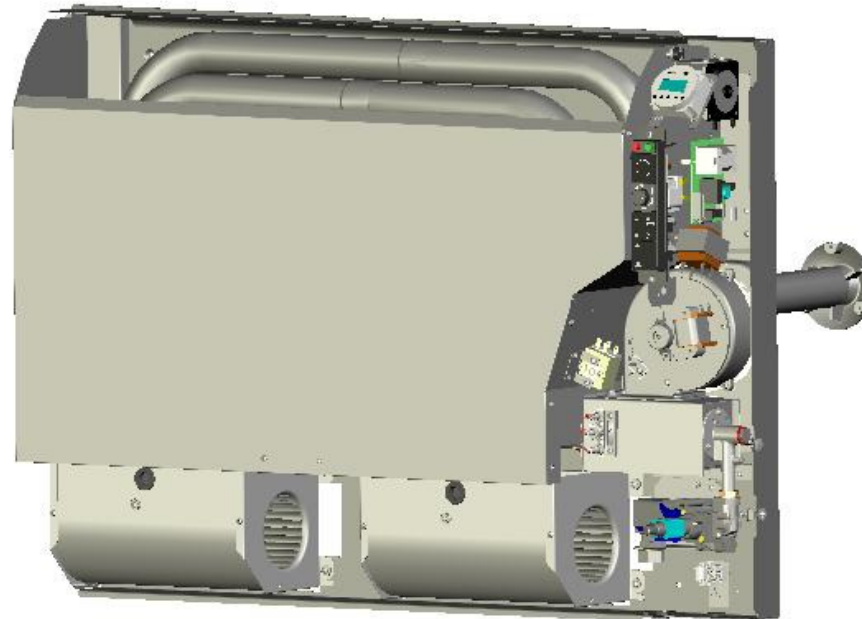


GAS-FIRED WALL HEATER

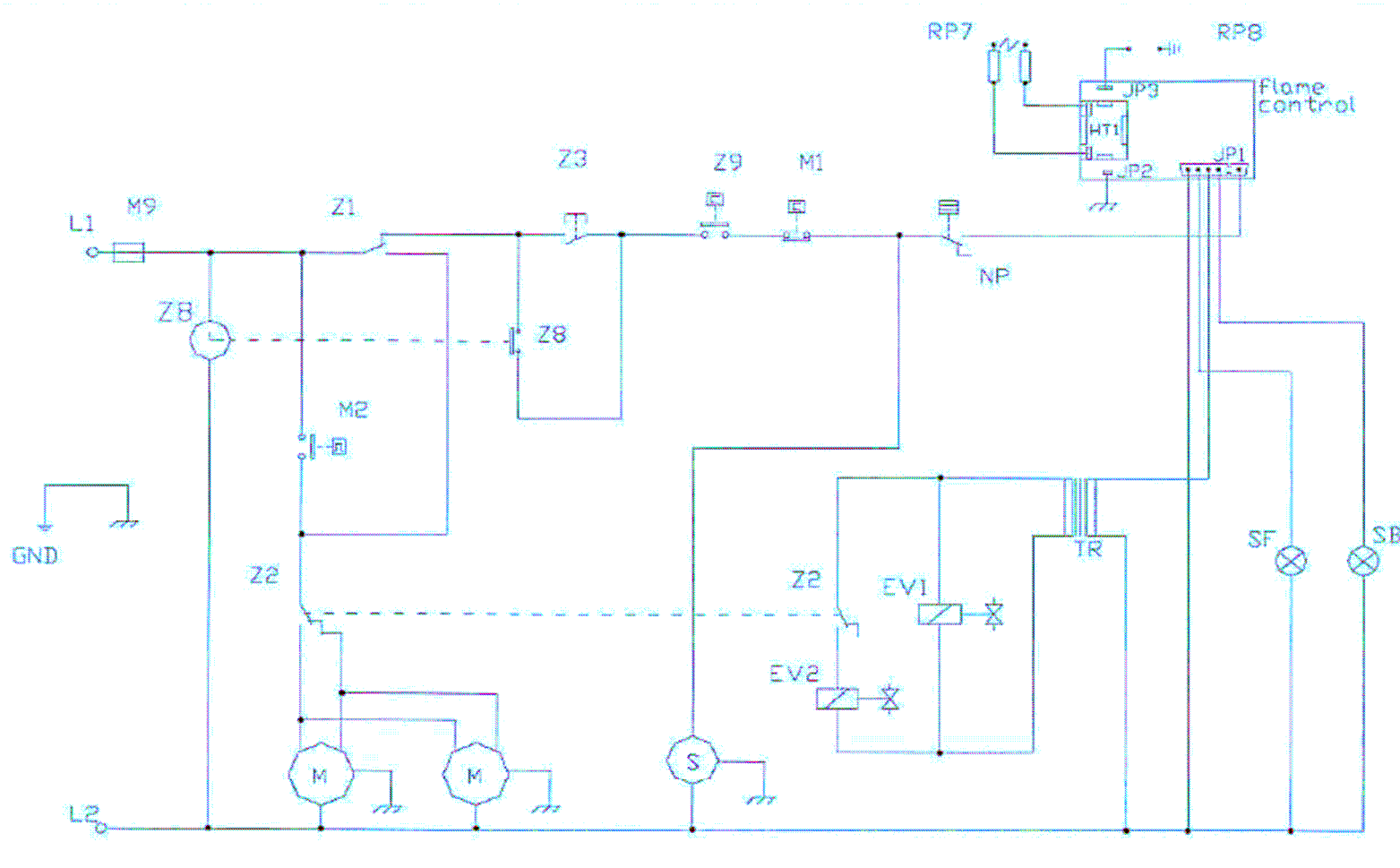
MODEL "8002"

