the burner control circuit transformer (if supplied) is correct for the voltage being supplied.

G. Occasional low gas supply pressure. Have local utility correct.

H. Air leak in oil suction line or check valve not holding. Correct as required.

GAS OPERATION

1. Burner Motor Runs, but Pilot Does Not Light

A. Gas supply to burner shut off--make sure all manual gas supply valves are open. Automatic high pressure valve at meter such as *Sentry* type tripped shut due to high gas pressure--reset valve and correct cause for trip out.

B. Pilot solenoid valve not opening--listen and feel for valve actuation. Solenoid valve not being powered--check electrical circuitry. Replace coil or entire valve if coil is burned out.

C. Defective gas pilot regulator--replace.

D. Gas pressure too high or too low at pilot orifice. Check orifice size in gas pilot assembly. Replace if incorrect. Refer to gas pilot adjustments for correct settings. Readjust as required.

E. Defective ignition transformer--replace. Incorrect ignition electrode settings--refer to gas pilot adjustments for correct settings.

F. Defective flame safeguard control or plug in purge timing card. Replace as required.

G. Air flow switch not making circuit--check out electrically and correct pressure adjustment on switch if required. Defective air flow switch--replace. Air switch negative pressure sensing tube out of position--reposition as necessary.

2. Burner Motor Runs and Pilot Lights, but Main Gas Flame is Not Established

A. Main shut off or test cock closed. Check to make certain fully open.

B. Pilot flame signal reading too low to pull in flame safeguard relay. Refer to gas pilot settings section and readjust as required.

C. Defective automatic main or auxiliary gas shut off valves. Check electrical circuitry to valves. Replace valves or correct circuitry as required.

D. Main diaphragm shut off valve opening too slowly. Adjust bleed on valve.

E. Defective flame safeguard control or plug in amplifier. Check and replace as required.

F. Butterfly valve set incorrectly on modulating burner. Readjust as required.

G. Main gas pressure regulator atmospheric vent line obstructed. Correct.

H. Defective main gas pressure regulator--replace. Misadjusted main gas pressure regulator--readjust to meet required operational values.

3. Carbon Monoxide Readings on Gas Firing

A. Flame impingement on *cold* heat transfer surfaces caused by excessive firing rate. Reduce firing rate to correct input volume.

B. Flame impingement on cold combustion chamber surfaces due to undersized combustion chamber. Refer to chamber size charts, pages 14 and/or contact factory for additional information.

C. Incorrect gas/air ratios. Readjust burner to correct CO_2/O_2 levels, reducing CO formation to appropriate level. See NOTE on page 25 and page 41, Table 13 for additional information.

4. Gas High Fire Input Cannot Be Achieved

A. Gas company pressure regulator or meter operating incorrectly, not allowing required gas pressure at burner train inlet. Have gas company correct.
B. Gas cock upstream of train inlet not fully open. Check and correct.
C. Gas line obstructed. Check and correct.
D. Gas train main and/or leak test cocks not fully open. Check and correct.
E. Gas supply line between gas company regulator and burner inlet too small. Check supply pressure at meter, determine pressure drop and increase line size as required, or raise supply pressure to compensate for small line. Do not raise pressure so high that under static (no flow) conditions the pressure exceeds the maximum allowable pressure to the gas train components on the burner.
F. Burner gas train components sized too small for supply pressure. Increase component size as appropriate.
G. Automatic gas valve not opening fully due to defective operation. Replace gas valve.
H. Side tee (limiting) orifice (if supplied) too small. Replace with correct size.
I. On modulating burner, butterfly valve not fully opened. Readjust.
J. Defective main gas pressure regulator. Replace.
K. Incorrect spring in main gas pressure regulator. Replace as required.
L. Main gas pressure regulator vent line obstructed. Check and correct.
M. Normally open vent valve (if supplied) not closing when automatic gas valves open. Check to see if valve is fully closed when automatic valves are open. Replace vent valve, if not closing fully.

