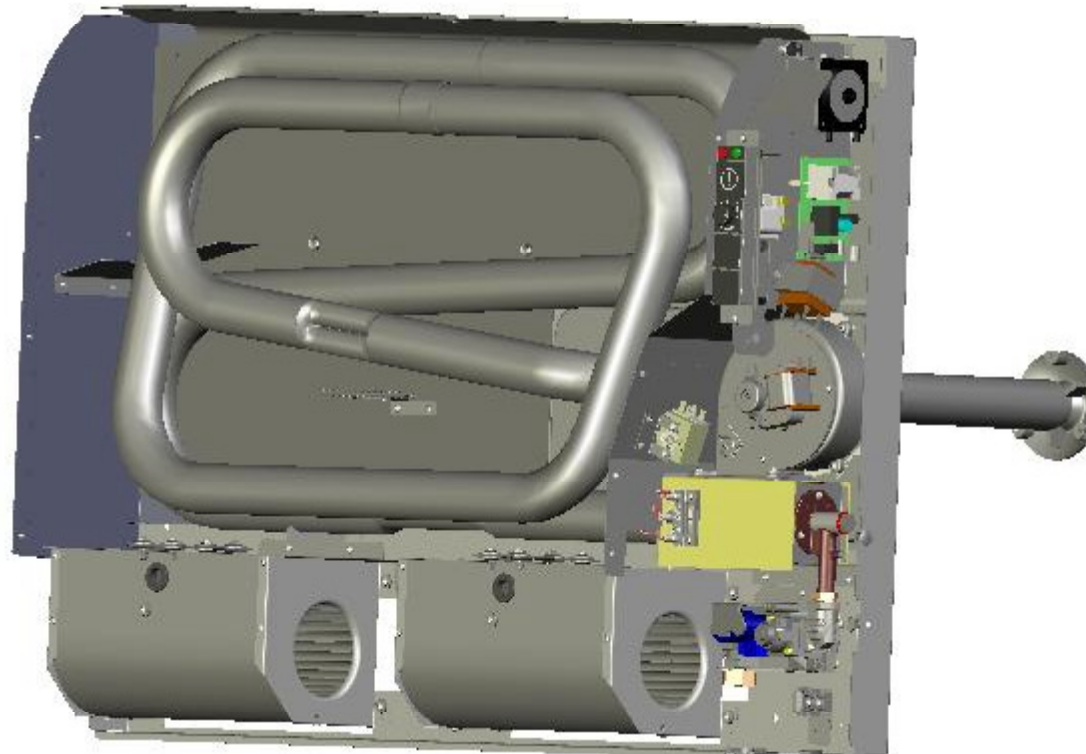


GAS-FIRED WALL HEATER

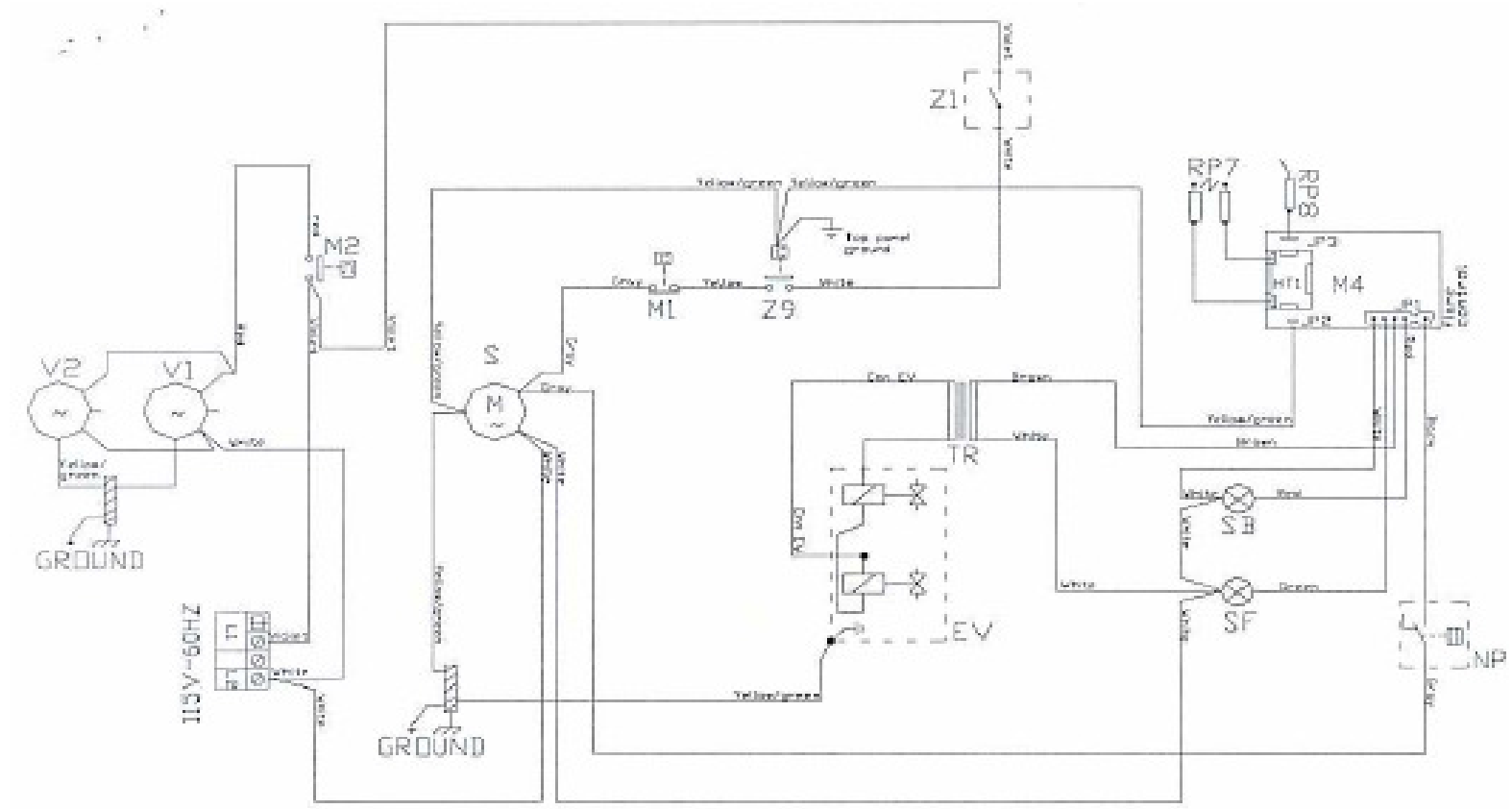
MODEL "8001"

TROUBLE-SHOOTING AND SERVICE MANUAL

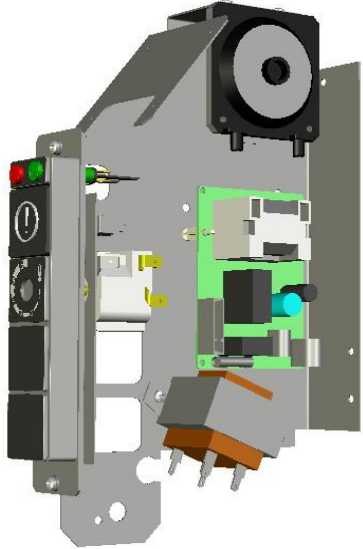
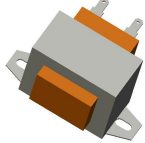
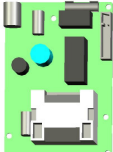

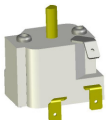




| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>L1-L2: Electrical supply 120V - 60Hz; L1 phase, L2 neutral</p> <p>M9: Main Fuse - 5x20 size - 4A</p> <p>Z1: Reset switch</p> <p>M2: Fan thermostat</p> <p>M: Fan motors</p> <p>Z9: Room thermostat</p> <p>M1: Overheat thermostat</p> <p>NP: Pressure switch</p> | <p>RP8: Flame sensor</p> <p>RP7: Spark igniter</p> <p>S: Combustion blower motor</p> <p>EV: Gas valve</p> <p>TR: 120/24 V transformer</p> <p>SF: Flame view lamp (Green lamp)</p> <p>SB: Lock-out lamp (Red lamp)</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

