

PROFLAME 2 SYSTEM

Troubleshooting Guide

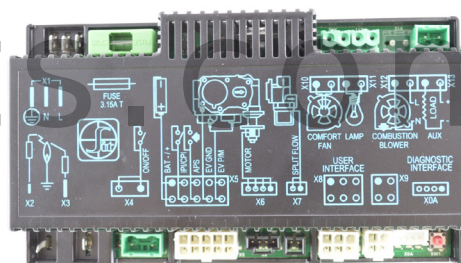
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SIT Proflame II GTMFS System primary components overview:

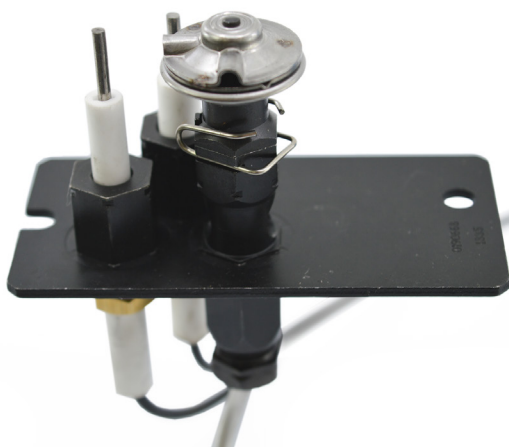
Gas Valve



Control Module



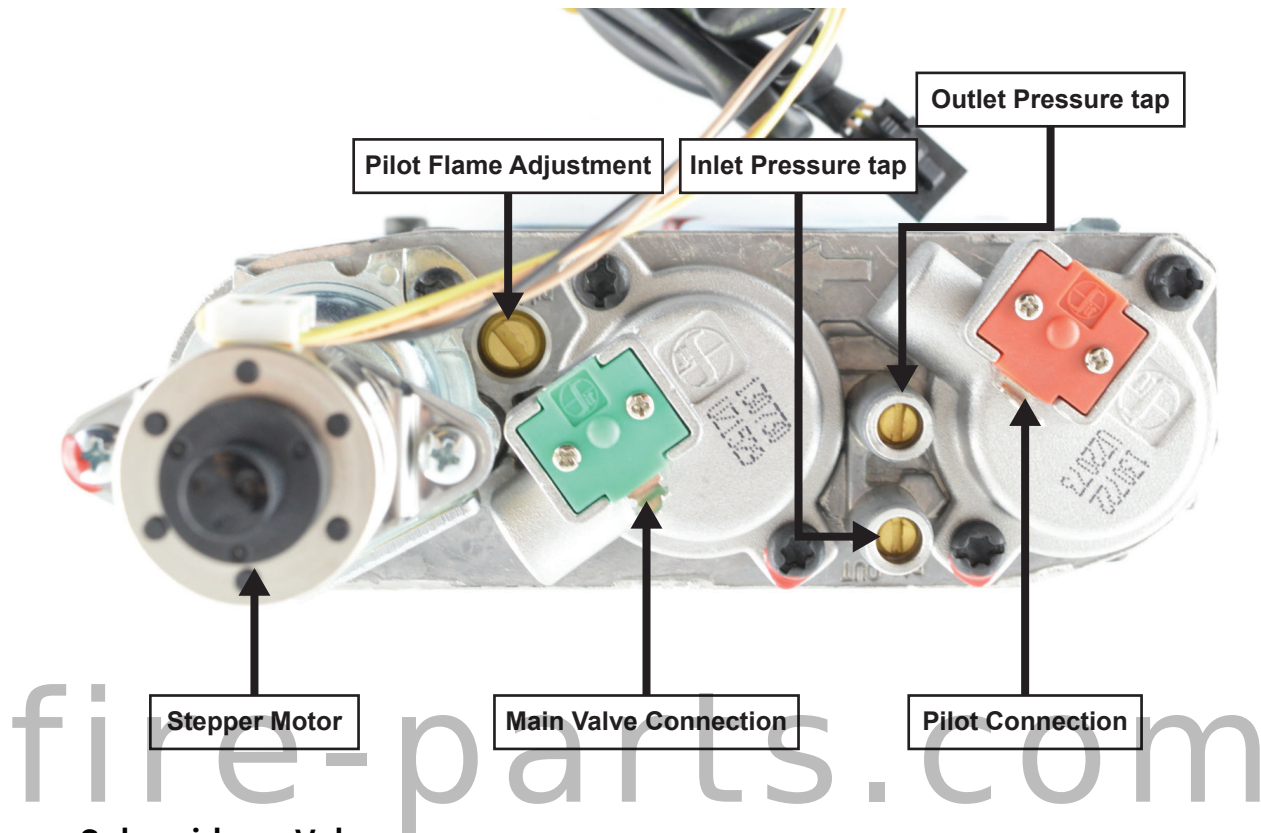
Pilot Assembly



Proflame Remote



SIT Proflame GTMF Gas Valve



Solenoids on Valve:

EV1 (Pilot Connection Coil):

- Opens and closes to release gas to the pilot
- Orange in color furthest from step motor
- 5VDC and drops to 1.0VDC (test image shown on pg 16)

EV2 (Main Burner Coil):

- Opens and closes to release gas to the burner (needs rectification at pilot before voltage)
- Green in color closest to step motor
- 5VDC and drops to 1.0VDC (test image shown on pg 16)

Gas Pressure: Very Important for the Function of an IPI Pilot Assembly

Inlet Pressure Test Point

- Measures amount of gas coming into the valve
- NG 5.0" WC to 7.0" WC
- LP 11.0"WC to 13" WC
- Critical to check this with all gas appliances on in house (Full Load Check)

