

INSTALLATION, OPERATION & MAINTENANCE MANUAL

Sunglo™ Patio Heaters

MODEL PSA265 (V,E)

MODEL A242

MODEL A244 (V,E)

For either indoor or outdoor installation.
NOT FOR USE IN RESIDENTIAL DWELLINGS

DANGER

FOR YOUR SAFETY – If you smell gas;

1. Open windows.
2. DO NOT try to light any appliance.
3. DO NOT use electrical switches
4. DO NOT use any telephone in your building
5. Leave the building immediately
6. Immediately call your local gas supplier after leaving the building. Follow the gas supplier instructions.
7. If you cannot reach your gas supplier, call the Fire Department.

WARNING: FIRE HAZARD



Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. Failure to follow these instructions can result in death, injury or property damage.

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this heater.

WARNING: California Prop 65

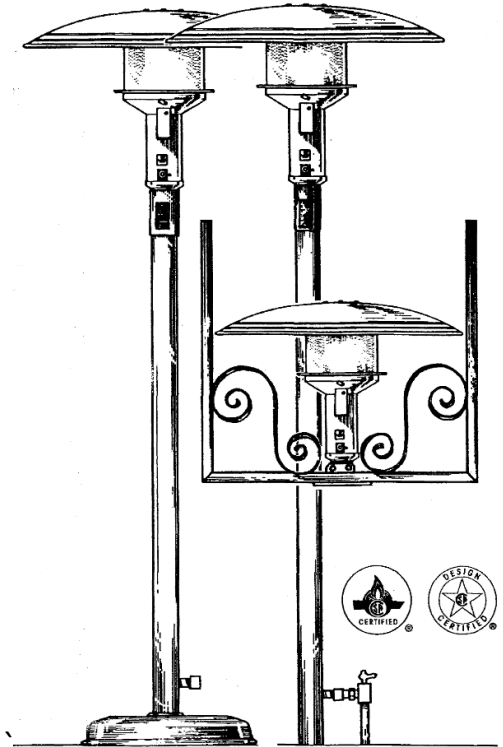
If not installed, operated and maintained in accordance with the manufacturer's instruction, this product can expose you to substances in the fuel or from combustion including carbon monoxide which can cause death or serious illness and which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65WARNINGS.CA.GOV

WARNING: FIRE AND EXPLOSION

Installation and replacement of gas piping, gas utilization equipment, or accessories, and repair and servicing of equipment shall be performed by a qualified agency familiar with all precautions required regarding type of equipment and that has complied with all requirements of the authority having jurisdiction

TO THE INSTALLER: Please read and understand all instructions prior to installation. Give a copy of this manual to the owner after installation.

TO THE OWNER: Keep this manual in a safe place to retain for future reference



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FOR YOUR SAFETY



Application

This is not an explosion proof heater. Consult your local Fire Marshall, insurance carrier and other authorities for approval of the proposed installation

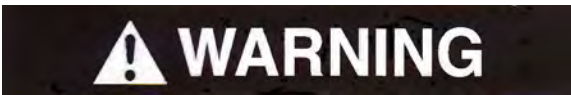
Sunglo™ heaters are designed certified for commercial indoor/outdoor and residential outdoor applications. They are NOT approved for use in any inside residential dwelling. This includes, but is not limited to, attached garages, living quarters, solarium, etc. Consult your local Fire Marshall and/or insurance provider if unsure of your application.

Warning Symbols

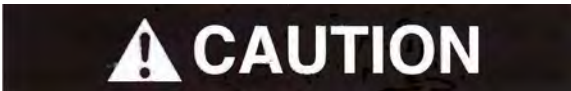
Safety is the most important consideration with installing, operating, and maintaining this gas heater. You will see the following symbols and signal words when there is a hazard related to safety or property damage



DANGER indicates there is an immediate threat which if not avoided could result in death or injury.



WARNING indicates a potential hazardous situation which, if not avoided, could result in death or injury.



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



Not for Use in Residential Dwelling.

A residential dwelling is a domicile intended for use by one or more persons and that includes one or more areas, such as those used for cooking, eating, living, sleeping or a sanitary facility. A residential dwelling does not include a detached garage, workshop, or outdoors.

! WARNING



Improper connection to gas lines may result in death or serious injury, explosion, poison fumes, toxic gases or asphyxiation. Connect gas line in accordance to national, state and local codes



Placement of explosive objects, flammable objects, liquid and vapors close to the heater may result in explosion, fire, property damage, serious injury or death. DO NOT store, or use explosive objects, liquids and gasoline vapor in the vicinity of the heater



Failure to comply with published clearance to combustibles could result in death or serious injury and/or property damage.