OIL OPERATION

1. Burner Motor Runs, but Direct Spark Ignited Oil Flame is Not Established

A. Defective or incorrect size oil nozzle. Remove and clean or replace.
B. Low oil pressure. Check with gauge for correct *light-off* pressure.
C. Defective oil pump. Replace.
D. Defective oil solenoid valve. Replace.
E. Oil pump coupling loose or defective. Replace or tighten as required.
F. Low oil pressure switch (if supplied) defective or incorrectly set. Adjust or replace switch.
G. Defective ignition transformer. Replace.
H. Ignition electrode set incorrectly. Remove electrodes and reset.
I. Ignition electrodes cracked and grounding out spark. Replace electrodes.
J. Ignition leadwire defective and grounding out spark. Replace.
K. Loose ignition plug in connections at transformer or electrodes. Tighten.
L.. Air flow switch (if provided) not making. Reset pressure or replace.
M. Defective flame safeguard control or plug in purge timer card. Replace.
N. Air dampers held in high fire position due to mechanical binding of linkage. Readjust linkage.
O. Loose wiring connections. Check and tighten all connections.

2. Oil Flame Ignites, but then Flame Safeguard Control Locks Out on Safety

A. Dirty flame scanner lens. Remove and clean.
B. Blocked or dirty scanner sight tube. Check and clean.
C. Defective flame scanner. Replace.
D. Defective oil nozzle causing unstable flame and scanning problems. Replace oil nozzle.
E. Fuel/air ratios incorrect, resulting in unstable or smoky flame causing scanner flame sighting problem. Readjust ratios for clean stable flame.
F. Defective flame safeguard amplifier or control. Replace as appropriate.

3. Oil Flame Extremely Smoky at Light Off or in Low Fire Position

A. Defective or incorrect size oil nozzle. Replace.
B. Fuel/air ratio incorrect. Readjust.
C. N.C. oil solenoid valve in oil nozzle return line not opening. Check electrical circuitry and replace valve if defective.
D. On two-step pump - N.O. pump mounted solenoid valve malfunctioning. Replace valve or pump.

4. Light Off Oil Flame Is Established and Proven, but Burner Will Not Attempt to Go to the High Fire Position

A. Low/High/Low or Modulating burner high fire temperature or pressure control could be defective or not set to call for high fire. Readjust or replace control.
B. Loose wires or incorrectly wired. Verify wiring and tighten all connections.
C. Flame safeguard control or high fire panel switching relay (if supplied) defective. Verify and correct as required.
D. High fire 3 way solenoid valve defective. Replace.
E. Hydraulic oil cylinder defective. Replace.
F. On two-step pump - N.O. solenoid valve defective (not closing). Replace pump or valve.
G. Linkage mechanically binding. Readjust linkage.
H. On modulating system - defective modulating motor. Replace.

5. Low Oil Flame Is Established and Proven, but Flame Out Occurs in Transition from Low Fire to High Fire

A. On Low/High/Off or Low/High/Low system - N.C. oil solenoid valve in nozzle return line not closing (or leaking). Check valve operation and replace if necessary.
B. On two-step oil pump - N.O. solenoid valve defective (not closing). Replace valve or pump.
C. Defective or incorrect size oil nozzle. Replace.
D. High fire oil pressure too low. Readjust.
E. Air dampers set too far open at low fire, which causes flame to blow out in starting to high fire. Readjust dampers.
F. Loose or defective oil pump coupling. Tighten or replace.
G. Defective oil pump. Replace.
H. Linkage mechanically binding. Readjust.
I. Make certain the #72 orifice into the N.C. side of the 3 way valve has not been removed.
J. On modulating systems - fuel/air ratios set incorrectly, causing flame to blow out when going to high fire. Readjust linkage.