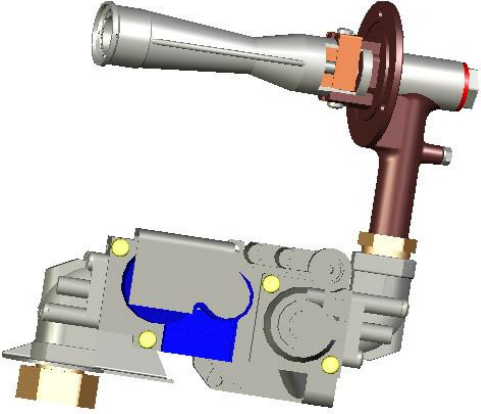
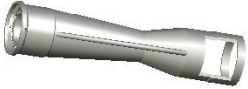

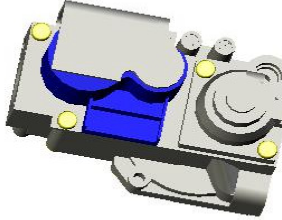
ELECTRIC SCHEME



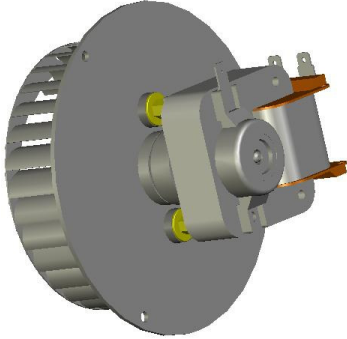
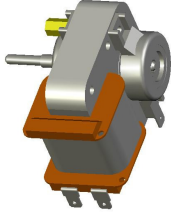
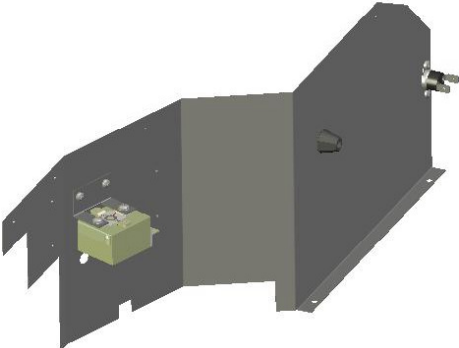


ELECTRIC BOX

| | | | |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------|-----------------------------------|
|  |  | TR - 120/24V Transformer | Part number: JTRS017 |
| |  | Ignition control box | Part number: JCNT019 |
| |  | NP - Pressure switch | Part number: JPRS009 |
| |  | Z9 - Room thermostat | Part number: JTLT005 |
| |  | Z1 - Reset switch | Part number: N19800205 |
| |  | SF/SB - Green and red lamps | Part number: ELMP006 - ELMP007 |

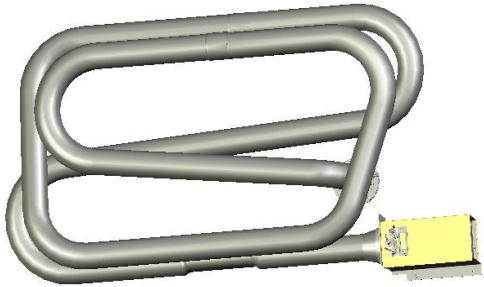
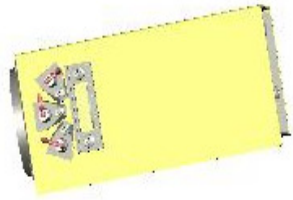
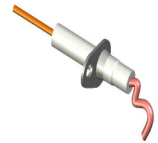

GAS ASSEMBLY

| | | | |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------|----------------------------------------------|
|  |  | Gas burner+gas nozzle | Part number: JPRT011 |
| |  | Natural gas nozzle LP gas nozzle | Part number: JGLL069 Part number: JGLL062 |
| |  | EV - Gas valve | Part number: JVLV065 |