In locations used for the storage of combustible materials, signs must be posted to specify the maximum permissible stacking height to maintain the required clearance from the heater to the combustible. Signs must either be posted adjacent to the heater switch or other off/on control or other conspicuous location

Hazards Include:

For maximum safety the building must be evaluated for hazards before installing heaters including the following:

- Gas and electrical lines
- Combustible and explosive materials
- Chemical storage areas
- Areas of high chemical fume concentration
- Provision for accessibility to heater
- Adequate clearance around air openings
- Combustion and ventilating air supply
- Vehicle parking areas
- Vehicles with lift or cranes
- Storage areas with stacked material
- Lights
- Sprinkler heads
- Overhead doors and tracks
- Dirty contaminated environment

A critical safety factor to consider before installation is the clearance to combustible materials. Clearance to combustibles is defined as the minimum distance you must have between the heater outer surfaces and the combustible objects. Consideration must also be made for movable objects that may be placed near the infrared heater. The following is a partial list of items to maintain clearance from:

Combustible Objects

- Wood
- Paper
- Fabric
- Chemicals
- Wall or Roof Insulation
- Drywall

Movable Objects

- Umbrellas
- Awnings
- Movable Partitions
- Stage Components
- Other heat sensitive objects
- Sprinkler Heads

When installing infrared heating systems, the minimum clearance from combustible materials must be maintained. These distances are shown on page 8 and on the label attached to the heater. If you are unsure of the potential hazards, consult your local Fire Marshall, fire insurance carrier or other qualified authorities on installation of gas-fire infrared heaters for review of your proposed installation.

OWNER'S MANUAL

Before Starting Your Heater

Before you start your heater examine the heater installation to determine that;

- Areas immediately around the heater including the air inlet and the flue areas are free from obstructions
- There is no obvious deterioration of the heater.
- Portable type heaters must be placed on level and adequate footing.

Starting and Shutting Down Your Heater

Sunglo heaters can utilize a variety of gas control systems. With some models it is necessary to manually light a pilot. Other models have a fully automatic ignition system. Identify the model of your heater on the Basic Lighting instructions chart on page 6 and follow the lighting instructions. If heater fails to light or does not heat properly discontinue use of the heater and contact your local distributor, or qualified service agency.

Performing Routine Maintenance

Overtime, particularly during longer periods of disuse, the heater can accumulate dirt and debris in and around the pilot and burner. Routine maintenance should be performed at least once a year by a qualified service technician to insure the heater is operating properly. More frequent service may be required for heaters located near waterfronts

Warning Labels

It is important that warning labels including the lighting instructions are not removed from the heater. If labels are damaged, replacement labels are available from your local dealer or from the factory

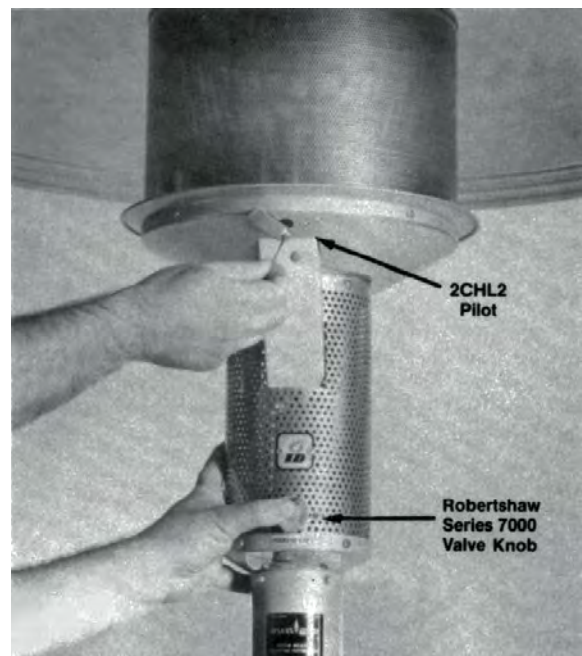
Stainless Steel Care

Stainless steel needs to be cared for like any other surface. We recommend washing the stainless-steel post and base with a mild detergent solution and applying a stainless cleaner to bring back the original shine. The stainless steel may be expected to permanently darken around the top of the heater.

Before You Remodel

If you plan to make changes to the patio or building structure after the heaters have been installed, your heater installation must be reviewed by a qualified

agency to ensure that clearances from combustible materials and ventilation requirements are maintained after alterations are complete. When plastic curtains or drops are used to enclose a patio, you must take steps to ensure that all Sunglo heaters have the required permanent access to outside air. If the patio is to be partially enclosed a qualified agency familiar with this type of heating equipment must be consulted to ensure the safe operation of the equipment.