6. **White Smoke Formation on Oil Firing**
   A. Oil/Air ratios incorrect due to excess air, or oil flow is too low. Readjust for proper fuel input, CO_2 and smoke reading.
7. **Gray or Black Smoke Formation on Oil Firing**
   A. Impingement on cold combustion chamber surfaces due to undersized chamber, or incorrect oil nozzle spray angle for application. This could also result in carbon formation on chamber surfaces. Refer to chamber sizing, page 14, Figure 16 and page 14, Table 7 for additional information. If chamber is the correct size, change nozzle spray angle in order to shorten or narrow the flame as required.
   B. Defective or dirty oil nozzle. Replace or clean nozzle.
   C. Incorrect oil/air ratios. Readjust burner to correct CO_2 and smoke levels.
   D. Oil pressure too low resulting in poor atomization. Readjust.
   E. Impingement of raw oil spray on the blast tube choke ring or oil nozzle air diffuser. Make certain that the diffuser is seated firmly against the oil nozzle adapter shoulder, except on C5-OB, C5-GO-30B and larger burners or other special applications indicated on burner data shippedwith the unit. See page 35 and 36, Figures 30, 31 and 32 for additional information. Position the oil gun assembly fore or aft in the blast tube to assist in elimination of oil spray on the blast tube choke ring.
8. **Oil High Fire Input Rate Cannot Be Achieved**
   A. Oil nozzle size too small. Remove nozzle and check markings. Replace with correct size nozzle.
   B. Defective nozzle—replace. Dirty nozzle mesh filter—clean or replace.
   C. Oil supply pressure to nozzle too low. Readjust.
   D. Oil pump defective. Replace.
   E. On Low/High/Off and Low/High/Low systems - N.C. oil solenoid valve in nozzle return line not closing (or leaking). Check valve operation and replace if necessary.
   F. On two-step pump - N.O. pump mounted oil solenoid valve defective (not closing). Replace valve or pump.
   G. Oil pump coupling loose (slipping) or defective. Replace.
   H. Linkage mechanically binding. Readjust.
   I. On modulating burner, oil nozzle return line metering valve set incorrectly. Readjust to attain required nozzle bypass pressure.
   J. Oil suction line too small or partially blocked. Make vacuum test while at high fire. If the vacuum is in excess of 10" HG, consult line sizing chart on page 12. Make line size changes, if required.
   K. Blocked or dirty suction line oil filter. Replace or clean.
   L. Manual valves in suction line not fully open. Check and correct.
   M. Suction line check valve or foot valve operating incorrectly. Check and correct.
   N. Vent system on oil tank blocked creating vacuum on tank, with high vacuum and lowered oil flow to burner. Check and correct.

Additional trouble shooting information can be found in the Flame Safeguard Control bulletin supplied with the burner.

8. MAINTENANCE

General Information

Only qualified service technicians should make mechanical or electrical adjustments to the burner and/or associated control equipment.

Preventative maintenance can usually be performed by building maintenance personnel.

Always follow the information provided in the *Owner Operating Instructions* on page 51. These should be conspicuously posted in the burner room at the time of the initial burner installation and start up.

Always turn the power supply off to the burner and close manual fuel valves as appropriate for routine maintenance.

Make sure that combustion and ventilation fresh air sources to the burner room remain clean and open.

Periodically check all electrical connections and make sure the flame safeguard control chassis is firmly connected to its wiring base.

Refer to manufacturer's product bulletins supplied with the burner for maintenance on the flame safeguard control and other components.

