

Operator's Manual



JAZ

(GB) Direct-fired Diesel/Kerosene Air Heaters

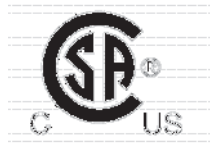
JAZ 42

JAZ 80

JAZ 80 W

JAZ 125

JAZ 160



IMPORTANT: Read and understand this manual before assembling, starting or servicing the heater. Improper use of this heater can cause serious injury. Keep this manual for future reference.

 **Munters**

Introduction

Thank you for choosing a Munters product. Read this manual carefully before using the unit and save it for future reference.

Disclaimer

Munters reserves the right to make alterations to specifications, quantities, dimensions etc. for production or other reasons, subsequent to publication.

While we believe the information is accurate and complete, we make no warranty or representation for any particular purposes. The information is offered in good faith and with the understanding that any use of the units or accessories in breach of the directions and warnings in this document is at the sole discretion and risk of the user.

1. General Safety Information



This is the safety alert symbol. It alerts you to potential personal injury hazards. Strictly obey all safety messages that follow this symbol.

⚠ DANGER

Indicates a hazardous situation, which, if not avoided, will result in death or serious injury.

⚠ WARNING

Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.

⚠ DANGER

General Hazard Warning
Failure to comply with the precautions and instructions provided with this heater, can result in death, serious bodily injury and property loss or damage from hazards of fire, explosion, burn, asphyxiation, carbon monoxide poisoning, and/or electrical shock. Only persons who can understand and follow the instructions should use or service this heater.

⚠ DANGER

Not for use in residential living areas or in non-adequately ventilated enclosed spaces.

⚠ DANGER

Carbon monoxide poisoning may lead to death.

⚠ WARNING

Fire, burn, inhalation, and explosion hazard. Keep solid combustibles, such as building materials, paper or cardboard, a safe distance away from the heater as recommended by the instructions. Never use the heater in spaces which do or may contain volatile or airborne combustibles, or products such as gasoline, solvents, paint thinner, dust particles or unknown chemicals.

⚠ WARNING

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

⚠ WARNING

Not for home or recreational vehicle use

Local laws and regulations may limit or prohibit the use of this type of heater. Consult your local fire department for further information.

⚠ WARNING

Combustion by-products produced when using this product contain carbon monoxide, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Massachusetts Residents: Massachusetts state law prohibits the use of this heater in any building which is used in whole or in part for human habitation. Use of this heating device in Massachusetts requires local fire department permit (M.G.L.C. 148, Section 10A).

New York City Residents: The New York City fire Code prohibits the storage, handling and use of kerosene fueled heaters for space heating. Any person violating that provision may be punished by a fine up to \$10,000 and a term of imprisonment up to 6 months.

⚠ WARNING

The heater surfaces become very hot during and after operation. Do not touch! Use personal protecting equipment if needed.

⚠ WARNING

Children should be supervised to ensure that they do not play with the heater.

⚠ WARNING

This heater is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

⚠ WARNING

Shut off and unplug the heater before moving it. Never pull the cable to unplug or move the unit.

⚠ WARNING

Never leave the heater unattended while burning or connected to a power source.

⚠ WARNING Never use or touch the heater with wet hands or when either the heater or the power cable is wet.

⚠ WARNING Follow all state and local ordinances and codes when using this heater.

2. Product Description

This is a Diesel or Kerosene-Fueled, direct-fired air heater. It is primarily intended for temporary heating of buildings under construction, alteration

or repair. Direct-fired means that the combustion products of the heater enter the heated space. This appliance produces small amounts of carbon monoxide. Carbon monoxide is toxic.