TROUBLE-SHOOTING AND SERVICE MANUAL

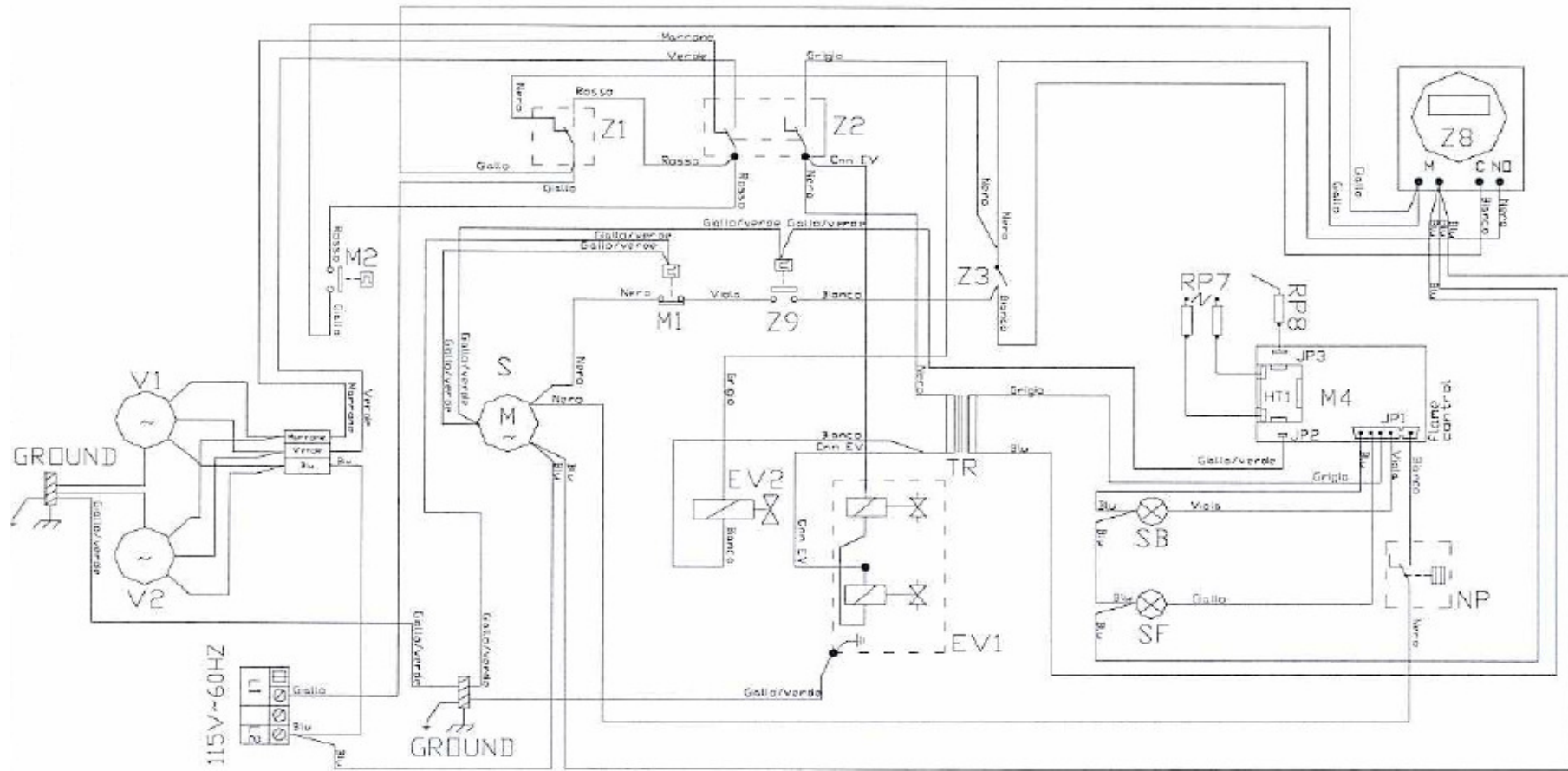


<p>L1-L2: Electrical supply 120V - 60Hz; L1 phase, L2 neutral</p> <p>M9: Main Fuse - 5x20 size - 4A</p> <p>Z8: Programmable timer</p> <p>Z1: Reset and summer/winter switch</p> <p>Z2: Hi-Lo flame and fan speed switch</p> <p>Z3: Manual-program mode switch</p> <p>M2: Fan thermostat</p> <p>M: Fan motor</p> <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>EV1: MIN gas valve</p> <p>EV2: MAX 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>