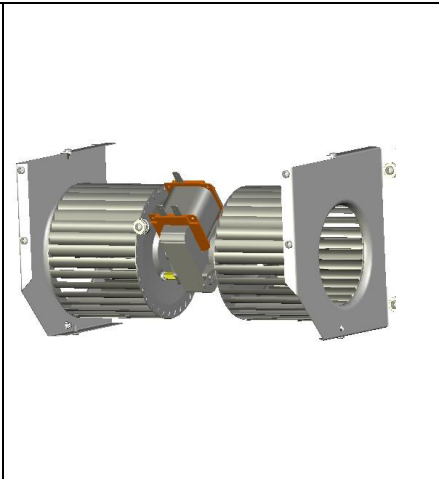
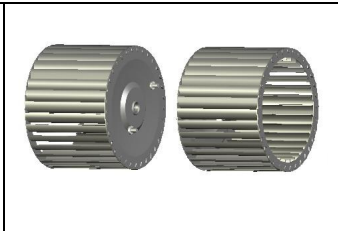
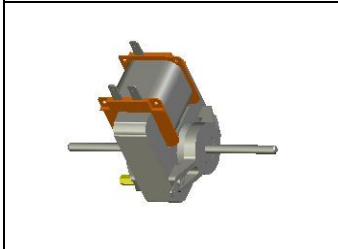
COMPONENTS (1)

| | | | |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------|-------------------------------|
|  |  | <p>S - Combustion blower motor</p> | <p>Part number: JMTR020</p> |
|  |  | <p>M1 - Overheat Thermostat</p> | <p>Part number: JTRM006</p> |
| |  | <p>M2 - Fan thermostat</p> | <p>Part number: J12301018</p> |

COMPONENTS (2)

| | | | | |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------|----------------------|
|  |  |  | RP8 : Flame sensor | Part number: JLTT015 |
| | |  | RP7: Ignition electrode (n.2 pcs) | Part number: JLTT023 |

COMPONENTS (3)

| | | | | |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------------------------------|
|  |  |  | <p>Fan blades (4 pcs)</p> | <p>Part number: VVNT003- VVNT002</p> |
| | |  | <p>M - Fan motor (2 pcs)</p> | <p>Part number: JMTR018</p> |

Starting sequence (electrical)

STEP 1

1. Check L1 - L2 (Supply 120 V, 60 Hz)
2. Check M9 (Main fuse)

TROUBLE-SHOOTING STEP 1

Point 1 (L1-L2).

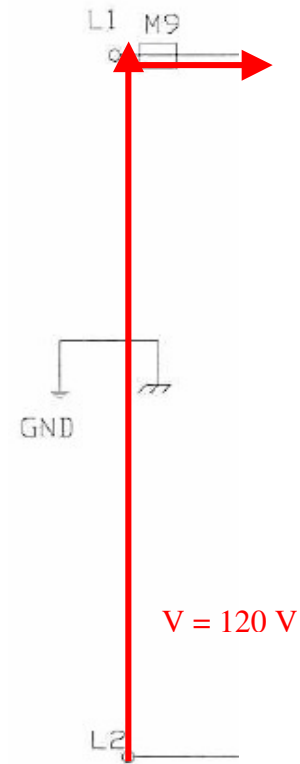
No voltage (120 V).

Check the electrical supply line, wirings and connections.

Point 2 (M9).

Fuse damaged.

Check the electrical supply line and replace the fuse.



STEP 2

3. Check **Z1** (Reset switch). The switch is closed if there is no ignition block.
4. Check **M2** (Fan thermostat). The thermostat is closed only when its temperature is higher than 104 °F.

TROUBLE-SHOOTING STEP 2

Point 3 (Z1).

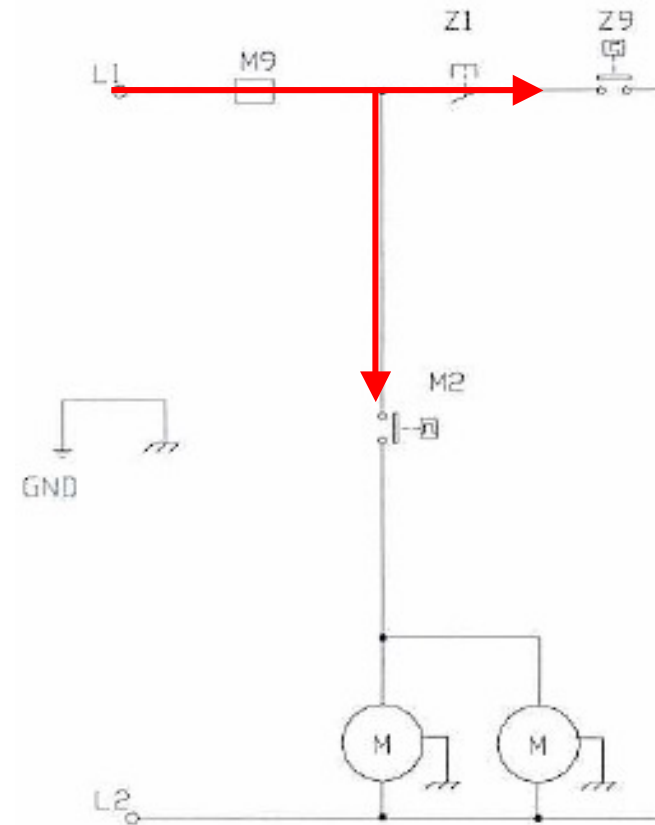
Z1 is open and no ignition block.