3. Technical Specifications

Model	JAZ 42	JAZ 80	JAZ 80 W	JAZ 125	JAZ 160
Heat Input [BTU/hr]	40,000	77,700	77,700	125,000	160,000
Air Flow Rating [ft ³ /min]	180	335	335	420	480
Fuel Type	No.1 Fuel Oil (Diesel Fuel) / No.2 Fuel Oil (Diesel Fuel) / Kerosene				
Fuel consumption [gal/h]	0.28	0.56	0.56	0.92	1.16
Fuel Nozzle Size	0.30 gph	0.65 gph	0.65 gph	0.85 gph	1.00 gph
Voltage	120V 60Hz				
Electrical Power [W]	180	230	230	240	430
Air Pressure Setting [psi]	4.8	4.1	4.1	5.1	5.5
Current Rating [A]	1.50	2.00	2.00	2.05	3.15
Fuse rating [A]	T 4A	T 4A	T 4A	T 4A	T 4A
Dimensions					
Net Weight [lb]	27.3	30.4	34.6	58.9	62.2
Length [in]	26.4	26.4	32.0	36.6	36.6
Width [in]	12.5	12.5	17.7	20.5	20.5
Height [in]	16.5	16.5	24.4	25.0	25.0
Tank Capacity [gal]	5.0	5.0	5.0	11.4	11.4
Running Time [h]	~18	~9	~9	~13	~10
Standard Features					
Fuel Level Indicator	Sightglass	Sightglass	Sightglass	Fuel gauge	Fuel gauge
Power Cord Support	yes	yes	yes	yes	yes
Handle	top	top	rear	rear + front	rear + front
Ambient Thermostat	built-in	built-in	built-in	built-in	built-in
Error Indicator	built-in	built-in	built-in	built-in	built-in

4. Assembling Instructions

Remove the heater from its shipping carton. If the unit is damaged in anyway, do not use it and contact your dealer.

JAZ 42/JAZ 80: the heater is fully assembled - no further assembly required

JAZ 80 W

The following parts are supplied with the heater in the shipping carton.

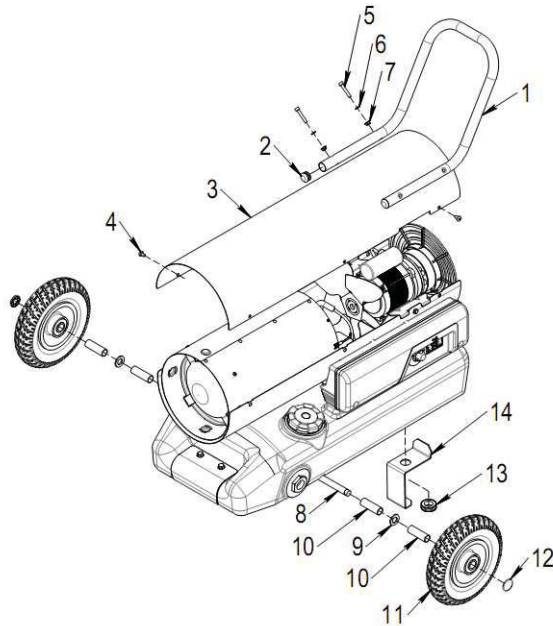


Fig. 1

List of contents

#	Description	Qty
1	Handle	1
2	End cap	2
3	Upper shell	1
4	Screw M5x8	6
5	Screw M5x30	4
6	Washer D.5	4
7	Nut M5	4
8	Axle	1
9	Washer	2
10	Spacer	4
11	Wheel	2
12	Cap nut	2
13	Knurled nut	1
14	Support bracket	1

Before adding fuel, installation and use, assemble the loose parts as follows (see Fig. 1): Fix end caps (2) to handle (1). Remove upper cover (3) unscrewing six fixing screws (4). Assemble handle to upper shell using four screws (5), washers (6) and nuts (7). Reassemble upper shell with the six screws (4).

Slide axle (8) through the two tubes on the tank bottom. Slide spacer (10), washer (9), and spacer (10) on each axle side. Insert wheels (11), and cap nut (12). Tap gently on cap nuts to secure them. Attach support bracket (14) screwing the knurled nut (13) to the tank drain cap. Finger tighten firmly.