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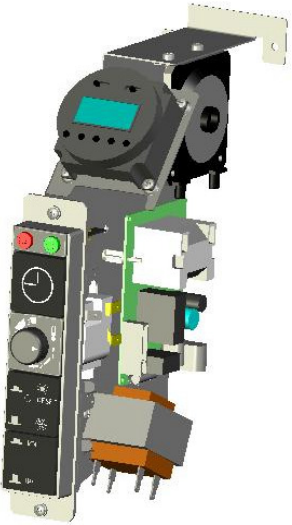
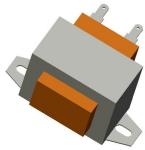
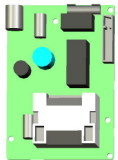

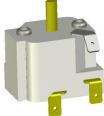


FUNCTIONAL DIAGRAM



ELECTRIC SCHEME

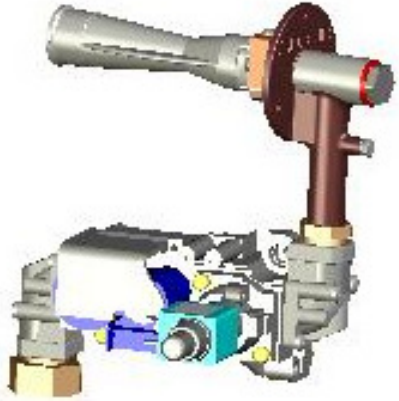
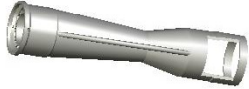

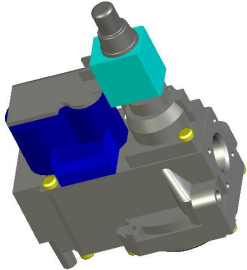


ELECTRIC BOX

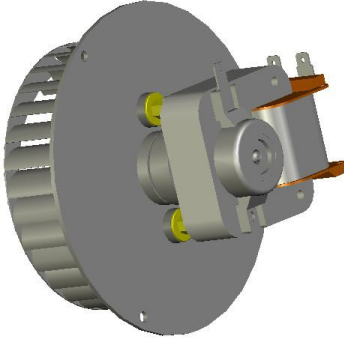
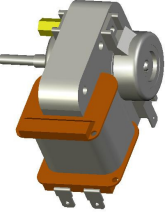
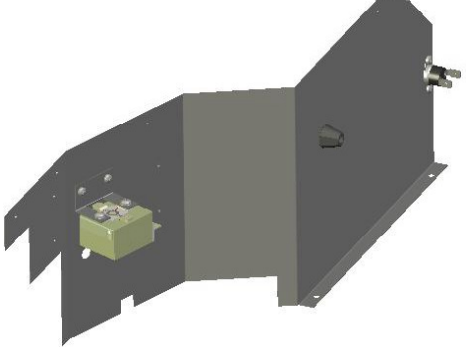


