GAS-FIRED INFRARED OUTDOOR PATIO HEATER INSTALLATION, OPERATION MAINTENANCE INSTRUCTIONS

PTH104

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READ THE FOLLOWING INSTRUCTIONS CAREFULLY AND BE SURE YOUR PATIO HEATER IS PROPERLY INSTALLED, ASSEMBLED AND CARED FOR. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN SERIOUS BODILY INJURY AND/OR PROPERTY DAMAGE. IF YOUR HAVE QUESTIONS CONCERNING ASSEMBLY OR OPERATION, CONSULT YOUR DEALER, GAS APPLIANCE SERVICE REPRESENTATIVE OR YOUR GAS COMPANY.

NOTE TO INSTALLER:
LEAVE THESE INSTRUCTIONS WITH THE CONSUMER AFTER INSTALLATION.

NOTE TO THE CONSUMER:
RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

IMPORTANT

* * * WARNING * * *

For outdoor use only (outside any enclosure)

Improper operation, installation, adjustment, alteration, servicing or maintenance can cause severe property damage or serious injury or death. Please read the installation, operation & maintenance instructions thoroughly before installing or servicing this equipment.

* * * FOR YOUR SAFETY * * *

If you smell gas:

- Shut off gas to appliance.
- Extinguish any open flame.
- If odor continues, immediately call your gas supplier.

For your safety:

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

TOOLS AND PARTS NEEDED FOR ASSEMBLY

NOTE: 20 pound, 5 Gallon LPG Tank is not supplied

Tools Needed:

Adjustable Opening Wrench
Spray Bottle of Soapy Water (to check for leaks)

Parts Supplied:

Reflector (3)
Reflector Dome Cap (1)
Reflector Plate (1)
Heater Head Assembly (1)
Post Assembly (2)
3/8" X 40 1/2" Galvanized Supply Pipe (1)
LPG Gas regulator (1)
Weighted Base with LPG Tank Cover Assembly (1)

Hardware Package

Reflector Nut (1)
1/4" x 3 1/2" Long Thread Ends Stud
Reflector 5/32" Screw (3)
Reflector Plate 1/4" Truss Head Screw (3)
Post 1/4" Truss Head Screw (4)
Post 1/4" Split Lock (4)
Post 1/4" Nut (4)
Teflon Pluming Tape For Joints (1)

PRECAUTIONS

NOTE: PLEASE READ THE FOLLOWING SAFETY

- Do not use this space heater in an explosive atmosphere. Keep heater away from areas where gasoline or other flammable liquids or vapors are stored.
- Prior to use, check for damaged parts such as hoses regulators, pilot or burner.
- Do not attempt to alter unit in any manner. EXAMPLE: using the heater without the top canopy reflector or radiant screen. Do not shorten the burner post assembly.
- Heater must always be placed on a solid and level surface.
- Always maintain proper clearance to combustible materials.(Top 36" Side 36")
- Always assure there is ample fresh air ventilation for outdoors use ONLY.
- Never replace or substitute the regulator with any regulator other than the factory suggested replacement.
- Do not clean heater with cleaners that are combustible or corrosive.
- Do not paint radiant screen, control panel or top canopy reflector.
- All leak test should be done with a soapy solution. NEVER USE AN OPEN FLAME TO CHECK FOR LEAKS.
- The LP tank should be turned off when the heater is not in use.
- At least once a year, the unit should be inspected for the presence of spiders, spider webs or other insects. The burner area is a common spider haven and can damage the heater and render it unsafe for use, Check the heater immediately if any of the following exists:

1. The smell of gas in conjunction with extreme yellow tipping of the burner flames.
2. The heater does not reach temperature.
3. The burner makes popping noise during use (a slight popping noise is normal when the burner is extinguished).

- The LP regulator/hose assembly shall be
- located out of pathways where people may trip over it or in area where the hose will not be subject to accidental damage.
- Children and adults should be aware of hazards of high surface temperature and shall stay away to avoid burns of clothing ignition.
- Young children should be carefully supervised when they are in the area of the heater.
- Clothing or other flammable material should not be hung from the heater, or placed on or near the heater.
- Any guard or other protective device removed for servicing the heater must be replaced prior to operating the heater.
- Installation and repair should be done by a qualified service person, the heater must be should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required as necessary. It is imperative that control compartment, burner and circulating air passageways of the heater be kept clean.
- Keep the appliance area clear and out of combustion material, gasoline and other flammable vapors and liquids.
- Do not obstruct the flow of combustion and ventilation air.
- Keep the ventilation opening of the cylinder enclosure free and clear of debris.