JAZ 125

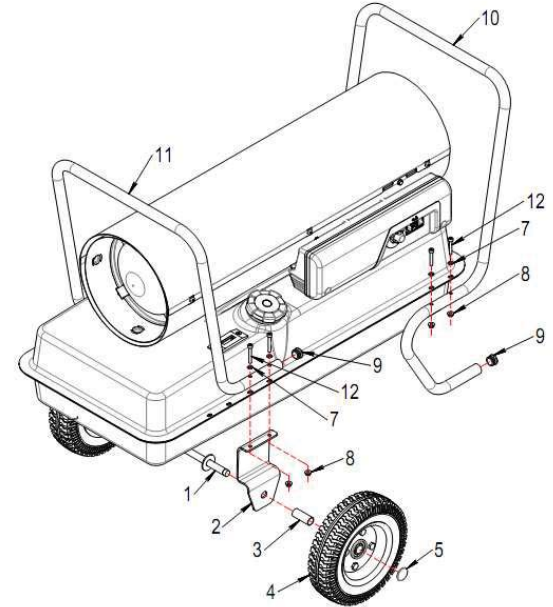


Fig. 2

List of contents

#	Description	Qty
1	Axle	1
2	Axle bracket	2
3	Spacer	2
4	Wheel D.200	2
5	Cap nut	2
6	Screw M5x16*	4
7	Washer D.5	12
8	Nut M5	12
9	End cap	2
10	Rear handle	1
11	Front handle	1
12	Screw M5x30	8

* not used on JAZ 125

Before adding fuel, installation and use, assemble the loose parts as follows (see Fig. 2): Slide axle (1) through axle brackets (2). Assemble in order: spacers (3), wheels (4), cap nuts (5) on each end. Secure cap nuts (5) by tapping lightly with a hammer. Connect axle assembly to tank and front handle (11) using four

screws M5x30 (12), washers (7) and nuts (8) lining up the holes. Insert end caps (9) on rear and front handle (10) (11). Connect rear handle (10) to heater tank using four screws M5x30 (12), washers (7) and nuts (8) as shown.

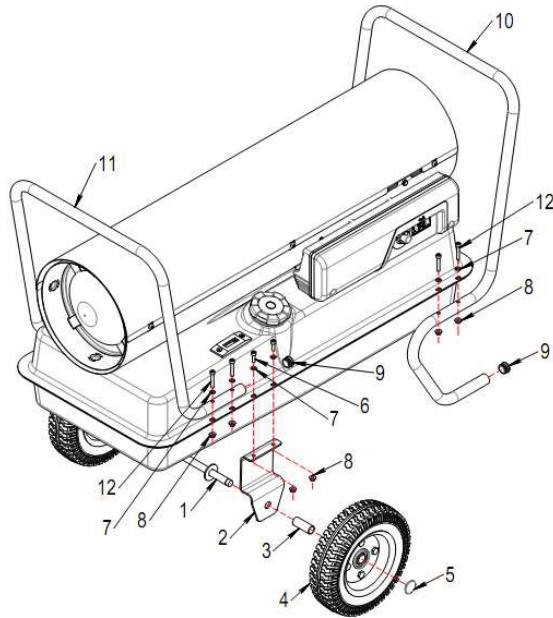


Fig. 3

List of contents

#	Description	Qty
1	Axle	1
2	Axle bracket	2
3	Spacer	2
4	Wheel D.200	2
5	Cap nuts	2
6	Screw M5x16	4
7	Washer D.5	12
8	Nut M5	12
9	End cap	2
10	Rear handle	1
11	Front handle	1
12	Screw M5x30	8

Before installation and use, assemble the loose parts as follows (see Fig. 3):
 Slide axle (1) through axle brackets (2). Assemble in order: cap nuts (3), wheels (4), spacers (5) on each ends, by tapping lightly. Connect axle assembly to heater tank using four screws M5x16 (6), washers (7) and nuts (8). Insert end caps (9) on rear and front handle (10) (11). Connect rear handle (10) and front handle (11) to heater tank using screws M5x30 (12), washers (7) and nuts (8) as shown.

- Tools needed:
- Phillips screwdriver
 - Adjustable wrench
 - Hammer

5. Electrical Connection and Installation

WARNING Never use this heater in living or sleeping areas.

WARNING Do not cover the heater. Do not block the air inlet and outlet.

WARNING Do not attach ducting to this heater.

Install the heater upright on a flat, level surface.

1. Provide adequate clearance to combustible materials.

MINIMUM SAFETY CLEARANCES FROM MATERIALS (INCLUDING COMBUSTIBLE MATERIALS) AND OBJECTS IN THE SURROUNDINGS OF THE HEATER:

Sides:	2 ft
Air inlet:	3 ft
Top:	5 ft
Hot air outlet:	10 ft
Floor:	0 ft

2. Provide adequate ventilation.

WARNING Direct-fired heaters are intended for use in outdoor open areas or in indoor well ventilated areas. For indoor use, a minimum opening area to the outside of 3 ft² per U.S. gallon capacity at the unit level must be provided, allowing a continuous fresh air circulation from the outside.