Check wirings and connections. If everything is OK replace the switch.

Point 4 (M2).

M2 is close and fan thermostat temperature lower than 104 °F.

Check wirings and connections. If they are OK replace the thermostat.



STEP 3

5. Check Z9 (Room thermostat). Close the thermostat by a clockwise rotation
6. Check M1 (Overheat thermostat, automatic reset). The thermostat is closed @ T lower than 167 °F
7. Check S (Combustion blower motor).

TROUBLE-SHOOTING STEP 3

Point 5 (Z9).

After a clockwise rotation the contact is still open.
Check wirings and connections.

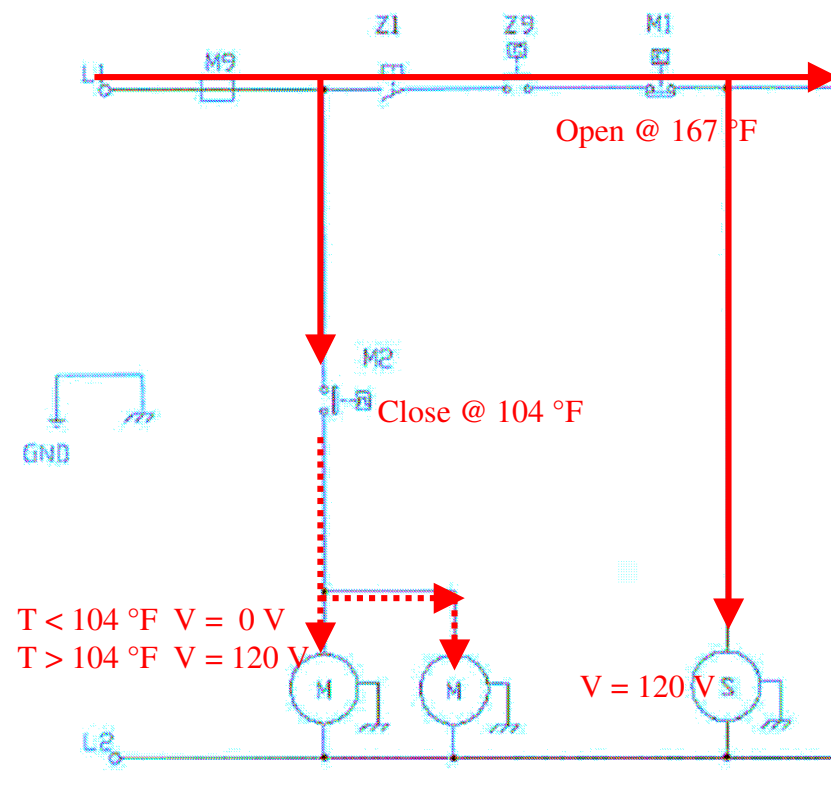
If they are OK and the room temperature is cold replace the switch.

Point 6 (M1).

M1 is open and T lower than 167 °F. Check wirings, connections, gas pressure, and motor. Clean fan blades and air grids.
If everything is OK, replace the thermostat.

Point 7 (S).

S motor does not run. Check voltage, wirings and connections.
If everything is OK, replace the motor.



STEP 4

8. Check NP (Pressure switch).
9. Check electrical supply to flame control box (120 V)
10. Check TR (electrical transformer) (120V/24V)
11. Check EV (gas valve) (120V)
12. Check RP7 (ignitions electrodes)
13. Check RP8 (flame sensor)

TROUBLE-SHOOTING STEP 4

Point 8 (NP).