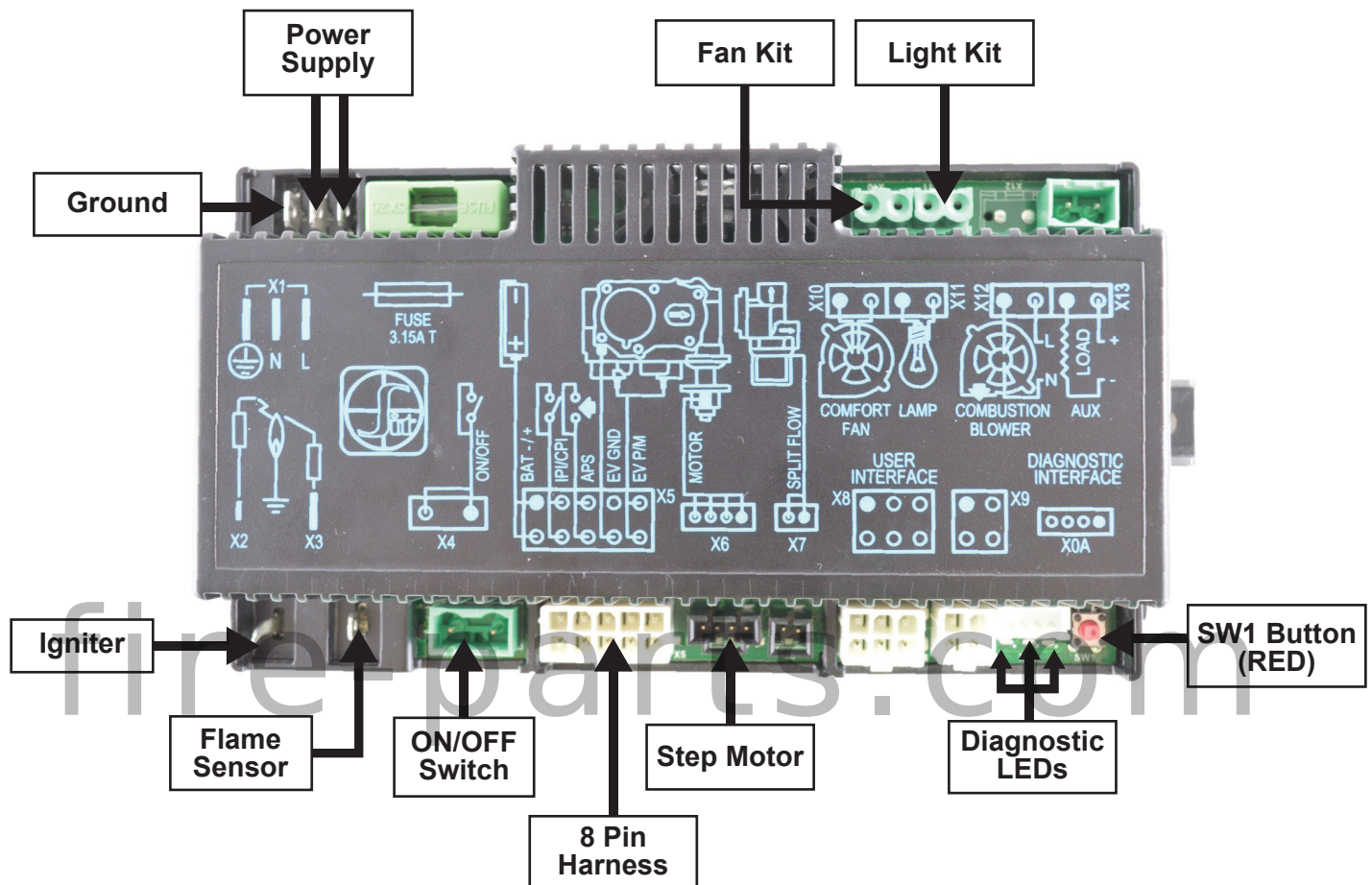
Outlet Pressure Test Point

- Measures amount of gas leaving the valve to burner orifices
- Need to have EV2 energized or burner turned on to verify

Pilot Adjustment Screw:

- Do not adjust as this is factory set by the valve manufacturer.

Integrated Fireplace Control (IFC Module)



The IFC module:

- Acts as the “brain” of the IPI system sending commands to specific areas
- Powered by 120VAC with an additional battery back up in case of main power loss.