Model No.	42	80	80 W	125	160
Minimum Opening Area	0.84 ft ²	1.68 ft ²	1.68 ft ²	2.76 ft ²	3.48 ft ²

DANGER Carbon monoxide poisoning may lead to death.

WARNING Direct-fired heaters may cause carbon monoxide (CO) poisoning when

incorrectly used (e.g indoors without adequate air circulation) or not properly working. CO poisoning may lead to death. Early signs of CO poisoning are headache, dizziness and/or nausea. If you have these signs, get fresh air at once, shut off the heater and check the heater operation and installation. Call qualified service if needed. Some people such as pregnant women, persons with heart or lung diseases, or under the influence of alcohol, or at high altitudes are more affected by carbon monoxide than others.

Connect the power cord female connector to the male connector on the control panel (see Fig. 4).



Fig. 4

3. Operation with portable generators:

- ⚠ WARNING** If the heater is powered by a portable generator, before use:
- check and be sure that the generator is properly grounded to earth. Refer to the generator manual for grounding procedures.
 - check and be sure that the electrical ratings of the generator are consistent with the electrical ratings of the heater. Refer to data plates.
 - measure the actual output voltage from the generator: the voltage must be 120 V +/- 10% (108 V - 132V). Do not connect the heater to the generator if the voltage is not within this range.

The installation of the equipment shall be in accordance with the regulations of authorities having jurisdiction and CSA B139.

⚠ WARNING Do not connect the heater to external fuel tanks.

6. Operation

1. Fill the fuel tank with clean 1-K Kerosene, Fuel Oil (Diesel Fuel) No.1 or Fuel Oil (Diesel Fuel) No.2.

JAZ 42/80/80W: the sightglass on the right side of the tank allows the user to see when fuel level is getting low (see Fig. 5)

JAZ 125/160: the fuel gauge on top of the tank allows the user to see the fuel level during operation (see Fig. 6)



Fig. 5



Fig. 6

3. Turn the thermostat knob fully counterclockwise.

4. Plug the heater into a 120V/60Hz, 1 Phase GFCI protected grounded outlet.

⚠ WARNING The electrical connections and grounding of the heater shall be in compliance with the National Electrical Code, ANSI/NFPA 70 or the CSA C22.1, Canadian Electric Code, Part I.

⚠ WARNING Always check power cables and extensions before use. Do not use the heater if any cable is damaged.

IMPORTANT: extensions must be approved, grounded, 3-wire cords of proper size.

Extension cord size requirements:

6-10 ft	18 AWG (0.75 mm ²)
11-100 ft	16 AWG (1 mm ²)
101-200 ft	14 AWG (1.5 mm ²)

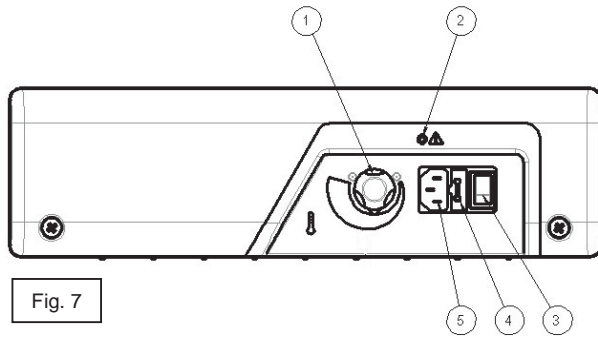


Fig. 7

1. Thermostat Control Knob
2. Green Indicator Light
3. On/Off Switch
4. Fuseholder
5. Power Cord Socket

To Start the Heater

1. Turn the ON/OFF switch (3) to the ON ("I") position. The green indicator light above the On/Off switch will flash slowly (every 3 seconds), indicating STAND-BY MODE.

2. Turn the thermostat knob slowly clockwise until the heater starts. The green indicator light above the On/Off switch will remain lit continuously, ON MODE.

3. Adjust the thermostat to the desired temperature [setting/position?]. One or two adjustments may be required to obtain the desired temperature. When the thermostat senses the temperature has been reached, the heater will cycle off and return to STAND-BY MODE. The thermostat will cause the heater to automatically turn on and off to maintain the set temperature.

Note: Air temperature and wind velocity around the heater may affect the thermostat operation. Adjustments to the thermostat setting may be required to obtain the desired comfort level.