PERIODIC CHECK LIST

Item	Frequency	Checked By	Remarks
Gages, monitors, and indicators	Daily	Operator	Make visual inspection and record readings in log
Instrument and equipment settings	Daily	Operator	Make visual check against heat exchanger manufacturer's recommended specifications
Firing rate control	Weekly Semiannually Annually	Operator Service Technician ServiceTechnician	Verify heat exchanger manufacturer's settings Verify heat exchanger manufacturer's settings Check with combustion test
Flue, vent, stack, or outlet damper	Monthly	Operator	Make visual inspection of linkage, check for proper operation
Combustion air	Monthly	Operator	All sources remain clean and open
Ignition System	Weekly	Operator	Make visual inspection, check flame signal strength if meter-fitted (see *Combustion safety controls*)
Fuel Valves			
Pilot and main	Weekly	Operator	Open limit switch-make aural and visual check-check valve position indicators and check fuel meters if so fitted
Pilot and main gas or main oil	Annually	Service Technician	Perform leakage tests-refer to valve manufacturer's instructions
Combustion safety controls			
Flame failure	Weekly	Operator	Close manual fuel supply for (1) pilot, (2) main fuel cock, and/or valves(s): check safety shutdown timing; log
Flame signal strength	Weekly	Operator	If flame signal meter installed, read and log; for both pilot and main flames, notify service organization if readings are very high, very low, or fluctuating; refer to flame safeguard manufacturer's instructions
Pilot turndown tests	As required/annually	Service Technician	Required after any adjustments to flame scanner mount or pilot burner; verify annually-refer to flame safeguard manufacturer's instructions
Refractory hold in	As required/annually	Service Technician	See *Pilot turndown tests*
High limit safety control	Annually	Service Technician	Refer to heat exchanger manufacturer's instructions
Operating control	Annually	Service Technician	Refer to heat exchanger manufacturer's instructions
Low draft, fan, air pressure, and damper	Monthly	Operator	Refer to this manual and control manufacturer's instructions
High and low gas pressure interlocks	Monthly	Operator	Refer to instructions in this manual
Low oil pressure interlocks	Monthly	Operator	Refer to instructions in this manual
Fuel valve interlock switch	Annually	Service Technician	Refer to valve manufacturer's instructions
Purge switch	Annually	Service Technician	Refer to fuel/air control motor manufacturer's instructions
Low fire start interlock	Annually	Service Technician	Refer to fuel/air control motor manufacturer's instructions
Automatic changeover control (dual fuel)	At least annually	Service Technician	Under supervision of gas utility
Inspect burner components		Service Technician	Refer to this manual and control component manufacturer's instructions
Remove oil drawer assembly	Annually	Service Technician	Remove and clean
Check blower motor and blower wheel for cleanliness. Remove and clean as necessary	Annually	Service Technician	Remove and clean
Remove, inspect and clean gas pilot assembly	Annually	Service Technician	Remove and clean

Refer to heat exchanger manufacturer's instructions for general inspection procedures and for specific testing and inspection of all liquid level controls, pressure/temperature relief and other applicable items.

If you have any questions about the procedures listed above-or questions relating to components or devices on your unit not specifically covered in the above-contact our Service Department at **(620)421-0480** for assistance.

9. BURNER START UP INFORMATION & TEST DATA

The following information shall be recorded for each burner start up:

Power Flame Model No._____Invoice No._____Serial No._____

Installation Name_____Start Up Date_____

Start Up Contractors Name_____Phone_____

Name of Technician Performing Start Up_____

Type of Gas Natural ☐ LP ☐Other_____Fuel Oil Grade No._____

Gas Firing

Gas Pressure at Train Inlet
Burner in Off Position_____"W.C.

Gas Pressure at Train Inlet
Low Fire_____
High Fire_____

Gas Pressure at Firing Head
Low Fire_____
High Fire_____

Gas Pressure at Pilot Test Tee
_____

Power Supply
Volts_____ Ph_____ Hz_____
Control Circuit Volts_____
Blower Motor amps at high fire_____
_____

Flame Signal Readings
Pilot_____
Low Fire_____
High Fire_____

CO_2 or O_2 (Specify)
Low Fire_____
High Fire_____

CO
Low Fire_____
High Fire_____

Input Rate BTU/HR
Low Fire_____
High Fire_____

Over Fire Draft
Low Fire_____
High Fire_____

Stack Outlet Test Point Draft
Low Fire_____
High Fire_____

Net Stack Temperature
Low Fire_____
High Fire_____

Combustion Efficiency
Low Fire_____%
High Fire_____%

NOx Measured
Low Fire_____
High Fire_____

Oil Firing

High Fire Vacuum Reading at Oil Pump Inlet_____"H.G.

Gas Pressure at Pilot Train Inlet
(If applicable)_____

Gas Pressure at Pilot Test Tee
(If applicable)_____

Oil Nozzle Supply Pressure
Low Fire_____
High Fire_____

Oil Nozzle Bypass Pressure
Low Fire_____
High Fire_____

Power Supply
Volts_____Ph_____Hz_____
Control Circuit Volts_____
Blower Motor amps at high fire
_____
Remote Oil Pump Motor amps at high fire_____