		TR - 120/24V Transformer	Part number: JTRS017
		Ignition control box	Part number: JCNT019
		NP - Pressure switch	Part number: JPRS009
		Z9 - Room thermostat	Part number: JTLT005
		Z1 - Reset and summer/winter switch	Part number: NTST000
		Z8-Z3 - Timer and manual-program mode switch	Part number: N19800202

		Z2- Hi-Lo flame and fan speed switch	Part number: N19800201
		SF/SB - Green and red lamps	Part number: ELMP006 - ELMP007
		Z8 - Timer	Part number: E-PRG005

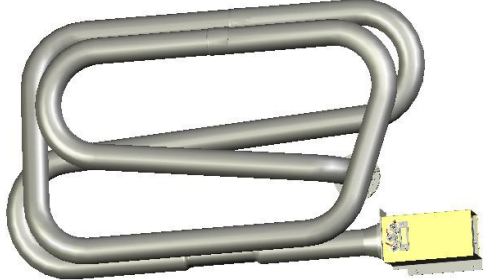
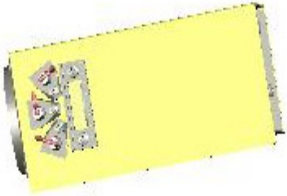


GAS ASSEMBLY

		Gas burner + gas nozzle	Part number: JPRT011
		Natural gas nozzle LP gas nozzle	Part number: JGLL069 Part number: JGLL062
		EV1/2 - Min/Max gas valve	Part number: GVLV022


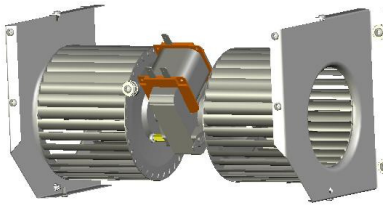
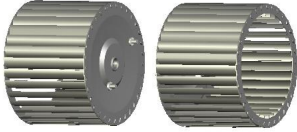
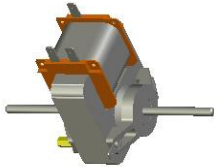
COMPONENTS (1)

		<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: Spark igniter (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).

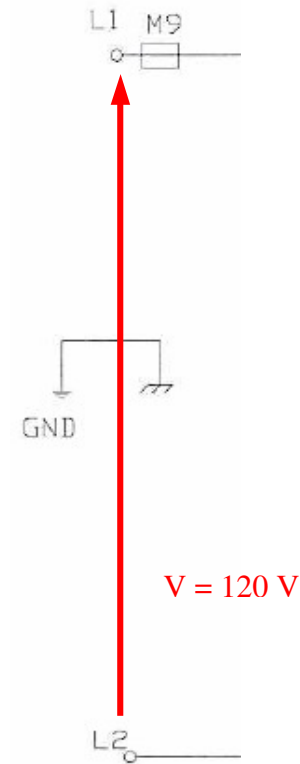
No voltage (120 V).

Check the electrical supply line, wirings and connections.

Point 2 (M9).

Fuse damaged.

Check the electrical supply line and replace the fuse.



**SUMMER MODE
STEP 2**

3. Check Z1 (Reset and summer/winter switch). The switch is closed if there is no ignition block.
4. Check Z2 (Hi-Lo flame and fan speed switch)
Button down - Minimum velocity
Button up - Maximum velocity