WARNING This heater is equipped with a thermostat. When in the STAND-BY MODE, the heater may start at anytime on thermostat command. Keep children and animals away from heater area at all times!

WARNING Maintain adequate clearances from combustible materials at all times during operation. See "Minimum Safety Clearances from Materials and Objects in the Surroundings of the Heater" in the Electrical Connection and Installation section, above.

WARNING Do not start the heater if the combustion chamber is hot or if excess fuel has accumulated in or around the combustion chamber. Accumulated fuel could result from repeated unsuccessful

ignition attempts. Unplug heater and remove excess accumulated fuel before attempting restart.

WARNING Never leave the heater unattended while burning or connected to a power source.

4. To operate the heater in "CONTINUOUS ON" MODE, turn the thermostat knob fully clockwise.

IMPORTANT: If the heater fails to start the indicator light will FLASH rapidly (four times per second) indicating LOCK-OUT MODE.

If the heater goes into lock-out mode, check and remove the cause of lock-out before restarting the heater. See Troubleshooting, page... To reset, turn the ON/OFF switch to 0 and then again to I. If repeated LOCK-OUT occurs, call Customer Service (+1-239-936-1555).

NOTE 1: turning the thermostat knob will NOT reset the heater.

NOTE 2: in case of power failure and restoration

5. ABNORMAL OPERATION: in case of malfunction (flame failure, reduced air flow, bad combustion, etc.) the heater stops and the indicator light starts FLASHING QUICKLY (LOCK-OUT MODE).

6. POWER FAILURE: in case of power supply failure, the green indicator light will not be lit and the heater must be manually reset. Turn the On/Off switch to Off ("O") and then to the On ("I") position to restart the heater as power supply is restored.

To Stop the Heater

1. Turn the On/Off switch to OFF ("O") position.
2. Unplug the heater.

7. Cleaning, Maintenance and Storage

Regularly wipe the enclosure using a soft sponge or cloth. For very dirty parts, use a sponge

wetted with lukewarm water and a mild detergent, then dry using a clean cloth. Keep air inlet and fan free from dust and dirt. To clean inner parts, gently blow compressed air through air inlet.

Regularly inspect the power cable: if worn, cracked or damaged replace it with an original spare part.

Before storing the heater, make sure it is completely cool and dry.

⚠ WARNING Before starting maintenance or cleaning: shut down, unplug and let the heater cool down for at least 15 minutes. Do not attempt any electrical repair yourself. If the heater needs service or repair, contact a qualified electrician. Do not use a faulty unit until a qualified technician has inspected and repaired it. When cleaning, make sure that water does not enter the unit. Do not spray water into the heater. Never use solvents, gasoline, toluene and similar aggressive chemicals to clean the heater. Use only original equipment replacement parts. The use of alternate or third party components can cause unsafe operation and will void your warranty.

RECOMMENDED MAINTENANCE SCHEDULE

Fuel tank

Drain and flush fuel tank using clean kerosene every 150-200 hours or as needed.

Nozzle

Inspect and clean nozzle every heating season. Unscrew nozzle from nozzle fitting. Blow compressed air through nozzle orifice to free it from dirt particles. Replace nozzle if needed.

Air intake and output filters

Every 500 hours: Inspect air filters. Remove filter end cover (1), wash air intake filter (2) using a light detergent and dry it thoroughly before reinstalling. Replace air outlet filter (4) (Fig. 8)

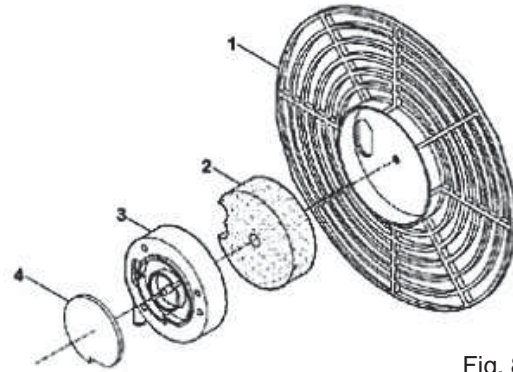


Fig. 8

Fuel filter

Inspect, clean or replace fuel filter every 500 hours or less as needed.

Ignition electrodes

Clean, adjust and if necessary replace ignition electrode every heating season. For electrode gaps see Fig. 9.