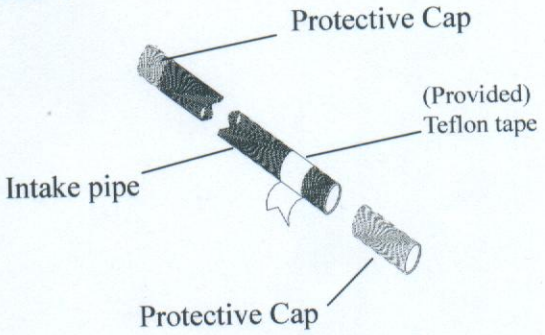
ASSEMBLY INSTRUCTIONS

NOTE: Assembly of this heater requires basic mechanical skills. Proper assembly is the responsibility of the installer.

STEP 1: <u>Gas pipe</u>

- Cover threads with provided Teflon tape or gas pipe sealant before connecting regulator hose.

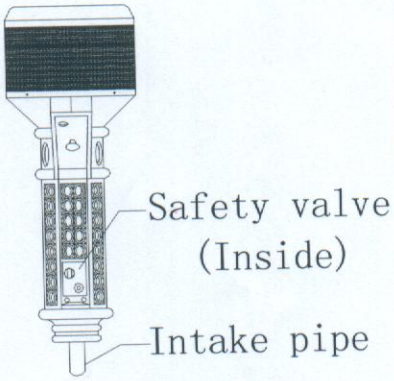
STEP 1



STEP 2: <u>Secure the Gas pipe & Post</u>

- Thread the intake pipe clockwise into the safety valve tightly.
- Slide the intake pipe through the top of the post and down through the hole in the top of the tank enclosure and secure the heating unit to the top of the post.

STEP 2



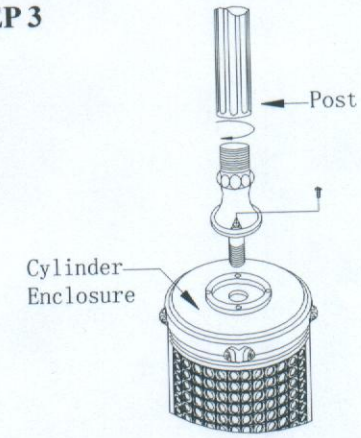
ASSEMBLY INSTRUCTIONS

NOTE : Assembly of this heater requires basic mechanical skills Proper assembly is the responsibility of the installer.

STEP 3: Connect post to cylinder enclosure

- Secure two post together. Then place post on of cylinder enclosure. Fasten 1/4 inch X 1 1/2 inch machine screws to the top of the cylinder to and screws on machine nut.

STEP 3

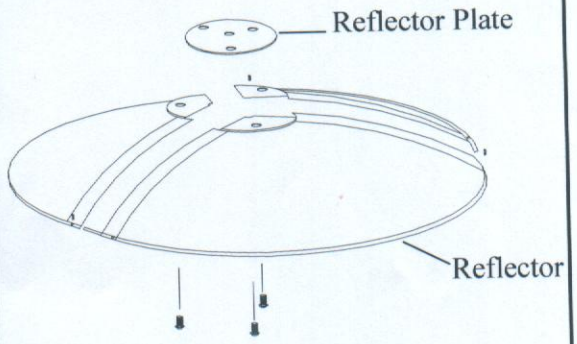


CAUTION: It will take about 5 minutes to bleed the gas line, so be patient.

STEP 4. Attach Reflector

- Combine three pieces reflector together
- Tighten up with three 5/32" screws.
- Put the reflector plate on reflector then tighten up with three 1/4" screws by upward.

STEP 4



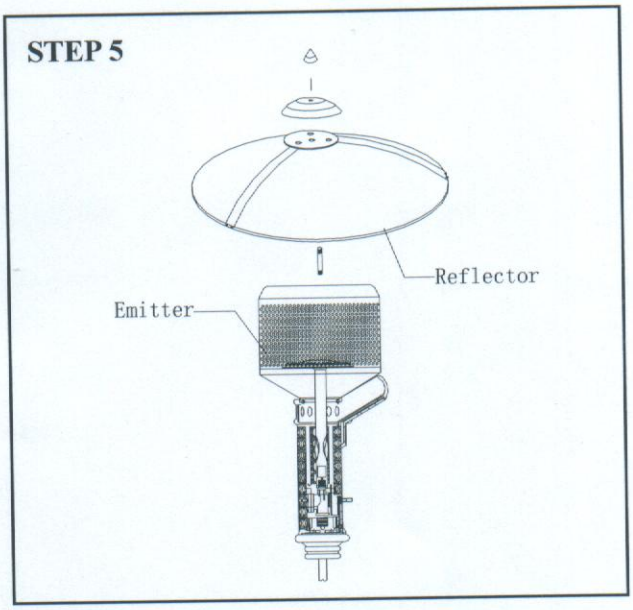
ASSEMBLY INSTRUCTIONS

NOTE: Assembly of this heater requires basic mechanical skills. Proper assembly is the responsibility of the installer.