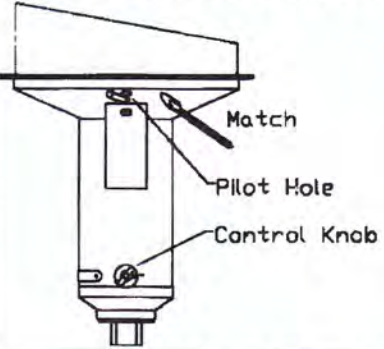
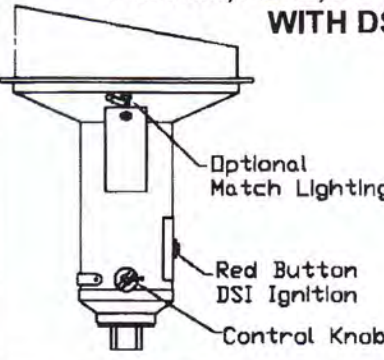
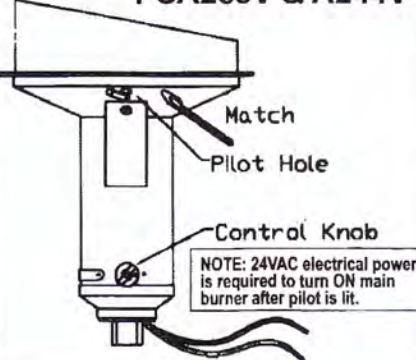
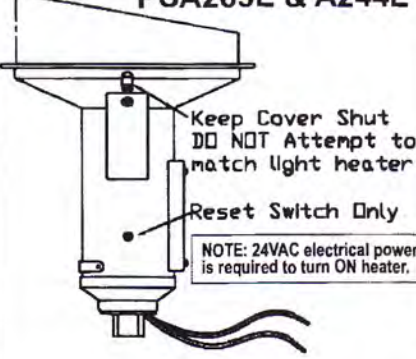


Basic Lighting with the Sunglo™ Manual Control (see lighting instructions pertaining to your heater model (on page 6.)

High Altitude Installations

Installation of this appliance at altitudes above 2,000 Ft (610 m) shall be in accordance with local codes, or in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54 or the National Standard of Canada, Natural Gas and Propane Installation code, CSA B149.1

BASIC LIGHTING INSTRUCTIONS

| Model | Lighting Instructions | Control Description |
|---|---|--|
| <p style="text-align: center;">PSA265, A242, A244</p>  <p style="text-align: center;">Match Pilot Hole Control Knob</p> | <p>To Light Pilot: Rotate control knob to "Pilot" position. Firmly depress knob for 30 seconds while lighting pilot through ½ diameter lighting hole above control. Pilot should remain lit.</p> <p>To Turn Heater ON: Rotate control knob to "ON" position.</p> <p>To Turn Heater and Pilot OFF: Rotate control knob to "Pilot" position, depress slightly and turn to "OFF" position.</p> <p>Wait 5 minutes after complete shutdown of heater before relighting pilot.</p> | <p style="text-align: center;">MANUAL CONTROL</p> <p>This heater utilizes a standing pilot with thermocouple safety shutoff.</p> <p>This heater can be either lit with a match or a long stem lighter.</p> <p>The manual control allows you to regulate the heat.</p> |
| <p style="text-align: center;">PSA265, A242, A244 WITH DSI</p>  <p style="text-align: center;">Optional Match Lighting Red Button DSI Ignition Control Knob</p> | <p>To Light Pilot: Rotate control knob to "Pilot" position. Firmly depress knob for 30 seconds while pressing the red button on the side of the heater. Pilot should remain lit.</p> <p>To Turn Heater ON: Rotate control knob to "ON" position.</p> <p>To Turn Heater and Pilot OFF: Rotate control knob to "Pilot" position, depress slightly and turn to "OFF" position.</p> <p>Wait 5 minutes after complete shutdown of heater before relighting pilot.</p> | <p style="text-align: center;">MANUAL CONTROL WITH DSI</p> <p>This heater utilizes a standing pilot with thermocouple safety shutoff.</p> <p>This heater is equipped with a battery operated spark ignition to light the pilot</p> <p>This heater can be either lit with a match or a long stem lighter.</p> <p>The manual control allows you to regulate the heat.</p> |
| <p style="text-align: center;">PSA265V & A244V</p>  <p style="text-align: center;">Match Pilot Hole Control Knob</p> <p style="font-size: small;">NOTE: 24VAC electrical power is required to turn ON main burner after pilot is lit.</p> | <p>To Light Pilot: Rotate control knob to "Pilot" position. Firmly depress knob for 30 seconds while lighting pilot through ½ diameter lighting hole above control. Pilot should remain lit.</p> <p>To Turn Heater ON: Rotate control knob to "ON" position and turn on 24 VAC electrical power to heater.</p> <p>To Turn Heater and Pilot OFF: Rotate control knob to "Pilot" position, depress slightly and turn to "OFF" position.</p> <p>Wait 5 minutes after complete shutdown of heater before relighting pilot.</p> | <p style="text-align: center;">MANUAL CONTROL WITH 24 VAC ACTUATOR</p> <p>This heater utilizes a standing pilot with thermocouple safety shutoff.</p> <p>This heater can be either lit with a match or a long stem lighter.</p> <p>The 24 VAC Actuator allows you to turn ON/OFF the main burner with a switch.</p> |
| <p style="text-align: center;">PSA265E & A244E</p>  <p style="font-size: small;">Keep Cover Shut DO NOT Attempt to match light heater</p> <p style="font-size: small;">Reset Switch Only</p> <p style="font-size: small;">NOTE: 24VAC electrical power is required to turn ON heater.</p> | <p>To Turn Heater ON:</p> <ol style="list-style-type: none"> 1. Turn the gas valve "ON". 2. Turn "ON" Electrical Switch (24 VAC only) <p>To Turn Heater OFF:</p> <ol style="list-style-type: none"> 1. Turn the electrical power "OFF". 2. Turn the gas valve "OFF". <p>Warning: If burner fails to ignite, shut OFF electrical power and wait (5) minutes before repeating lighting process.</p> <p>Warning: DO NOT attempt to light this heater manually.</p> | <p style="text-align: center;">ELECTRONIC CONTROL (DO NOT MATCH LIGHT)</p> <p>This heater utilizes a electronic ignition and flame monitoring thru flame rectification.</p> <p>This heater requires 24 VAC in order to operate.</p> |