Flame Signal Reading
Pilot (If applicable)_____
Low Fire_____
High Fire_____

GPH Firing Rate
Low Fire_____
High Fire_____

CO_2 or O_2 (Specify)
Low Fire_____
High Fire_____

Bachrach Scale Smoke Number
Low Fire_____
High Fire_____

Over Fire Draft
Low Fire_____
High Fire_____

Stack Outlet Test Point Draft
Low Fire_____
High Fire_____

Net Stack Temperature
Low Fire_____
High Fire_____

Combustion Efficiency
Low Fire_____%
High Fire_____%

NOx Measured
Low Fire_____
High Fire_____

Control Settings

General	Gas	Oil
Operating control cut out setting _____	Low gas pressure switch _____ in.	Low oil pressure switch _____ lbs.
Operating control cut in setting _____	High gas pressure switch _____ in.	High oil pressure switch _____ lbs.
Limit control cut out setting _____		
Limit control cut in setting _____		

Operation Checklist

Checked For Proper Operation of:	Yes	No		Yes	No
Low water cut off	( )	( )	Barometric damper	( )	( )
High water cut off	( )	( )	Boiler room combustion air and ventilation provisions correct	( )	( )
Flame safeguard control ignition failure	( )	( )			
Flame safeguard control main flame failure	( )	( )	Oil tank vent system checked	( )	( )
Burner air flow switch	( )	( )	All oil lines checked for leaks	( )	( )
Induced draft fan controls	( )	( )	All gas lines checked for leaks	( )	( )
Over fire draft controls	( )	( )	Gas lines and controls properly vented	( )	( )
Fresh air damper end switch	( )	( )	Other system components (specify)	( )	( )

Notified _____ of following system deficiencies: _____

NOTES

2001 South 21st St., Parsons, KS 67357, 620-421-0480, 620-421-0948 FAX

POWER FLAME INCORPORATED

10. OWNER OPERATING INSTRUCTIONS

FOR YOUR SAFETY

If you smell gas:

1. Open windows.
2. Do not touch electrical switches.
3. Extinquish any open flame.
4. Call your gas supplier immediately.

Do not store or use gasoline or other flammable liquids and vapors in the vicinity of this or any other appliance.

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the burner manual. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

IMPORTANT PRECAUTIONS

1. Never attempt to light burner with paper or other materials.
2. Never experiment with the burner.
3. Never change the fuel or air adjustments without consulting with the burner service company.
4. Never attempt to light the burner if combustion chamber contains any unburned fuel or gases.
5. Never throw waste paper, rags, garbage, or other waste materials into the combustion chamber.
6. Never wash out heating equipment room without first covering the burner with waterproof material.

START UP

Preparation for Start Up - All Fuels

1. Ensure that the system is in working order. If heat exchanger is a boiler, ensure that proper water level is available.

   Oil burner - make sure that the oil tank has an adequate fuel level and that the fuel is the proper grade.
2. Set the burner control panel switch to the *OFF* position.

   Combination Gas/Oil burner - Set the fuel selector switch to the fuel to be burned.
3. Turn the thermostat or operating control down to its lowest setting.
4. Check fuses and replace as necessary.
5. Depress the flame safeguard programming control reset button.

Start Up - Gas Burner

1. Manually open and close the main gas shut off cock, leak test cock and pilot cock to determine that they operate freely. Open all three cocks. (Reset low gas pressure switch if supplied.)
2. Set the main power switch and burner panel control switch to the *ON* position. Wait 30 seconds and turn up thermostat or operating control to the desired setting.
3. The burner blower motor will start and after a suitable prepurge period (this will vary with the type of flame safeguard control supplied - but will usually be a minimum of 30 seconds to a maximum of 90 seconds) the burner pilot will light, after which the main flame will be established.
4. If the system does not respond properly, contact your qualified burner service company.
5. When burning gas on a Combination Gas/Oil unit that has a blower motor driven oil pump, open all oil line valves. Oil must circulate through the oil pump, even when burning gas.

Start Up - Oil Burner

1. Open all valves in oil lines.
2. If pilot gas ignation system is supplied - open and close the pilot gas cock to determine that it is operating freely. Open the pilot gas cock.
3. Set the main power switch and burner panel control switch to the *ON* position. Wait 30 seconds and turn up thermostat or operating control to the desired setting.
4. The burner blower motor will start. Depending upon the type of flame safeguard control supplied, the fuel ignition system may energize within 1 or 2 seconds after the blower motor starts or could be as long as 90 seconds.
5. If the system does not respond properly, contact your qualified burner service company.