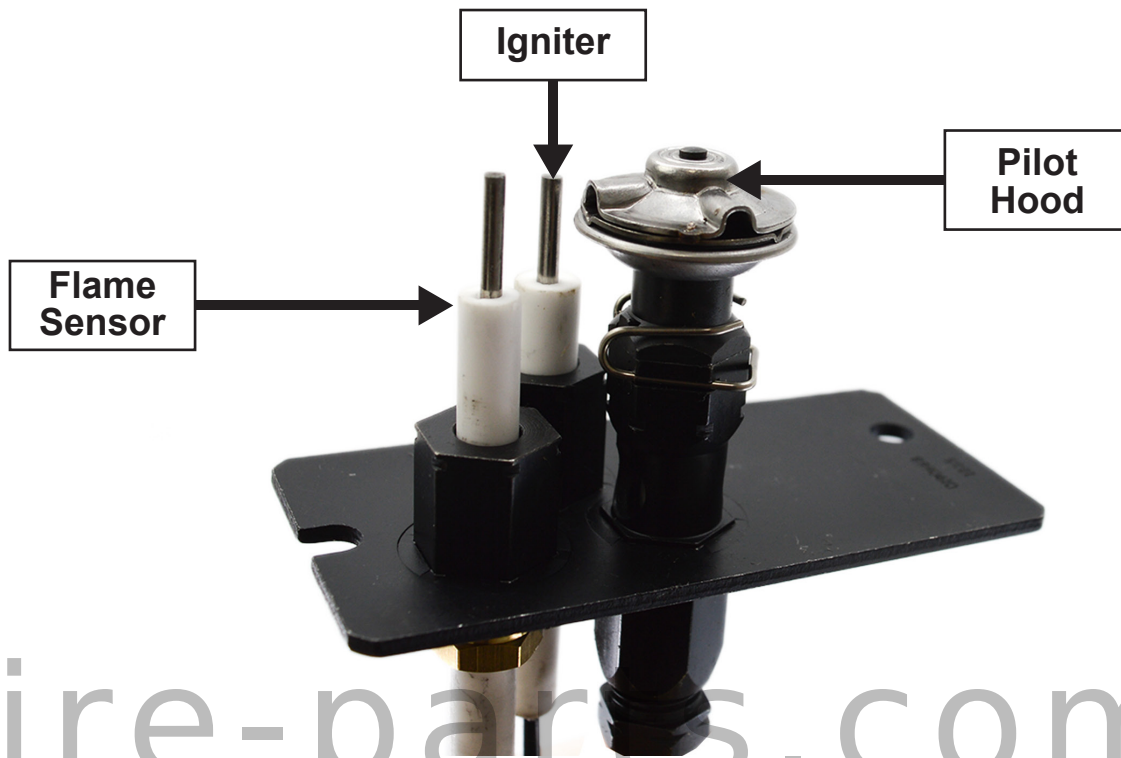
Testing Power Voltage:

- AC Power (Pins red(L) and black(N)) would be about 6.5VAC
(See test images on pg 15)

Diagnostic LEDs:

- This connection is for LEDs which provides the technician with lockout codes.
- For more information on LED Indicator Light and Lockout codes see page 9.

Pilot Assembly



Pilot Assembly is comprised of three parts:

Pilot Hood

- Splits the flame into two for burner and flame sensor.

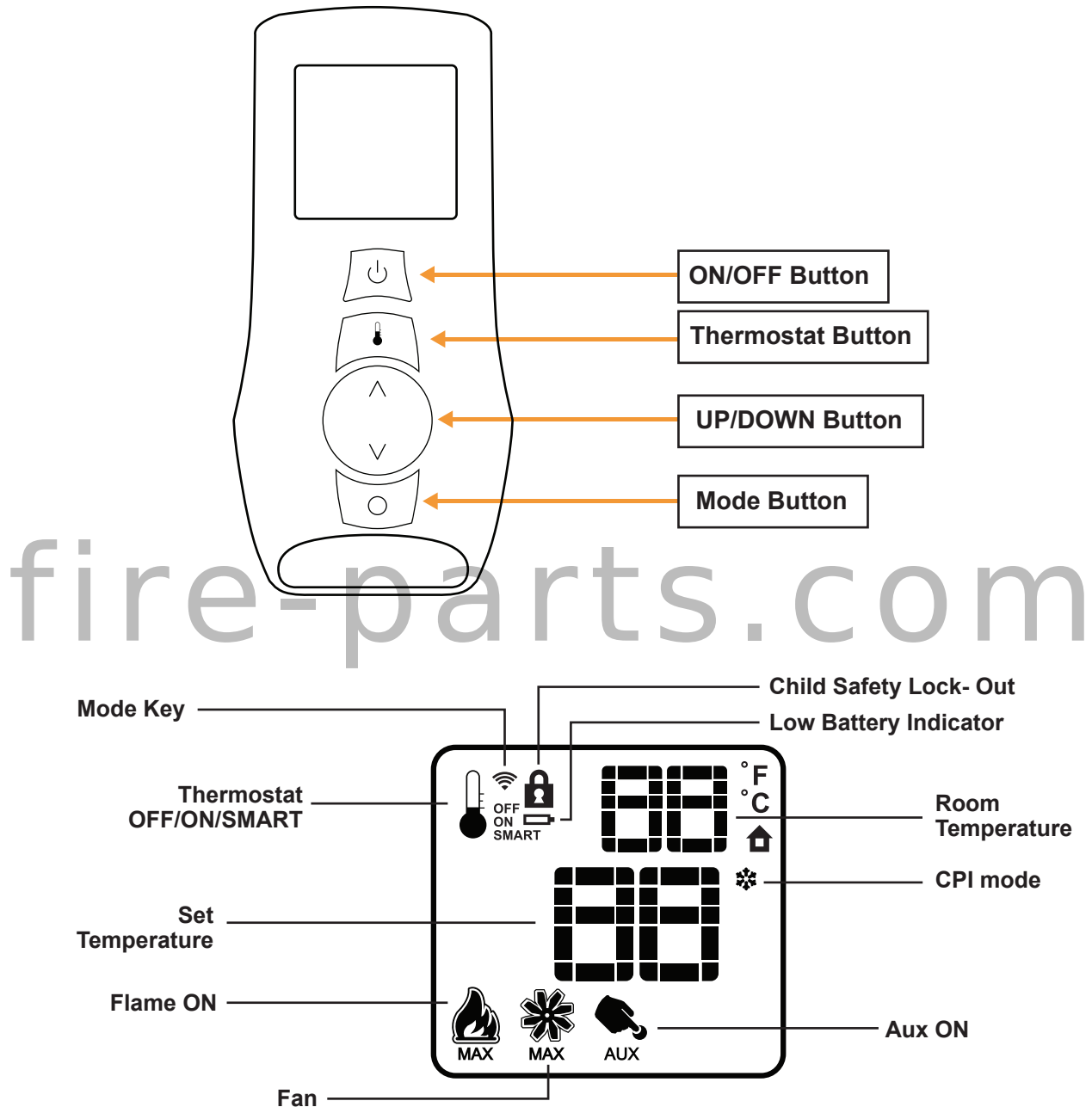
Igniter

- Provides spark to the pilot hood

Flame Sensor

- Rectifies the circuit, proves pilot is lit and carries the voltage to the IFC module to stop sparking and allow main burner to open.
- Without rectification igniter will still spark and burner will not turn on.