The NP contact is open and air blower ON.
Check wirings and connections. Check and clean blower pipes.
Check and clean burner and flue gas pipe. Clean blower.
If everything is OK, replace the switch.

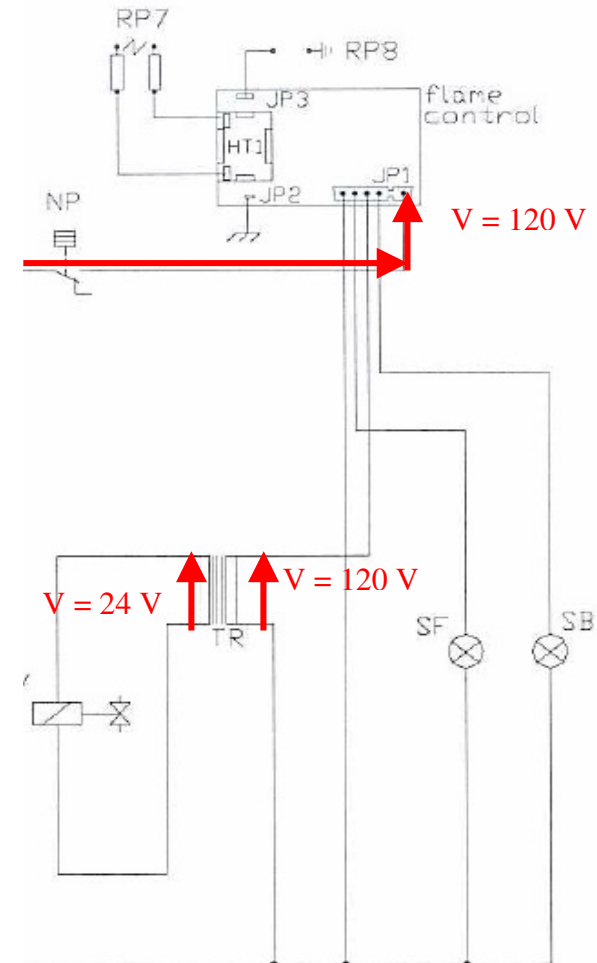
Point 10 (TR).

No inlet voltage (120 V).
Check 5 poles connector and control box.
If everything is OK, replace the connector.

No outlet voltage (24 V) during ignition.
Check wirings and connections.
If everything is OK, replace the transformer.

Point 11 (EV).

Valve is closed during ignition.
Check wirings, connections and voltage.
If everything is OK, replace the gas valve.



Point 12 (RP7).

No spark during ignition.

Check electrodes, wirings and connections.

If everything is OK, replace the flame control box.

Point 13 (RP8).

No flame sensing with flame.

Check flame sensor, wirings and connections. Check gas pressure and exhausted flue pipe.

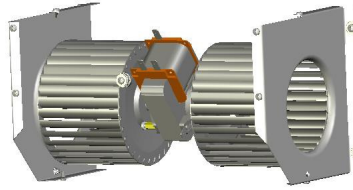
If everything is OK, replace the flame control box.

Starting sequence (gas)

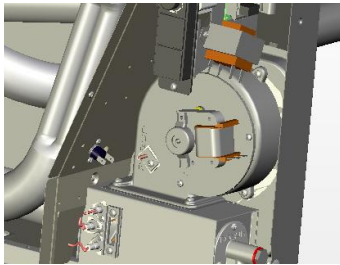
1. Check and clean exhausted **flue pipes**;
2. Check and clean **air blower and fan motor**;
3. Check and clean **burner and combustion chamber**;
4. Check and clean **gas nozzle**;
5. Check **gas type**;
6. Check **supply gas line** pressure (see the manual);
7. Check gas losses;
8. Set **burner gas pressure** (see the manual).