HEATER LAYOUT AND PATIO DESIGN

There are a number of considerations in determining the type and number of heaters to be used and their best location on your outdoor patio.

Concept of Patio Heating. Hot air from conventional heaters is not an option for heating an outdoor patio so a patio heater uses radiant heat like we receive from the sun

Radiant Heat: Is the type of heat you receive from a fireplace, potbelly stove, or the sun. It is an infrared wave length that heats objects without first heating the intervening air. Unlike ultraviolet light there is no sunburn or sun tanning affect. Infrared will not attract insects

Patio Heater: Is an unvented gas-fired infrared heater designed to concentrate radiant heat in outdoor areas.

Definition of Outdoors: (for the purpose of these instructions). An appliance is considered to be outdoors if installed with shelter no more inclusive than:

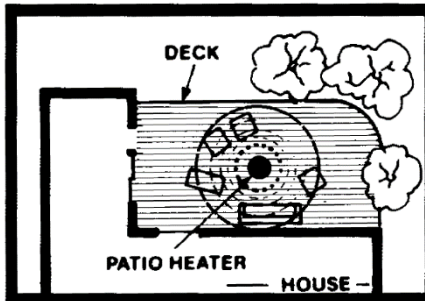
1. With walls on all sides but with no overhead cover.
2. Within a partial enclosure which includes an overhead cover and no more than two side walls. The side walls may be parallel, as in a breeze way, or at right angles to each other.
3. Within a partial enclosure which includes an overhead cover and up to three side walls, as long as 30% or more of the horizontal periphery of the enclosure is permanently open.

EFFECTIVE RANGE (COVERAGE):

The comforting warmth from a single Sunglo™ Heater will cover a 12' to 20' circle. The Sunglo™ is a "comfort" heater, and the coverage is the area in which people will receive a comforting amount of warmth. Some people will require more or less warmth than others to be comfortable and will either turn the heater up or down, or move closer or farther away as desired

WHERE TO LOCATE PATIO HEATERS:

Sunglo™ Heaters naturally attract people to their infrared warm glow. Locate heaters where people can readily gather, sit or stand comfortably, and where furnishing can easily be moved to best accommodate the radiating warmth.



GENERAL RULES FOR LOCATING HEATERS:

A Sunglo™ Patio Heater can operate effectively to maintain comfort even in completely exposed areas, although weather protected areas are desirable. Weather and wind protection allows the air to be warmed to enhance the direct radiant warming effect.

Breezy Conditions:

Sunglo™ heaters are designed to work well under a variety of outdoor conditions. However, wind and other weather conditions will affect how well the heater operates, or if it should be in use at all. The heater can be safely operated when the cross wind or breeze is 0-10 mph. If heaters are mounted on the edge of a precipice or sea cliff where wind is directed upwards into the reflector hood, damage to the heater will occur. Upward thrusts of wind can also occur because of wind walls or other architectural elements near the patio. The patio should be designed to protect the heaters against this type of condition.

Using Multiple Heaters:

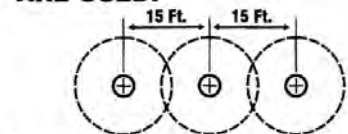
When more than one heater is used in an area, it is generally preferable to locate them close together. Multiple heaters located on 8' to 15' centers will give overlapping heat patterns, increasing the overall effective coverage for each heater.



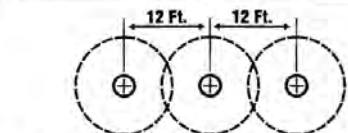
CONTROL SYSTEMS:

Sunglo™ heaters are available with a variety of control systems from manual controls requiring no electrical connections to a 24 VAC fully automatic ignition and control system (see Basic Lighting instructions on page 6). It is recommended that when multiple heaters are used, that the electrical circuitry be arranged so heaters can be switched on and off individually or in groups to provide maximum flexibility for heating the patio.