STEP 5: Attach the reflector

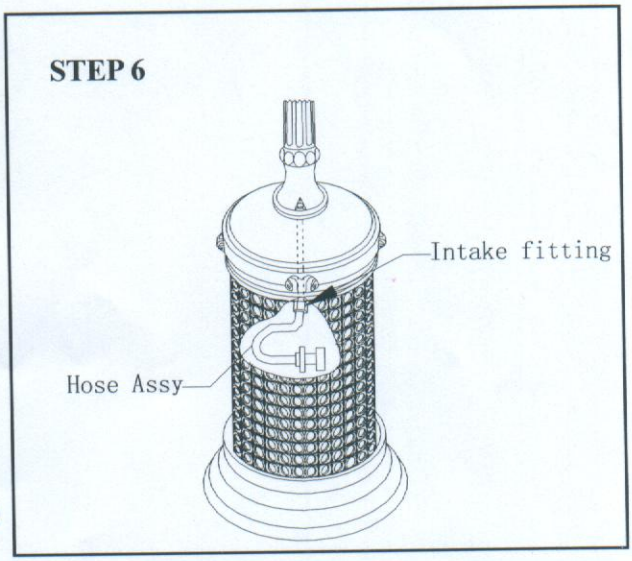
- Secure the 1/4" X 3 1/2"L threaded ends stud into emitter top.
- Attach the reflector and reflector cap to the top of emitter grid ornamental final. It screws on to 1/4" X 3 1/2 "L threaded stud screwed into emitter top.

NOTICE:
EMITTER GRID COLORATION OCCURRED DURING OUR TEST STAGE. THIS WAS PERFORMED TO ENSURE YOUR SAFE USAGE



STEP 6: Attach regulator

- Attach 3/8 inch flare adapter on the hose end of the regulator assembly to the flare fitting on the intake pipe.
- Secure the other end of regulator inlet fitting onto gas tank until tight.
- The 3/8 inch female IPS X 3/8 inch male flare fitting is already attached on the intake pipe by manufacturer.
- The LP-Gas supply cylinder must be disconnected when this appliance is not in use. Disconnect the gas tank by turning the regulator anti-clockwise.



SAFETY CHECKS

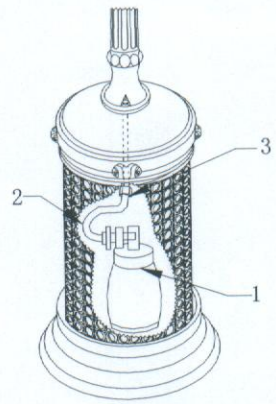
ALWAYS CHECK THE FOLLOWING CONNECTIONS

STEP 1

1. Check connection of regulator to the propane tank connection. Remember, the POL adapter is a left hand thread
2. Check all connections on the hose regulator assembly
3. Check the intake pipe to make certain that it is not kinked or in a position that could cause it to kink hand tighted and than make a 1/2 turn with the adjustable wrench

NOTE: The remaining connections are to be Tested after the heater has been lit (SEE LIGHTING INSTRUCTIONS)

STEP 1

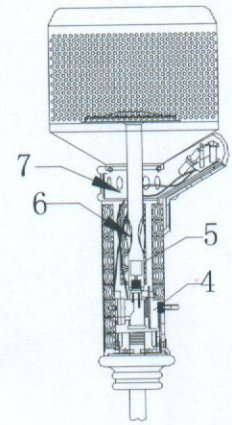


STEP 2

4. Light the heater following instructions on page 10 and page 11.
5. Using spray bottle with soapy water, spray each of the areas listed below to visually inspect for leaks. leaks will be indicated by bubbles.
6. Check intake pipe fitting at the bottom of safety control valve.
7. Check pilot tubing to safety control valve
8. Check orifice fitting and the safety control valve
9. Check pilot tubing and pilot

NOTE: After leak testing is completed and all leaks are sealed , close the door to the tank enclosure and your patio heater is ready to use.