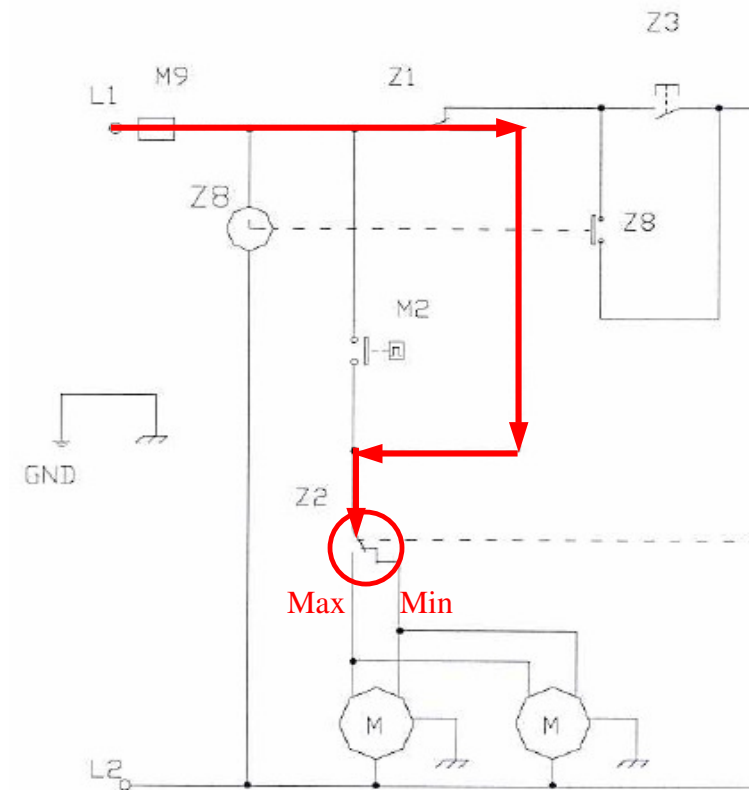
TROUBLE-SHOOTING STEP 2

Point 3 (Z1)

Z1 is open and no ignition block.
Check wirings and connections. If everything is OK replace the switch.

Point 4 (Z2)

Z2 is down but the fan motor runs at the maximum velocity (120 V)
Z2 is up but the fan motor runs at the minimum velocity (<120 V)
Check wirings and connections. If they are OK replace the switch.



WINTER MODE
STEP 3

5. **Check Z1** (Reset and summer/winter switch).
Button up - winter mode.
6. **Check Z3** (Manual-automatic switch).
Button up - manual mode
Button down - auto mode.
7. **Check M2** (Fan thermostat).
The thermostat is closed only when its temperature is higher than 104 °F.

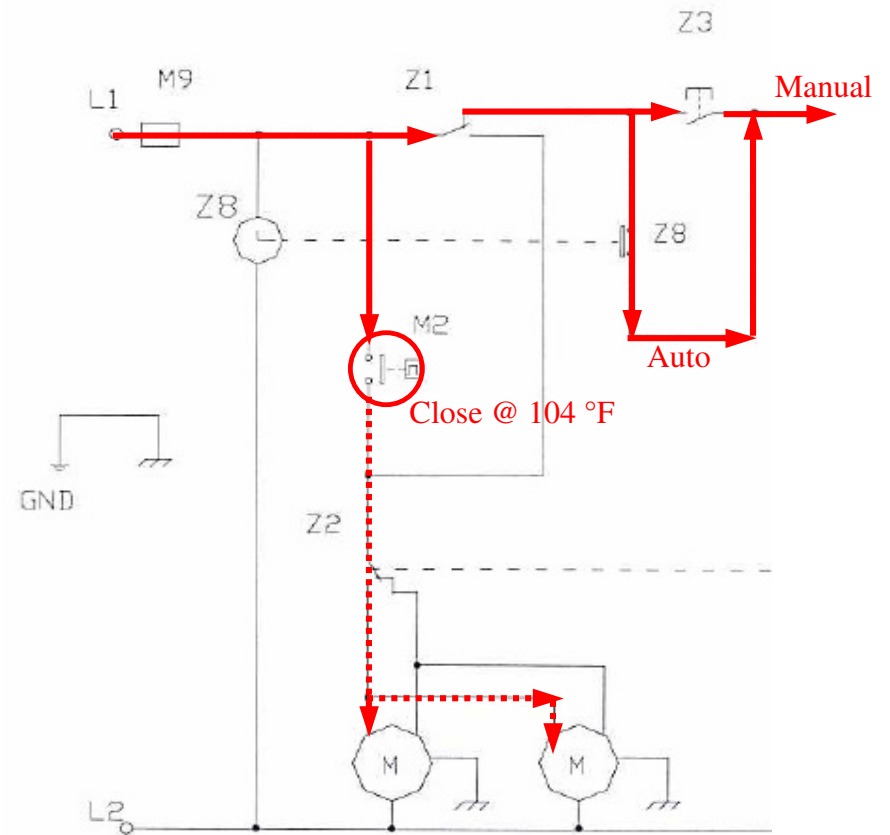
TROUBLE-SHOOTING STEP 3

Point 5 (Z1)

Z1 is open and no ignition block.
Check wirings and connections. If everything is OK replace the switch.