Main service operations (once a year)

1. Clean fan blades

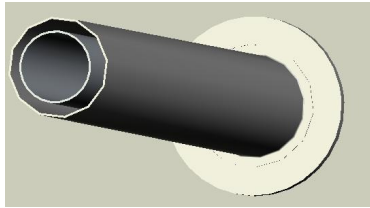


2. Clean air blower



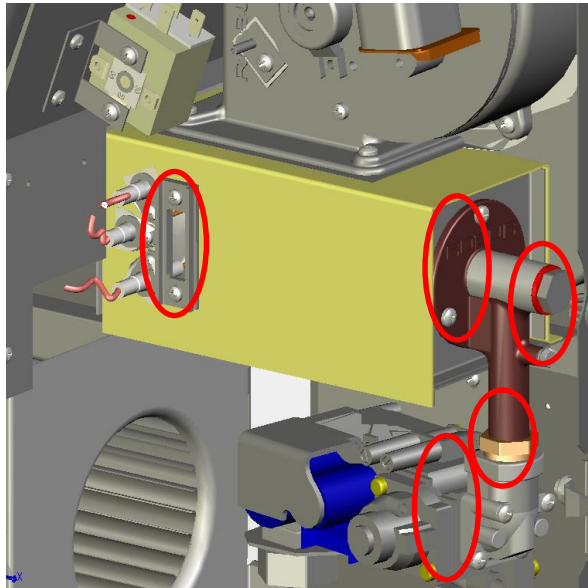
3. Check and clean silicone red pipes
4. Check air flow switch

5. Clean and check exhausted flue pipe and air intake pipe

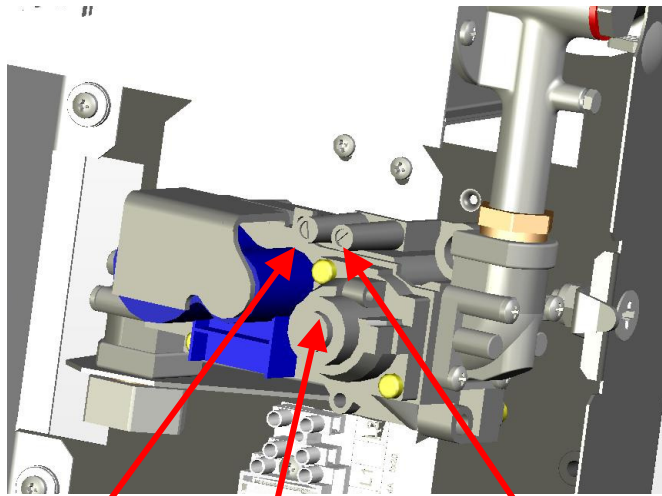


Check red O-R gasket (NRNG003).
If it's damaged, replace it

6. Check for gas leaks on all connections



7. Check and adjust gas pressure



Gas inlet pressure
(pipeline)

Gas burner pressure
adjustment

Gas manifold
pressure (burner)

Adapting to a different gas type

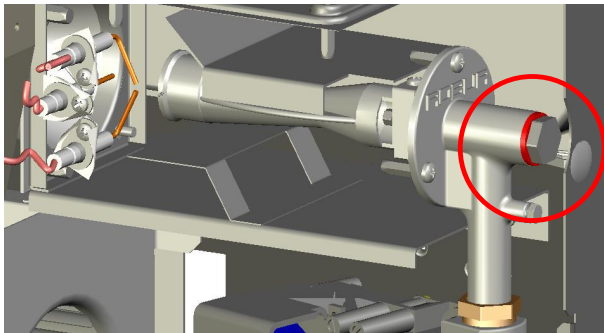
Adapting to another gas type must be performed by a qualified installer

If the type of the gas does not correspond to the type to be used (natural or LPG gas) by the unit, it must be converted and adapted to the correct type of the gas.