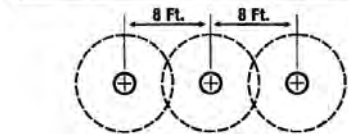
SUGGESTED SPACING WHEN MULTIPLE HEATERS ARE USED:



Spacing For: WELL PROTECTED AREAS AND MILD CLIMATIC CONDITIONS



Spacing For: SEMI EXPOSED AREAS WITH AVERAGE WEATHER CONDITIONS



Spacing For: COMPLETELY EXPOSED AREAS WITH SEVERE WEATHER CONDITIONS

INSTALLATION AND SERVICE INSTRUCTIONS

Receiving Equipment

On receipt of equipment it is suggested that a visual inspection be made for external damage to the carton. If the carton is damaged, a note should be made on the Bill of Lading when signing for the equipment. Remove the heaters from the carton. If there is damage, report the damage to the freight carrier immediately.

Each Sunglo™ heater is carefully tested and adjusted at the factory. Before attempting to install this equipment a thorough inspection is required to insure the heaters are in the original condition from the factory. Check for any loose parts or damage such as dents or parts that may affect the operation of the heater. If there is any question in regards to the condition of the equipment, contact the factory.

INSTALLATION INSTRUCTIONS

Important Notice

These instructions are intended for qualified personnel, specifically trained and experienced in the installation of this type of equipment and related system components. Some states or provinces require installation and service technicians to be licensed. If your state or province is such, be sure your contractor bears the appropriate license. Persons not qualified shall not attempt to install this equipment nor attempt repairs.

Code Requirements

Installation must be in accordance with local codes, or in absence of local codes, with the latest edition of the National Fuel Gas Code, NFPA 54/ANSI Z223.1 and the National Electrical Code ANSI/NFPA 70, and for Canada, the latest edition of CAN/CGA-B149.1 and B149.2 and Canadian Code CSA C22.1 Part 1 and Part 2.

Heaters to be installed in Aircraft hangars must be installed in accordance with the American National Standard for Aircraft hangars, ANSI/NFPA No. 409.

Heaters to be installed in Public Garages must be installed in accordance with NFPA No. 88A, Standards for Parking Structures.

Heaters must be installed so that minimum clearances marked on the heater will be maintained from vehicles parked below the heater.

When an external electrical source is utilized each heater must be electrically grounded in accordance with the National Electrical Code ANSI/NFPA 70. In Canada, the Canadian Electrical Code CSA C22.1 Part 1 applies.

Gas Supply

The gas inlet supply pressure and manifold pressure required for each heater are listed below. For gas supply line pressures in excess of ½ psig, consult your natural gas representative or the factory.

| Gas Inlet Pressure | Nat Gas | Propane |
|---------------------------|----------------|----------------|
| Maximum Pressure | ½ psig | 11 W.C. |
| Minimum Pressure | 6 W.C. | 11 W.C. |
| Manifold Pressure | 5 W.C. | 11 W.C. |

It is important that the gas piping system be adequately sized for all the gas appliances it serves.

Clearance Requirements

Each heater must be installed such that the following “Minimum Clearances from Combustible Materials” are always maintained.

Combustible materials include all wood, compressed paper, plant fibers, plastics, Plexiglas and other materials capable of being ignited or burned. Such materials shall be considered combustible even though flame-proof, fire retardant treated or plastered. Additional clearance may be required for vinyl siding, glass, painted surfaces or other materials that may be damaged by radiant or convection heat.

Clearance from Combustibles

| | | |
|-------|-----------|--------|
| Top | 18 inches | 46 cm |
| Side | 24 inches | 61 cm |
| Below | 84 inches | 214 cm |

Fire Sprinklers

Fire Sprinklers must be located at an appropriate distance from each heater to avoid accidental activation of the sprinkler. Ethylene glycol or propylene glycol must never be used in fire sprinkler systems where heaters are present, as these substances may become flammable when heated. A fire sprinkler professional must be consulted when heaters are installed to insure heaters and fire sprinklers are properly integrated. Specific guidelines can be found in NFPA 13, Installation of Fire Sprinkler Systems.

Electrical (V,E) Models Only

These heaters require 24 VAC to operate. The installer must provide a NEC Class 2 transformer. Each heater requires 20VA or 0.8 amperes (AMP). When multiple heaters are connected to one transformer, that transformer must be sized to accommodate the entire electrical load.

Control wire used to electrically connect one or more heaters together must have adequate capacity and insulation temperature rating for the total connected load. Use at least 18 GA wire up to 50 feet from the heaters to the transformer or wall switch. Use minimum of 16 GA wire for over 50-foot distances.

If any of the original wire supplied with the heater must be replaced, it must be replaced with wiring having a temperature rating of at least 105 centigrade.

Ventilation

1. It is required that areas above and below the heater be properly vented to allow for necessary combustion air and removal of combustion gases.
2. Heater shall be provided with natural or mechanical means to supply and exhaust at least 4 cfm per 1,000 BTU per hour of heater input. Exhaust opening for removing the flue products shall be above the level of the heaters.
3. Heater ventilation must comply with state and local codes.