EXTENDED SHUT DOWN

1. Place main power switch and burner control panel switch to the *OFF* position.
2. Close all valves in gas and oil lines.
3. Cover burner to protect it from dust and dampness.

MAINTENANCE

1. See *Maintenance* section in burner manual for suggestions on periodic maintenance and service.

Burner Service Company _____ Date of Installation _____

Address _____ Telephone _____

Remove this page and post near burner

POWER FLAME INCORPORATED LIMITED WARRANTY TYPE C BURNERS

Power Flame Incorporated, hereinafter called the Seller, of 2001 South 21st Street, Parsons, Kansas, hereby warrants its equipment manufactured by it and bearing its nameplate (hereinafter called Warranted Equipment) in the respects and exclusively for the benefit of those users described herein. THIS LIMITED WARRANTY SHALL EXTEND SOLELY TO THOSE PERSONS WHO ARE OWNERS OF THE WARRANTED EQUIPMENT DURING THE WARRANTY PERIOD HEREINAFTER DEFINED AND WHO USE SUCH WARRANTED EQUIPMENT IN THE PROJECT AND FOR THE PURPOSES FOR WHICH SUCH WARRANTED EQUIPMENT WAS ACQUIRED FROM THE SELLER. The Seller warrants its equipment to be free from defects in the material and workmanship under normal use and service for fifteen (15) months from date of shipment. Burner blast tube (Firing Head) is warranted for a full five (5) years. EXCLUDED FROM ANY COVERAGE UNDER THIS WARRANTY ARE DEFECTS IN WARRANTED EQUIPMENT FROM DAMAGE IN SHIPMENT, FAULTY INSTALLATION, MISUSE OR NEGLIGENCE. If any person becomes entitled to a claim under this warranty, such person shall, as a condition precedent to securing warranty performance, return the Warranted Equipment to the Seller's plant, 2001 South 21st Street, Parsons, Kansas, transportation prepaid. If the Warranted Equipment thus returned is found by the Seller to be defective for a cause and within a time covered by this Warranty, such equipment shall be repaired or replaced without charge; and returned to its owner or job site at the Seller's cost for transportation and handling. If inspection of the Warranted Equipment discloses defects not covered by this Warranty, the Seller shall notify the owner. Said equipment, at the owner's option (to be determined thirty (30) days from the date of notification), may be repaired or replaced at the expense of the owner and Seller's regular charges shall apply. Owner shall assume the cost for transportation and handling. Equipment which is repaired or replaced shall carry a warranty equal to the unexpired portion of the original warranty. The Seller will commence inspection of any Warranted Equipment returned to it for warranty claim within seven (7) working days after the arrival of such Warranty Equipment at Seller's plant, and shall complete any repairs required under this warranty within sixty (60) days after such arrival, unless Seller shall sooner notify said owner of reasonable cause for delay beyond control of Seller. Warranty obligations hereunder will be performed only between the hours of 9:00 a.m. and 4:00 p.m. Monday through Friday and excluding holidays. Any person believing himself entitled to warranty performance hereunder is required to notify the Warranty Claims Department of Power Flame Incorporated, 2001 South 21st Street, Parsons, Kansas, prior to return of any Warranted Equipment for repair hereunder. IN ALL EVENTS, SELLER WILL NOT BE LIABLE FOR AND WILL NOT REIMBURSE ANY LABOR, MATERIAL, OR OTHER REPAIR CHARGES INCURRED BY ANYONE OTHER THAN SELLER ON ANY WARRANTY EQUIPMENT, UNLESS SUCH CHARGES HAVE BEEN SPECIFICALLY AUTHORIZED IN ADVANCE IN WRITING BY SELLER. ANY WARRANTY IMPLIED BY LAW WITH RESPECT TO THE MERCHANTABILITY OR FITNESS OF THE WARRANTED EQUIPMENT IS HEREBY LIMITED TO THE DURATION OF THE WARRANTY PERIOD HEREUNDER. THE SELLER WILL NOT IN ANY EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ATTRIBUTABLE TO THE WARRANTED EQUIPMENT.
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