Remote Control

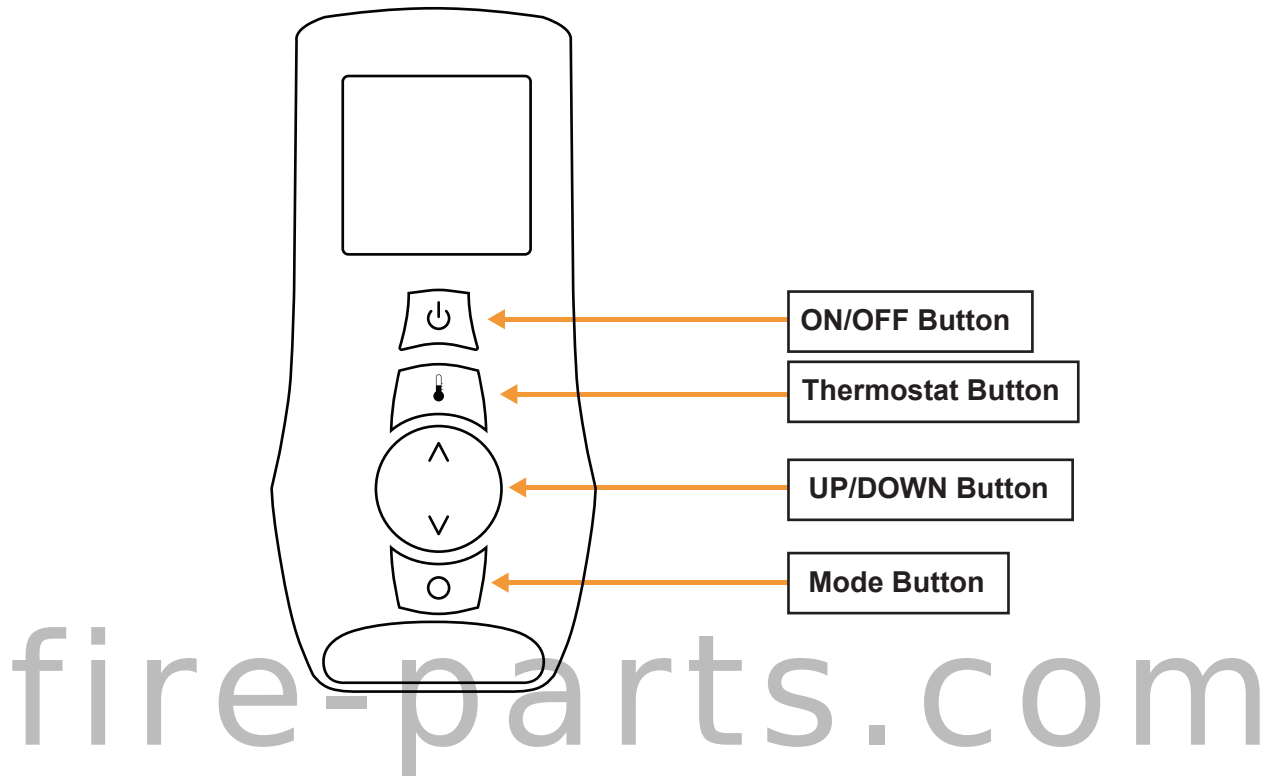


The Proflame transmitter uses radio frequency to communicate information to the receiver box located in the fireplace or wall switch location.

The transmitter is powered by three (3) AAA batteries. As these batteries begin to wear down the blue backlight feature on the remote will deactivate indicating the batteries require replacement.

There is also an indicator on the display to indicate low battery power in transmitter.

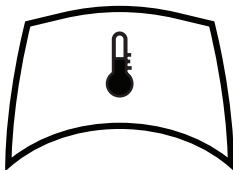
Remote Control Button Function



ON/OFF Button

- Pressing this button one time will turn the fireplace ON in manual mode. Pressing it once more will turn the fireplace off.

Note: The thermostat image on the left should read OFF for fireplace to run manually.



THERMOSTAT Button

3 Settings

ON

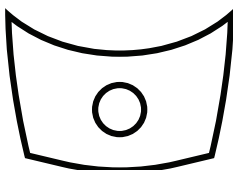
- Fireplace will operate in thermostat mode with ability to manually set the flame height.

OFF

- Thermostat is off, but will operate manually from remote using ON/OFF button.

SMART

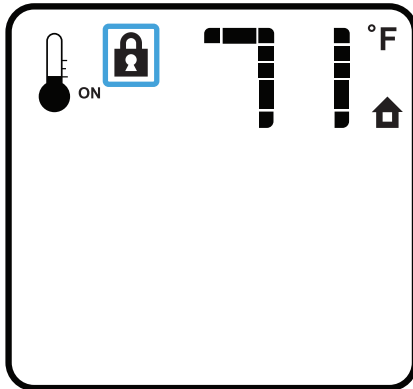
- Works the same as ON thermostat, but the SMART function will modulate the flame height as the fireplace nears the set temperature.



MODE Button

Pressing the MODE button will cycle the display screen from flame modulation, to fan modulation, to light kit on/off, split flow, auxillary, and standing pilot mode. Use the UP/DOWN button to adjust each setting accordingly.