Gas Piping

1. A minimum pipe size of ½" is required for inlet piping. A ½" lever handled shut-off gas cock must be installed within 6 feet of the heater for servicing the unit.
2. Gas lines must be adequately sized to carry the total connected gas load. Check with local and state plumbing and heating codes regarding sizing of gas line.
3. All gas pipe connections to the heater(s) must be sealed with a gas pipe compound resistant to liquefied petroleum gases.
4. Installation of a drip leg in the gas supply line going to each heater is required to minimize the possibility of any loose scale or dirt within the gas supply line from entering the heater's control system.
5. When checking for gas leaks do not use an open flame. Use a soap and water solution.
6. For gas supply line pressures in excess of ½ psig, consult the factory or your local natural gas representative.
7. Installation of a 1/8" N.P.T. plugged tapping accessible for test gage connections is required upstream of the gas supply connections to the heater.

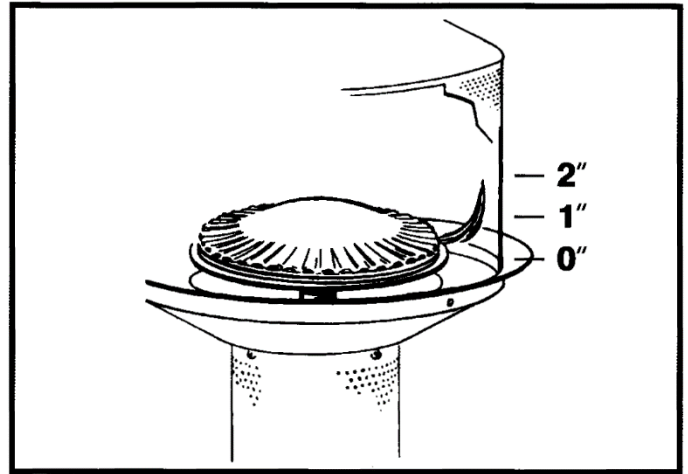


Figure 1. Normal Flame Position

Initial Start-Up Procedure

1. Make sure the gas lines are completely purged of air before attempting to light heater.
2. Follow lighting instructions on page ?? for your particular model.
3. Check all gas connection for leaks using soapy water.
4. Flame should travel completely around the inside of the emitter grid.
5. Emitter grid should become RED within 5 minutes (this may be difficult to see in bright sunlight).

NOTE: Some white smoke may appear during or just after the initial start-up of the heater. White smoke will dissipate with procedure.