Point 7 (M2)

M2 is close and fan thermostat temperature lower than 104 °F.
Check wirings and connections. If they are OK replace the thermostat.



STEP 4

8. Check Z9 (Room thermostat). Close the thermostat by a clockwise rotation
9. Check M1 (Overheat thermostat, automatic reset). The thermostat is closed @ T lower than 140 °F
10. Check S (Combustion blower motor)

TROUBLE-SHOOTING STEP 4

Point 8 (Z9).

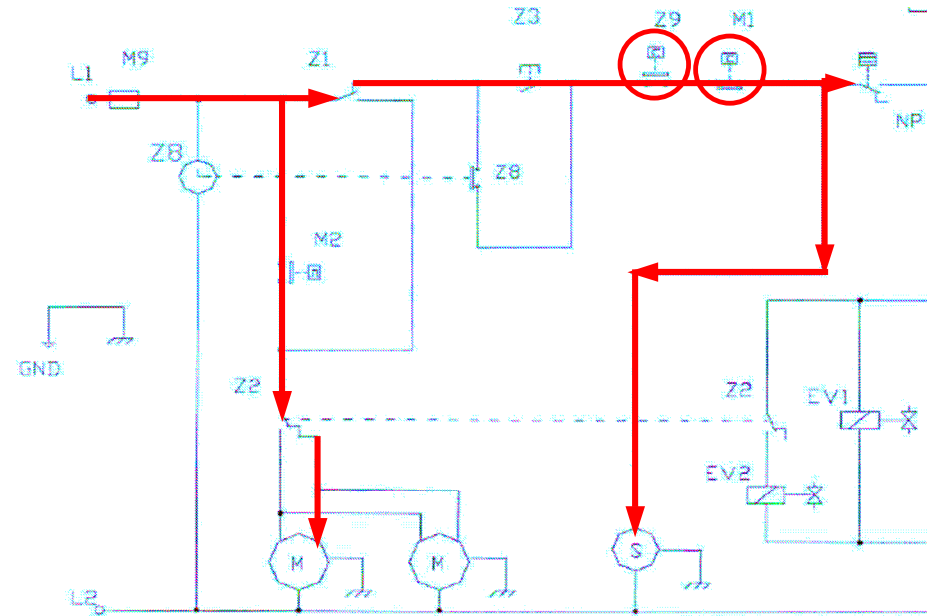
After a clockwise rotation the contact is still open. Check wirings and connections. If they are OK and the room temperature is cold replace the switch.

Point 9 (M1).

M1 is open and fan thermostat temperature lower than 140 °F. Check wirings, connections, gas pressure, fan motor. Clean fan blades and air grids. If everything is OK, replace the thermostat.

Point 10 (S).

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



Point 15 (RP7).

No spark during ignition.

Check electrodes, wirings and connections.

If everything is OK, replace the flame control box.

Point 16 (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.

Point 17 (EV2).

No voltage on EV2 with Z2 up.

Check wirings and connections.

If everything is OK, replace the switch.

Valve closed with voltage with Z2 up.

Check wirings, connections and voltage.

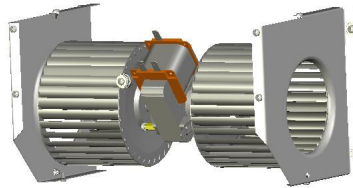
If everything is OK, replace the gas valve.

Starting sequence (gas)

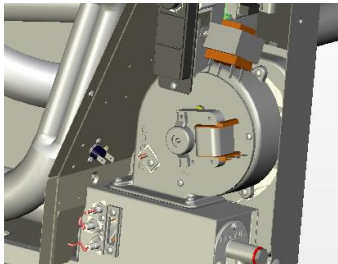
1. Check and clean **exhausted flue pipes**;
2. Check and clean **air blower and fan motor**;
3. Check and clean **burner and combustion chamber**;
4. Check and clean **gas nozzle**;
5. Check **gas type**;
6. Check **supply gas line** pressure (see the manual);
7. Check gas losses;
8. Set **burner gas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