STEP 2



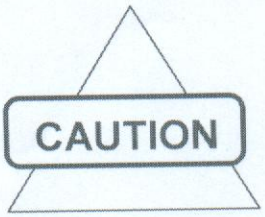
LOCATION HEATER FOR USE

BE CAREFUL: When certain materials or items are left under this heater, while in use, they will be subject to radiant heat and could be seriously damaged.

- The unit is designed for heating outdoor patios, decks, spas, pool and working areas.
- Always ensure that adequate fresh air ventilation is provided. Follow the spacing tolerances in Figure 1.
- The minimum clearances to combustible construction shown in Figure 1 must be maintained at all times
- The installation must conform to local codes or in the absence of local codes with the standard for the storage and handling of liquid petroleum gases:

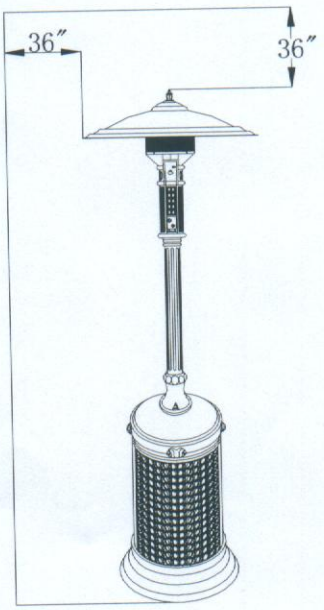
  In the US use : ANSI/NFPA58 on National Fuel Gas Code ANSI Z223-1998

  In Canada use: National Standards of Canada. CAN/CGA B149.1 & 2-M86
- The heater must be placed on level firm ground.
- Never operate in an explosive atmosphere. Keep away from areas where gasoline or other flammable liquids or vapors are stored or used.



During strong and windy weather, turn off the heater and the gas cylinder valve. Remove the heater reflector hood then move the heater to a sheltered location. Cautions do not move heater while it is still hot.

Figure 1.

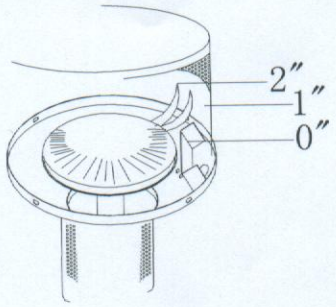


LIGHTING/SHUTDOWN

WHEN HEATER IS ON:

- Emitter screen will become bright due to intense heat. The color is more visible at night.
- Burner will display tongues of blue and yellow flame. These flames should not be yellow or produce thick black smoke, indicating an obstruction of airflow through the burners. The flame should be blue with straight yellow tops.
- The flame pattern at the emmitter grid should be visually checked whenever heater is operated (see figure 2). If flames extend more than 1/2 inch beyond surface of the emitter grid or reflector the heater should be turned off immediately and he heater should not be operated again until repairs are made

FIGURE 3
NORMAL FLAME POSITION



RELIGHTING

(A) Turn the control knob to off position.
(B) Wait five (5) minutes before attempting to relight pilot.
(C) Repeat steps beginning with step (D) above.

SHUT DOWN INSTRUCTIONS:

(A) Turn control knob clockwise to 'OFF' position. The burner may make a slight popping sound when extinguished. This is normal.
(B) Turn propane tank gas valve clockwise to 'OFF'position when heater is not in use

Caution: This patio Heater contains a Tilt Safety Switch which is designed to provide safe use of the patio heater. The tilt safety switch will automatically shut-off the heater when it tilts in the tip angle over 45-60 degrees from vertical position.

BURNER INSTALLATION/PILOT CLEANING

BURNER INSTALLATION:

Install the burner assembly by reversing the four (4) steps used for disassembly making certain the burner assembly stands centered when complete.

After reassembly, the heater should be test fired. Observe the burner flame. The flame should be blue with a slight yellow tipping.

PILOT CLEANING:

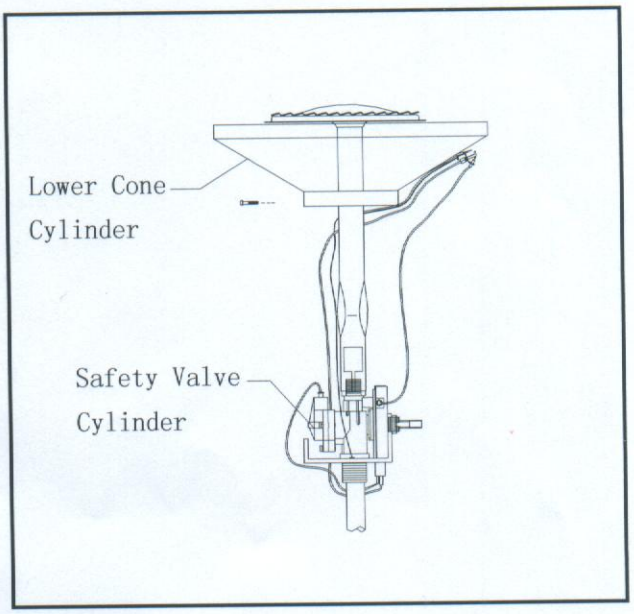
The pilot burner provides a flame to light the main burner. It also heats a thermocouple which must be hot before allowing the main burner to come on.