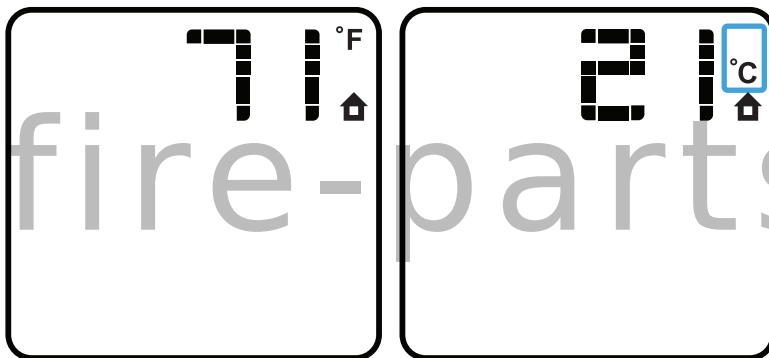
Remote Control Display Icons



Child Lock

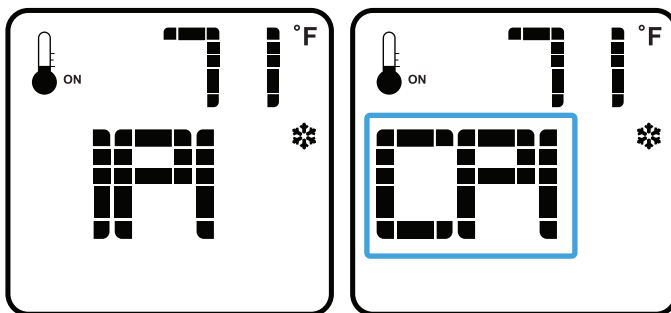
To activate child lock, press the Mode button and the Up button at the same time.

To deactivate press the same button sequence.



Fahrenheit / Celsius Adjustment:

With the system in the OFF position, press the Thermostat button and the Mode button at the same time.



Continuous Pilot/Intermittent Pilot

CPI/IPI This system has the option of a continuous (standing) pilot feature. By having the pilot on continuously the firebox remains warm and a draft is established allowing an easy start. With the system OFF, press Mode to index CPI icon. Using the arrow key select CPI or IPI mode. A snowflake icon will be visible during setup and will remain visible in CPI mode.

SIT Proflame 2 IFC Module Ignition and Reset Information

Ignition Sequence:

Starting from OFF, press the remote power button. Approximately four seconds after it is pushed the IFC module will send spark to the pilot hood. It will spark for 60 seconds.

If there is no flame ignition (rectification) during the first try for ignition, the IFC module will stop sparking for approximately 35 seconds and then it will begin sparking again. The second attempt will spark for another 60 seconds.

If there is no positive rectification after the second sequence the IFC module will go into a Lock Out and the LED Indicator Light will blink three times in intervals until the system is reset.

In Summary:

- 1) Ignition sequence is 60 seconds spark, 35 second wait, 60 second spark and then lock out if flame is not rectified.
- 2) Lock Out blink on the LED Indicator Light is 3 blinks in sequence

Resetting Proflame IFC Module When In Lock Out:

Reset Using the Transmitter ON/OFF power button:

Turn the system off by pressing the remote power button. After approximately 2 seconds press it again.

Reset Using the Remote Flame Adjustment buttons:

In the manual mode, use the down arrow to lower the flame all the way to OFF. Wait 2 seconds and then use the up arrow to turn the flame back on.

Reset Using Receiver Switch:

With the remote off, move the ON-REMOTE-OFF switch to the OFF position on the receiver box. Wait approximately 2 seconds and slide back to ON position. (Note: You will need to move to REMOTE if you prefer to turn on via remote).

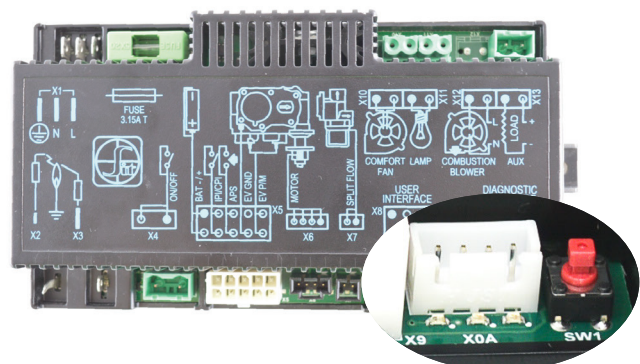
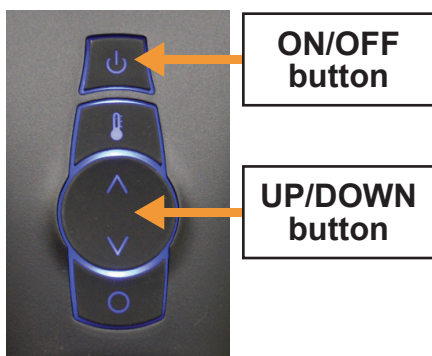
Low Battery Condition (<4V) Remote Control: Battery Icon will appear on LCD remote control display. Replace batteries.

Low Battery Condition (<4V) Battery Backup: Red LED Indicator will blink (1) time in intervals. Low double-beep emitted from IFC control module when it receives an ON/OFF command from the remote control. Replace Batteries.

Pilot Flame Error Condition: Red LED Indicator will blink (2) times in intervals. Contact your dealer if this occurs.

System Lock Out Condition: Red LED Indicator will blink (3) times in intervals. Make sure gas is turned on. Make sure sensor is not shorted.

Follow **Reset IFC Control Module When System Goes Into Lock Out** instructions above.



Remote Not Learning to Receiver

Begin

Verify proper 120VAC power supply

- A. Remove the batteries from battery back up.
- B. Attempt to light continuous pilot from switch if equipped.

If pilot lights or if spark is present we know power is supplied and we can proceed.

If spark or pilot is not present proceed in troubleshooting steps for pilot does not light.