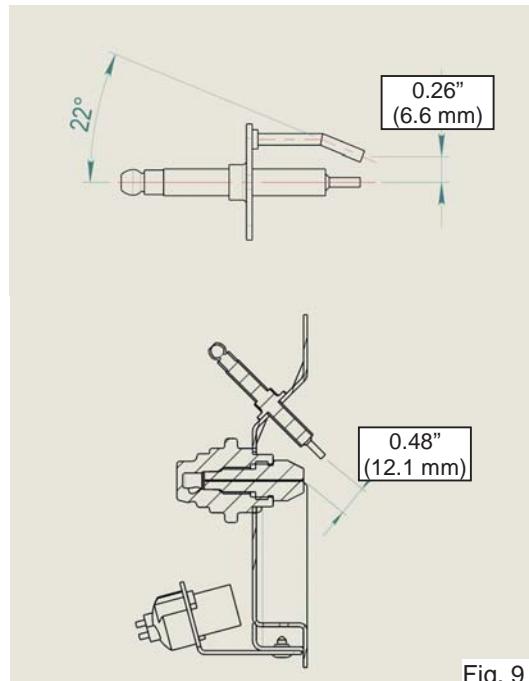


Fig. 9

Compressor Pressure Adjustment (Fig. 10)

⚠ WARNING The compressor pressure is factory set and must be checked and adjusted by service persons only. Tampering with the unit may cause incorrect combustion and dangerous emissions.

To check and adjust the pressure proceed as follows:

Remove the pressure gauge port cap (1). Connect a 0-15 psi pressure gauge to the pressure gauge port. Be sure that the pressure

gauge connection is 1/8 inch BSP (parallel thread; not tapered). Start heater, read the air pressure value and compare to the air pressure (at right) required for your model. If adjustment of air pressure is required, loosen the hex nut at the Air Vent Hole and turn the pressure adjustment screw (2) with a 5/32 inch or 4mm hex key or allen wrench. Turn the pressure adjustment screw clockwise to increase or counterclockwise to decrease the pressure. Tighten the hex nut and remove the hex key from the adjustment screw. Check the pressure shown on the pressure gauge again and repeat the procedure as required to obtain the correct air pressure.

Model	Air Pressure (psi)
JAZ 42	4.8
JAZ 80	4.1
JAZ 80 W	4.1
JAZ 125	5.1
JAZ 160	5.5

Electrical

Inspect all internal wiring, electrical parts and connections. Clean or replace parts as needed.

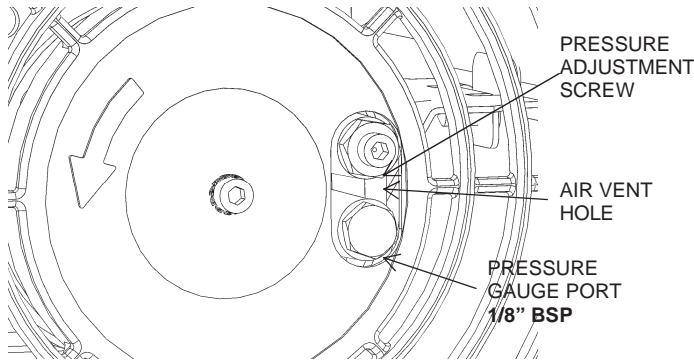
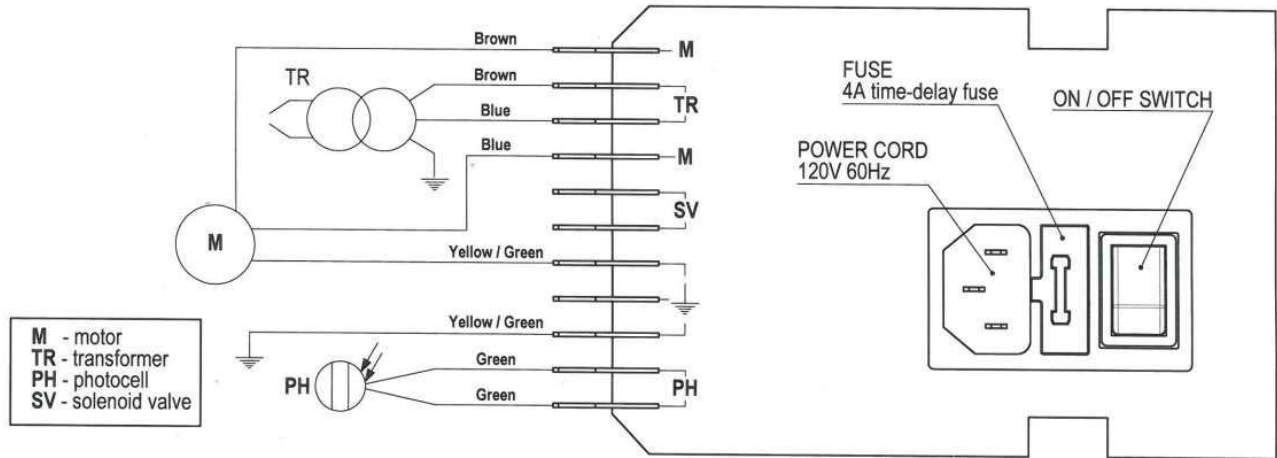