If the pilot is blocked by debris, spider webs, etc., the pilot flame may be small and the thermocouple may not heat up enough for the main burner to come on. If this occurs it will be necessary to clean the pilot.

BEWARE OF SPIDERS

CAUTION : BURNER TUBES MUST BE INSPECTED AND CLEANED BEFORE FIRST USE

Spiders and small insects occasionally spin webs or make nests in the burner tubes and orifices during warehousing and transit these webs or nests can lead to a gas flow obstruction which could result in afire on and around the burner tubes. This type of fire is known as FLASH BACK and can cause serious damage to your patio heater and create an unsafe operating condition for the user Although an obstructed burner tube is not the only cause of FLASH BACK it is the most common cause and frequent inspections and cleaning of the burner tubes is necessary .



BURNER REMOVAL

START DISASSEMBLY FOR CLEANING BY:

1. Remove the valve panel to gain access to the pilot.

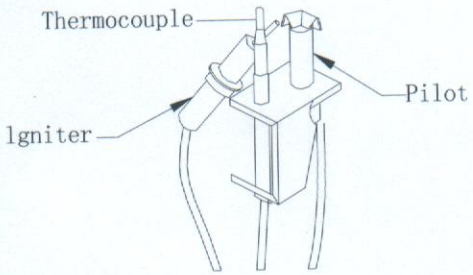
2. Remove screw that fastens the pilot assembly to the lower screen cone.

3. Hold the pilot assembly with slip joint pliers, loosen and remove the nut at the base of the pilot.

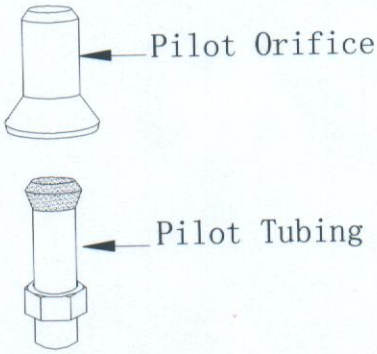
4. Inspect the pilot and tubing for blockage, you should be able to see through the pilot. If it is obstructed by debris clear with a piece of wire.

5. The cap-like pilot orifice can be cleared with a pin. Use the pin gently on the inside of the orifice to clear debris. Never enlarge the opening of the pilot orifice.

STEP 1



STEP 2



TROUBLE SHOOTING

Problem	Possible Causes	Correction
Pilot won't light	■ Air in gas line	■ Purge gas line and repeat ignition operation
	■ Lowe gas pressure	■ Check gas pressure
	■ Gas line turned 'OFF'	■ Turn 'ON' gas supply
	■ Blockage in gas line	■ Check gas passage way
	■ Pilot orifice is clogged	■ Call a qualified person
	■ Control knob not in pilot position	■ Turn control knob to pilot position
	■ Control knob not pressed in while in pilot position	■ Press in control knob while in pilot position
Igniter did not spark	■ Igniter electrode positioned wrong	■ Correct electrode position
	■ Igniter electrode broker	■ Replace electrode
	■ Igniter cable pinched or broken	■ Free igniter cable, if damaged replace assembly
	■ Igniter cable not connected to gas control	■ Connect cable to igniter
Pilot won't stay lit	■ Tilt switch in trip angle/OFF position	■ Reset the Heater keep in vertical position
	■ Bad thermocouple	■ Replace thermocouple
	■ Corrosion of thermocouple contact	■ Clean thermocouple contact
	■ Safety interlock is triggered	■ Wait a minute repeat ignition operation
	■ Bad gas valve	■ Replace gas valve
	■ Control knob not pressed in long enough	■ After pilot lights, keep control knob pressed in for 60 seconds
	■ Thermocouple connection loose at gas control or damaged	■ Tighten connection or replace thermocouple
	■ Pilot flame not touching the thermocouple	■ Contact a qualified service person
Main burner won't light	■ Low gas pressure	■ Check gas supply pressure
	■ Blockage in burner orifice	■ Clean burner orifice
	■ Control knob not in 'ON' position	■ Turn control knob to 'ON' position

TROUBLE SHOOTING

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