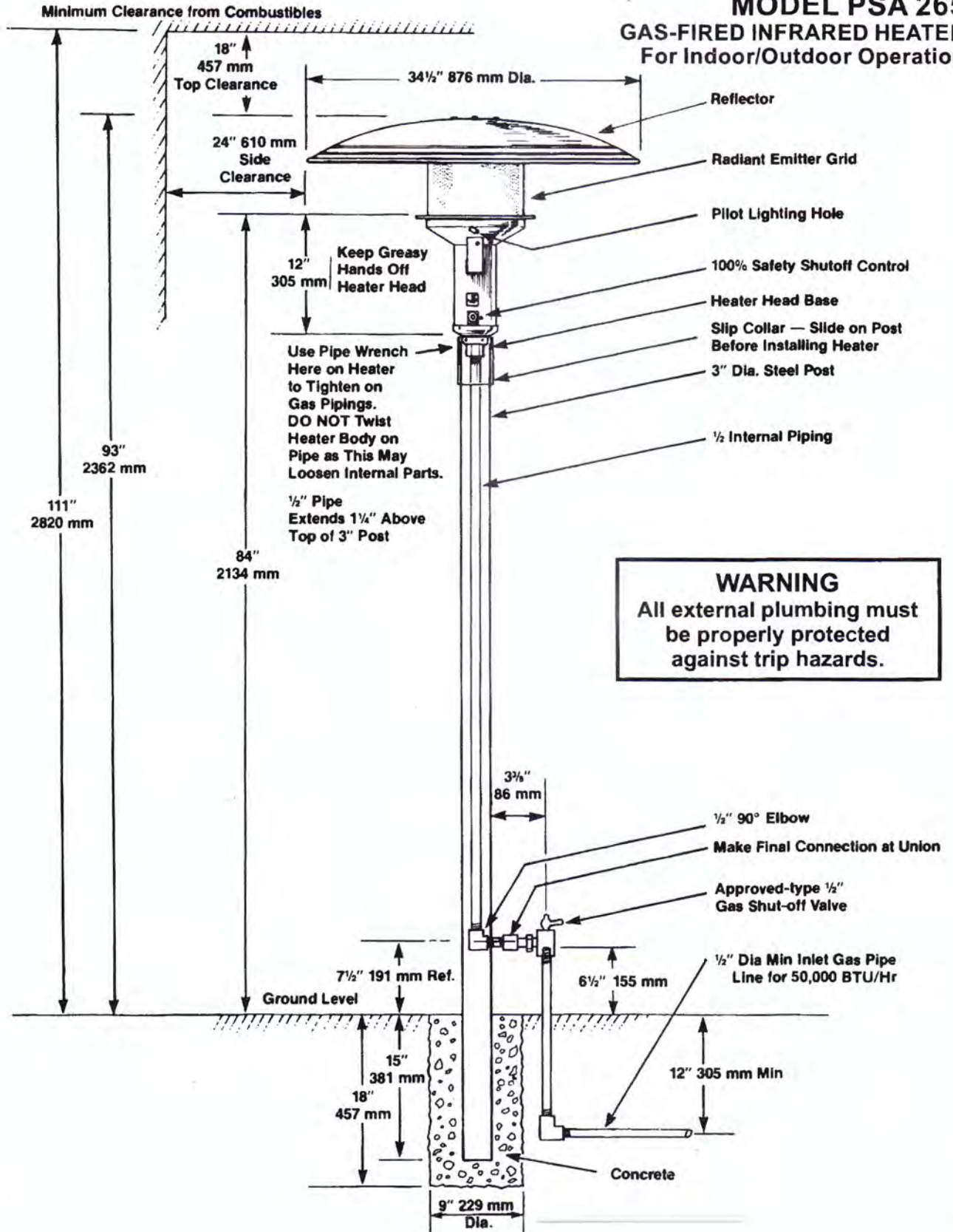
Servicing Instructions

Service checks on these heaters should be performed at least annually or more frequently depending on their use to verify the proper operation of these heaters. If the pilot fails to light or the heater does not heat properly the heater must be repaired before being put back into service.

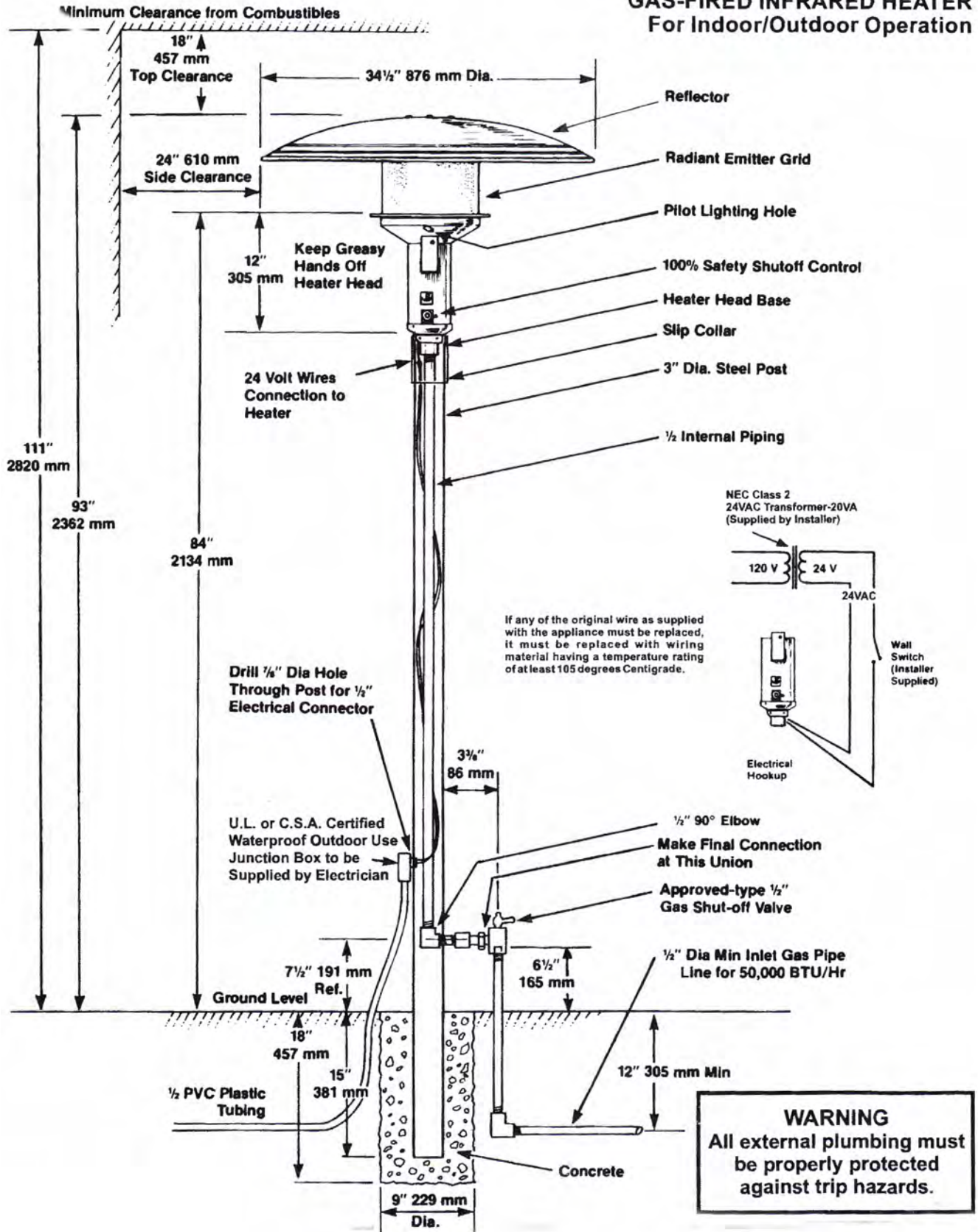
1. Turn off gas and electrical before attempting to any service.
2. Remove reflector and emitter assembly from heater as shown on page 21.
3. Using low pressure air (maximum of 30 psig) clear burner and pilot of any dirt or debris.
NOTE: Appropriate eye protection must be worn).
4. Using a metal brush remove any accumulated dirt from the inside of the emitter grid.
5. Reassemble heater and observe whether heater has been restored to proper operation.
6. If heater does not operate properly it may be necessary to remove burner and orifice for cleaning.
7. Any corroded or deteriorated parts must be replaced.