(if you now re-install batteries and the pilot turns on focus would be on main power supply which is explained later in the guide with voltage readings)

It is possible the integrated fireplace control (IFC) module is in a lockout position. See page 9 on lockout and reset information.

Press the Red SW1 button the on the IFC module. You should hear 3 fast beeps indicating the receiver box is ready to learn the remote code. Did you hear the beep code?

No

Verify the ON/OFF rocker switch is in the ON position. Attempt learn sequence again. If no sound/LED replace IFC module.

Yes

Quickly press the ON/OFF power button on the remote control. You should now hear 4 beeps indicating the receiver has learned the remotes unique programming code. Did you hear the beep?

No

Verify batteries are new in remote, and if so replace remote control.

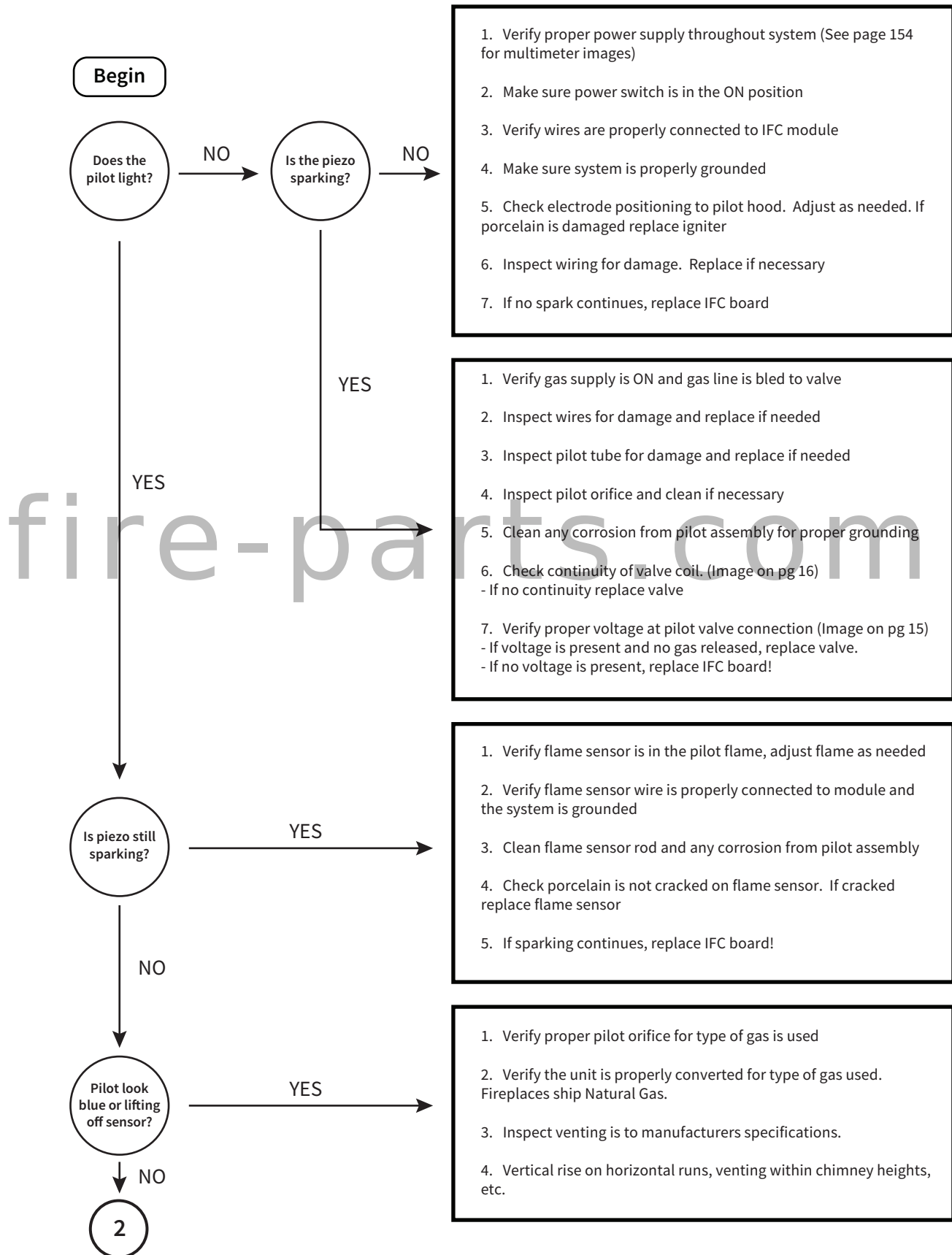
Yes

Remote is learned to the receiver and should operate the fireplace.