Main service operations (once a year)

1. Clean fan blades



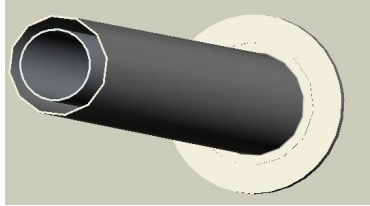
2. Clean air blower



3. Check and clean silicone red pipes

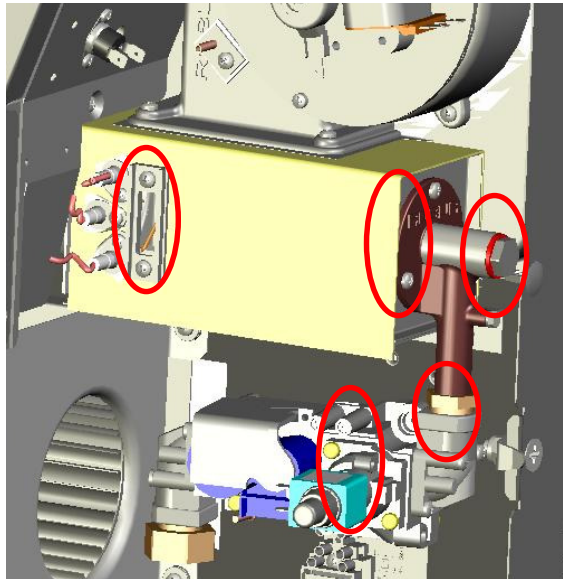
4. Check air flow switch

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

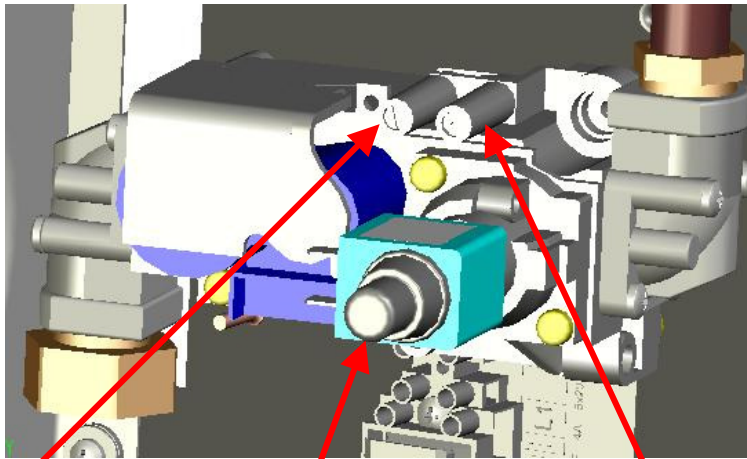


Check red O-R gasket (NRNG003).
If it's damaged, replace it

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

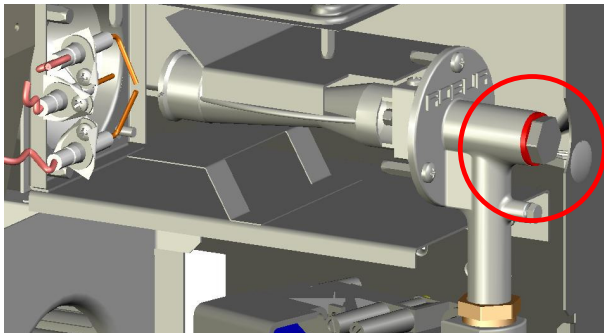
Adapting to another gas type must be performed by a qualified installer

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.