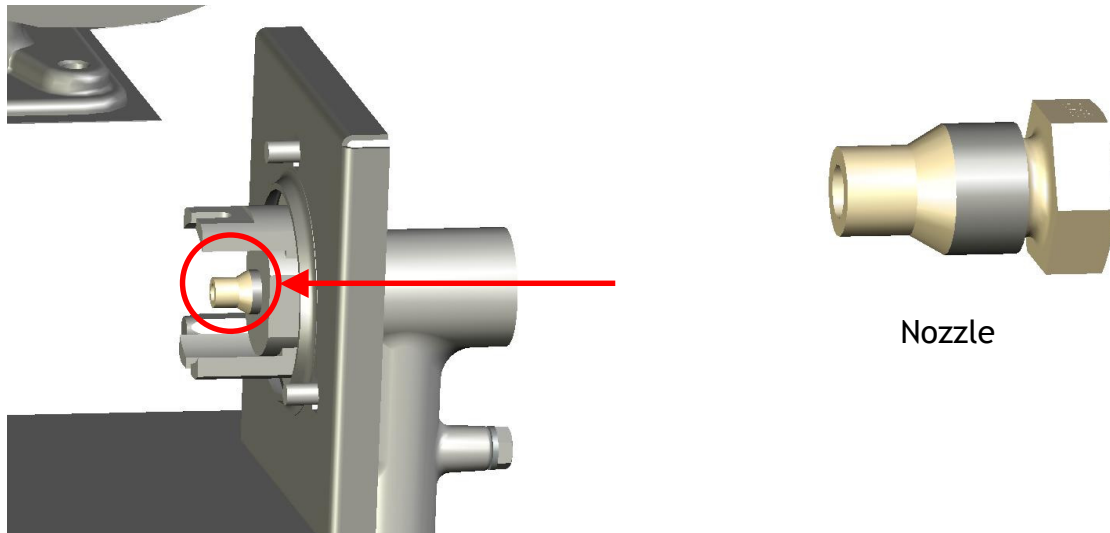
It is necessary to do the following two operations.

1. Nozzle changing

1. Remove the screw indicated below.



2. Without removing anything else, remove the nozzle from the burner inserting the screwdriver as indicated by the red arrow.



3. Change the nozzle, fix the screw indicated at point 1 and set the burner pressure as indicated in the table 2

| GAS TYPE | NOZZLE PART NUMBER | NOZZLE DIAMETER |
|-------------|--------------------|-----------------|
| NATURAL GAS | JGLL069 | 0.1 in. |
| LPG | JGLL062 | 0.06 in. |

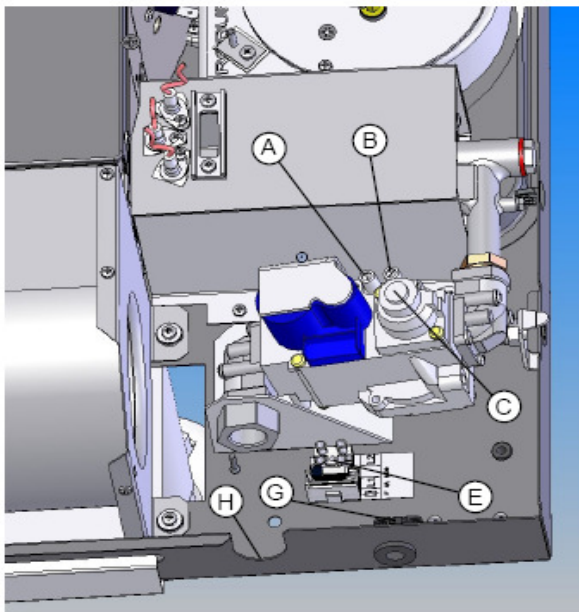
Table 1

2. Gas pressure checking and setting

See the values reported in the table below.

| GAS TYPE | MINIMUM LINE GAS PRESSURE | BURNER GAS PRESSURE |
|-------------|---------------------------|---------------------|
| NATURAL GAS | 7.0 in.w.c. | 3.2 in.w.c. |
| LPG | 11.0 in.w.c. | 10.6 in.w.c. |

Table 2



- A TEST GAUGE CONNECTION FOR GAS INLET PRESSURE
- B TEST GAUGE CONNECTION FOR GAS MANIFOLD PRESSURE
- C NUT FOR PRESSURE ADJUSTMENT (PRESSURE REGULATOR); THE SCREW IS COVERED BY A CAP
- E ELECTRIC CLAMP CONNECTION
- G ELECTRIC CABLE INLET
- H HOLE FOR GAS SUPPLY INLET

High altitude installation

According to the the altitude of the installation site, reduce the manifold pressure reported in the table 2 as indicated in the table 3.

| ALTITUDE | MANIFOLD PRESSURE REDUCING RATE |
|--------------|---------------------------------|
| 0-2000 ft | 0% |
| 2000-3000 ft | 8% |
| 3000-4000 ft | 16% |
| 4000-5000 ft | 24% |
| 5000-5500 ft | 32% |

Table 3

EuroTherm *Systems*

100 Quaker Lane • Malvern, PA 19355

Phone: 877-930-2739

Fax: 610-240-4906

www.eurothermsystems.com