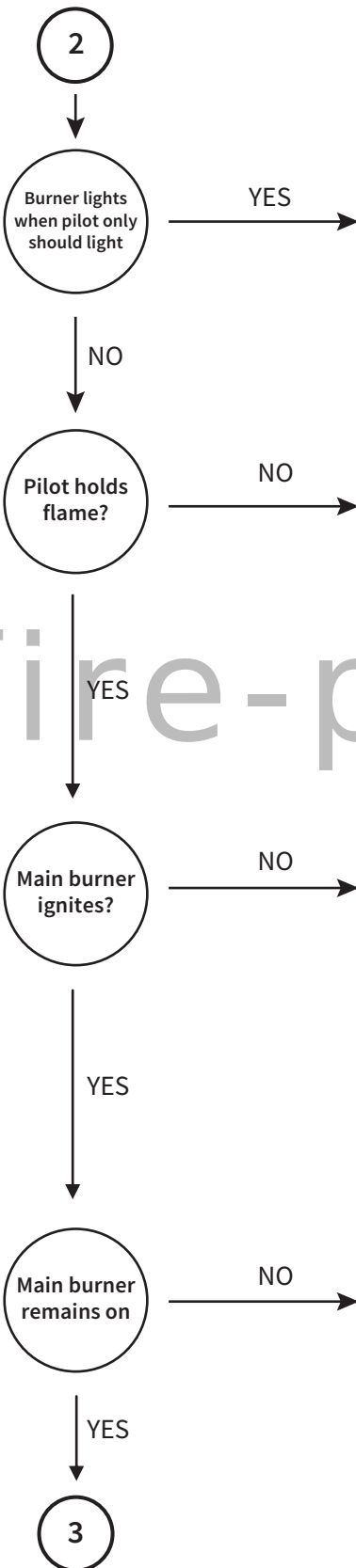
No

Proceed to next troubleshooting tree to verify there is not another problem

Troubleshooting



Troubleshooting



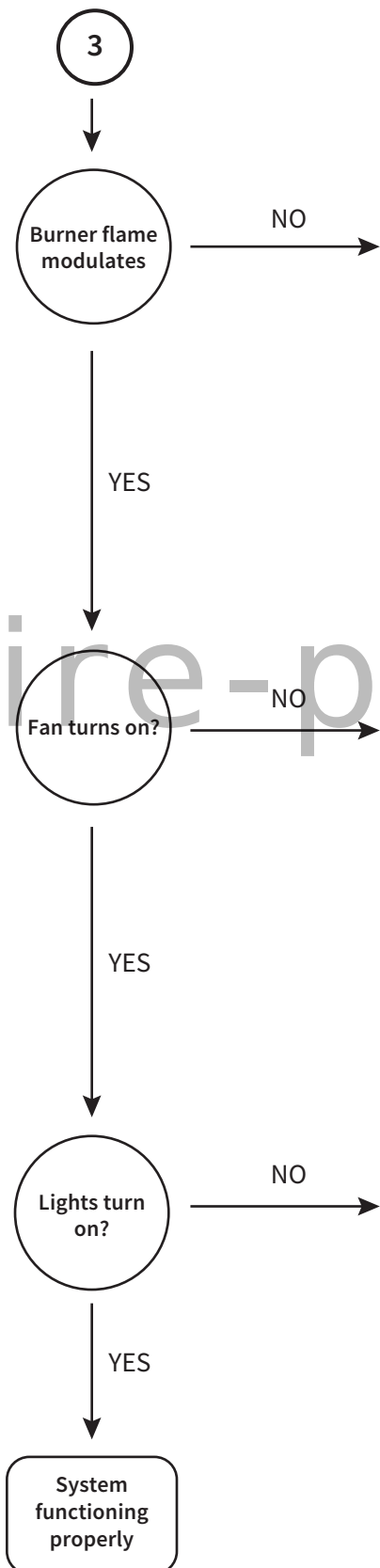
1. Verify transmitter is not powered on or in thermostat mode calling for heat. Display should say OFF next to thermometer image on display for thermo off.
2. Verify receiver switch is not in ON position
3. Ensure all electrical connections are secure based on the wiring diagram
4. Verify proper voltage at the main valve connection (EV2 green). See page 15.
 - If voltage is present replace IFC board!
 - If voltage is not present replace gas valve (solenoid not closing)

1. Check that the continuous pilot switch is ON (down position)
2. Verify pilot flame makes full contact with flame sensor
 - Verify gas pressure on full capacity
 - Verify turbulence is not pushing flame off flame sensor
3. Clean the flame sensor and inspect wiring for damage
4. Verify pilot assembly is properly grounded and pilot hood is brushed clean of debris and securely pressed down.
5. Replace flame sensor
6. Check voltage at pilot valve connection (EV1 orange) See page 15
 - If no voltage present when calling for pilot, replace IFC board
 - If voltage is present, replace gas valve (valve not opening)

1. Verify the receiver switch is in ON position. If in the REMOTE position verify remote is powered ON and thermostat is OFF.
2. Verify electrical connections are properly connected according to the wiring diagram and replace any damaged harnesses
3. Verify the pilot flame is properly directed to ignite the burner
4. Verify piezo is not sparking if so, go back to Piezo Still Sparking
5. Verify proper components are installed for type of gas used
6. Check continuity of the main burner coil. See pg 16
7. Check for voltage at the main burner connection (EV2 green) See pg 16
 - If voltage is present replace gas valve (not opening)
 - If no voltage is present replace IFC board

1. Verify the receiver switch is in ON position. If in REMOTE, verify remote ON and thermostat says OFF
2. Verify electrical components are properly connected according to the wiring diagram and replace any damaged harnesses
3. Verify pilot flame makes contact with flame sensor. Clean flame sensor of any debris or silicone film.
4. Verify gas pressure on full capacity is according to manual
5. Check for voltage at the main burner connection (EV2 green) See pg 16
 - If voltage is present when drops out, replace gas valve
 - If no voltage, replace IFC board

Troubleshooting



1. Thermostat in SMART mode will not modulate flame height
2. Check in/out pressure readings according to owner's manual
3. Check electrical connections and inspect wiring for damage
4. Inspect main burner orifice for blockage and correct size
5. Verify receiver is receiving transmitter command by beeping
- If no beep, see Remote Not Learning troubleshooting
6. Check continuity of step motor. Resistance between yellow/orange and black/brown wires should be 25 ohms. (See pg 17)
- If no continuity or step motor is not regulating out pressure, replace step motor.