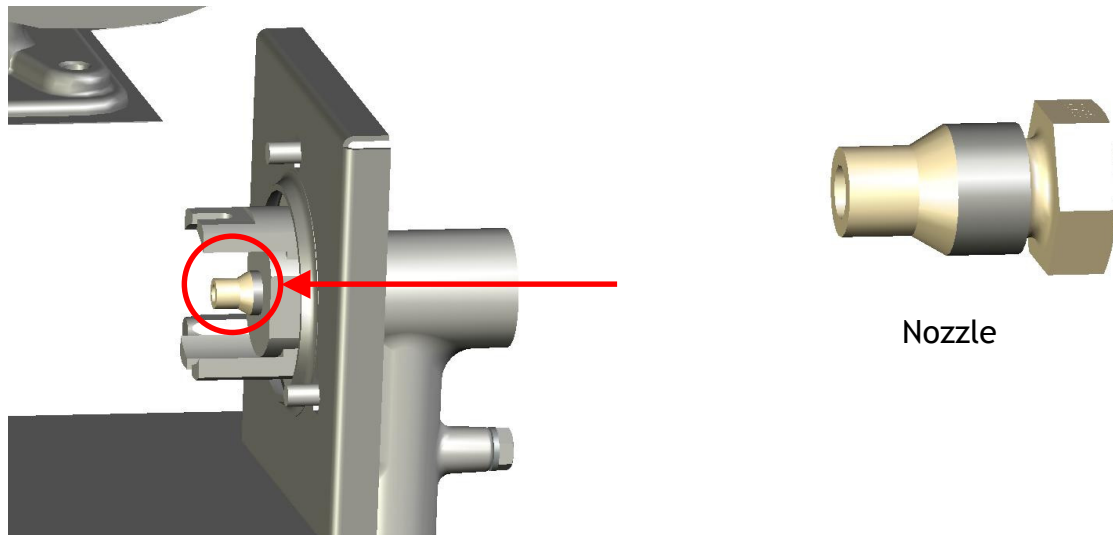
It is necessary to do the following two operations.

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.

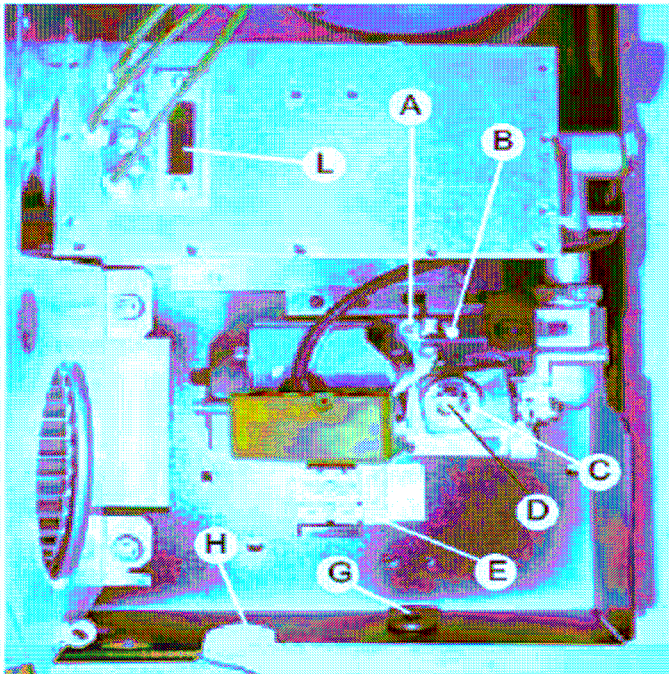
Table 1

2. Gas pressure checking and setting

See the values reported in the table below.

GAS TYPE	MINIMUM LINE GAS PRESSURE	BURNER GAS PRESSURE MAX.	BURNER GAS PRESSURE MIN.
NATURAL GAS	7.0 in.w.c.	3.2 in.w.c.	1.8 in.w.c.
LPG	11.0 in.w.c.	10.6 in.w.c.	6.5 in.w.c.

Table 2



- A TEST GAUGE CONNECTION FOR GAS INLET PRESSURE
- B TEST GAUGE CONNECTION FOR GAS MANIFOLD PRESSURE
- C NUT FOR HI PRESSURE ADJUSTMENT (PRESSURE REGULATOR)
- D SCREW FOR LO PRESSURE ADJUSTMENT (HI – LO OPERATOR)
- E ELECTRIC CLAMP CONNECTION
- G ELECTRIC CABLE INLET
- H HOLE FOR GAS SUPPLY INLET
- L FLAME VIEW

MINIMUM BURNER PRESSURE SETTING:

1. Set LOW burner capacity by pushing button Z2
2. Connect a micromanometer to the test gauge B
3. Rotate the internal screw “D” and set the pressure at the correct value

MAXIMUM BURNER PRESSURE SETTING:

1. Set HI burner capacity by pushing button Z2
2. Connect a micromanometer to the test gauge B
3. Rotate the external screw “C” and set the pressure at the correct value

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: 610-240-4900

Fax: 610-240-4906

www.eurothermsystems.com