Fig. 10

8. Wiring Diagram



10. Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
<p>Motor will not start</p> <p>GREEN INDICATOR LIGHT IS QUICKLY FLASHING (4 flashes/second)</p>	<p>No power or low voltage</p> <p>Fuse is blown.</p> <p>Thermostat is set too low.</p> <p>Faulty or damaged power cord or extension cord.</p> <p>Faulty motor/capacitor.</p>	<p>Check power supply and voltage. Reset: Turn On/Off switch to O and then to I [needed here?]</p> <p>Replace fuse.</p> <p>Turn thermostat knob clockwise to higher setting. Check and replace if needed.</p> <p>Check and replace if required.</p>
<p>Motor runs, but the fuel does not ignite and the heater shuts off after 5 seconds.</p> <p>GREEN INDICATOR LIGHT IS QUICKLY FLASHING (4 flashes/second)</p>	<p>Low or empty fuel tank.</p> <p>Dirty or wrong fuel.</p> <p>Fuel filter clogged.</p> <p>Leaks in fuel or air hoses.</p> <p>Faulty ignition transformer or control board.</p> <p>Spark plug dirty or fouled.</p> <p>Fuel nozzle clogged.</p>	<p>Fill tank with fresh kerosene [fuel?].</p> <p>Remove fuel and replace with clean kerosene [fuel?].</p> <p>Clean or replace fuel filter.</p> <p>Check hoses and replace with original parts if necessary.</p> <p>Replace ignition transformer or control board.</p> <p>Check and clean or replace spark electrode.</p> <p>Clean nozzle by blowing compressed air through front of nozzle; replace if necessary.</p>
<p>Heater stops during operation:</p> <p>GREEN INDICATOR LIGHT SLOWLY FLASHING (1 flash/4 seconds)</p> <p>GREEN INDICATOR LIGHT NOT LIT</p> <p>GREEN INDICATOR LIGHT IS QUICKLY FLASHING (4 flashes/second)</p>	<p>The desired room temperature has been reached. Heater is in STAND-BY MODE.</p> <p>Loss of power supply during operation.</p> <p>Fuse blown</p> <p>Flame Incorrect: Fuel/ Air mixture too rich (too much fuel or not enough air).</p> <p>Flame Incorrect: Fuel/Air mixture too lean (too much air or not enough fuel).</p>	<p>No fault. Normal operation. To start, turn thermostat knob clockwise to a higher setting.</p> <p>Check power supply. Reset: Turn On/Off switch to O and then to I</p> <p>Replace Fuse</p> <p>Provide correct fuel/air mixture. Check for blockage of air inlet, dirty or damaged fan, or bad fuel. Remove obstructions to good air flow, clean parts. Be sure correct fuel or clean kerosene is used. Be sure compressor pressure is correct.</p> <p>Provide correct fuel/air mixture: Check for low fuel level. Check for dirty fuel, dirty fuel or air filters, or dirty nozzle and replace as required. Be sure correct fuel or clean kerosene is used. Be sure compressor pressure is correct.</p>

Motor Overheating

Allow motor to cool and restart. Identify and correct cause of overheating. If needed, call Customer Service.

Faulty or Dirty Photocell (Flame Sensor)

Clean or replace photocell

Faulty Control Board

Replace control board

**For Spot Climate Control Customer Service (9 am to 5 pm EST):
Call (239) 936-1555 and select SCC Customer Service.**



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