Note: Not all fireplaces are equipped with fan

1. Remove batteries from battery backup and test fireplace turns on. If fireplace doesn't turn on, see pg 14 for 120VAC issue
2. Verify the ON/OFF rocker switch is in the ON position.
3. Verify there is power at the outlet the fan plugs into.
4. Verify the remote does not say OFF on remote. Note: Fan in thermo settings is time delay.
5. Verify electrical connections are secure
6. Unplug the fan from outlet and plug into external 120V supply
- If fan works replace IFC module.
- If fan does not work, replace fan

Note: Not all fireplaces are equipped with lights

1. Remove batteries from battery backup and test if fireplace turns on
- If fireplace doesn't turn on, see pg 14 for 120VAC issue
2. Verify the ON/OFF rocker switch is in the ON position.
3. Inspect light bulbs and fixture for damage. Replace if necessary
4. Inspect wiring and verify proper ground to the IFC is established
5. Check to make sure the remote is calling for the lights to be ON.
7. Check voltage on the IFC module (figure 3.2 pg 18)
- If no voltage replace IFC module.
- If voltage is present replace Light Kit.

Verifying Power Supply to IFC Module

The following images are a series of tests to determine if 120V is supplied throughout the system.

Figure 1.1 shows the location of the incoming power on the IFC module.

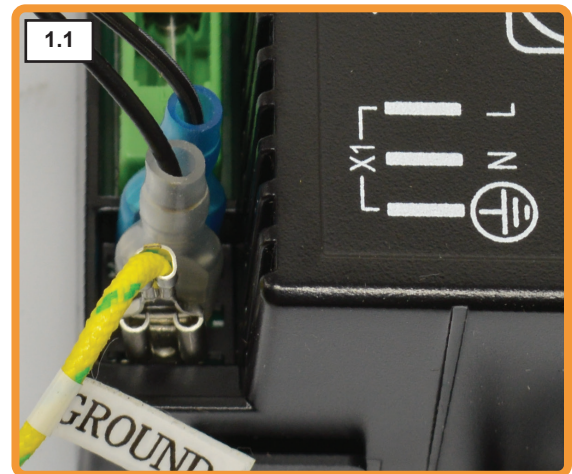


Figure 1.2 displays how to test if 120VAC is supplied to the IFC module. Take note that if you are getting 0VAC out of this test, make sure the POWER switch is in the ON position and if so test the outlet the unit is plugged into for power.

Note: This test will be a VAC reading



Figure 1.3 would be the battery back-up power supply test. It is important to get your multimeter pins on the contacts for an accurate reading. Power supplied should be approximately 6.2VDC.

Note: This test will be a VDC reading



Verifying Voltage on Solenoids (EV1 and EV2)

This test performed would be done if we wanted to know if the IFC module is supplying power to the Pilot solenoid (EV1) telling it to open.

Multimeter would be in VDC.

EV1 Solenoid

One multimeter pin would be placed on the ground at the top of the valve where yellow/ green wire connect, while the other pin would be placed on the spade connection where the Orange wire connects to the EV1 solenoid.

Initially when you turn on the pilot you will get a reading of about 4.292VDC (Figure 2.1) and drop to about 0.940 (Figure 2.2).

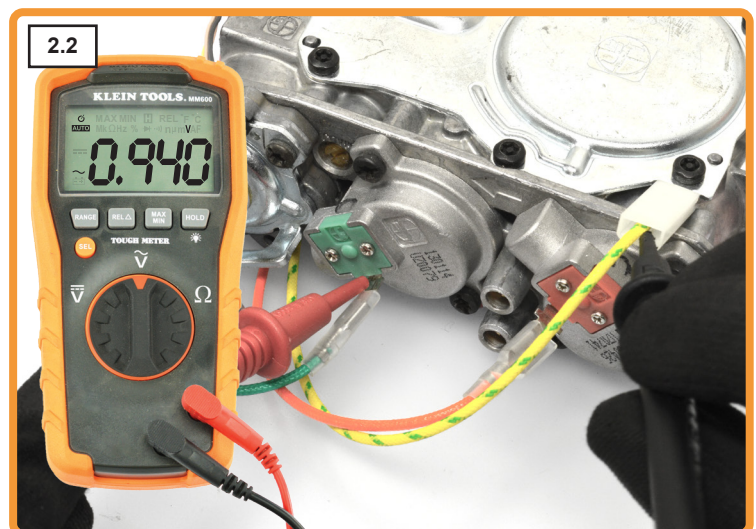
This reading tells us the IFC module is sending power through the harness to open the corresponding solenoid.

If you are getting power and valve is still not supplying gas our focus would be is gas turned on, pilot lined crimped, or bad valve. (see troubleshooting tree for complete steps)

EV2 Solenoid

To test Burner solenoid (EV2) follow the same process, but connect multimeter pins to ground and to the green solenoid and NOT the orange.

Important: To test the Burner Solenoid (EV2) there would need to be a proven/ rectified pilot flame.



Performing Ohms Reading of Valve Solenoids

This test performed in Figures 3.1 and 3.2 are a continuity test of the valve solenoids. Your multimeter would need to be in the Ohms position and disconnect the wiring harness from EV1 and EV2.

Using one multimeter pin on the solenoid and the other on the ground your reading should be approximately 331.4 ohms.

Same process is conducted for either EV1 or EV2, just need to touch the corresponding spade connector.



Performing Ohms Reading on Step Motor

This test performed in Figure 4.1 is a continuity test of the step motor. Your multimeter would need to be in the Ohms position and disconnect wiring harness from the step motor to expose the leads.

Using a multimeter place the two pins on the two leads of the connector. Your reading should be approximately 25.3 ohms.



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Performing Voltage Readings on Light and Fan Kits

This test performed in Figures 5.1 and 5.2 are a voltage test of the fan and light terminals on the IFC board. Your multimeter would need to be in the AC voltage position.

Using one multimeter pin on the black lead and the other on the white lead your reading should be approximately 117 VAC on HI.

Same process is conducted for either the fan kit (figure 3.1) or the light kit (figure 3.2).