HEATER MODELS

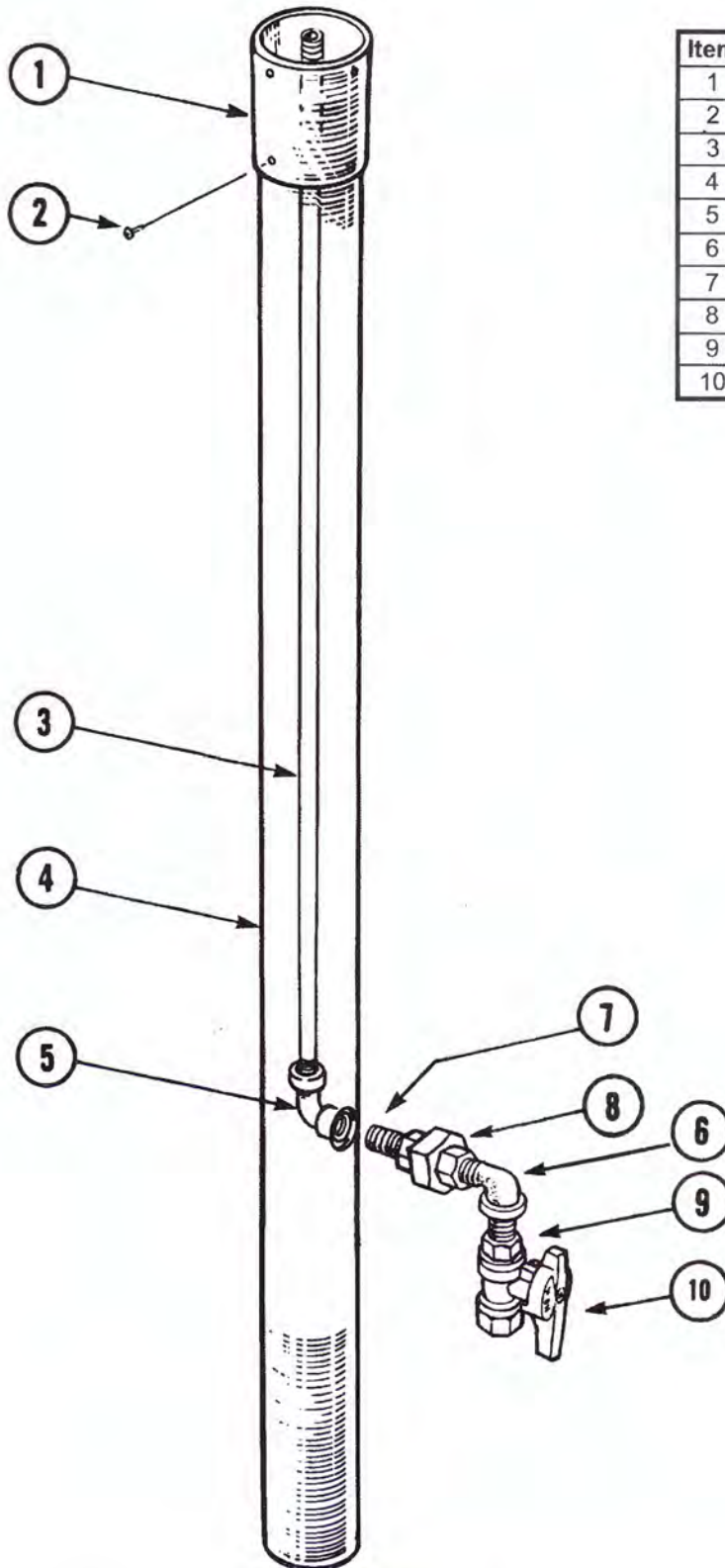
MODEL PSA 265
GAS-FIRED INFRARED HEATER
 For Indoor/Outdoor Operation



MODEL PSA 265V GAS-FIRED INFRARED HEATER For Indoor/Outdoor Operation



MODEL PSA 265V Replacement Parts List

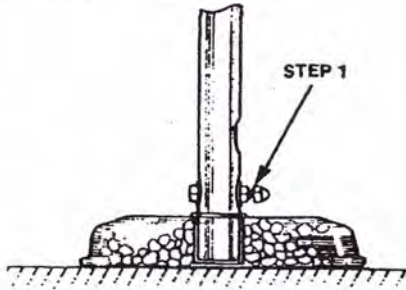


| Item | Part No. | Description |
|------|----------|---------------------------|
| 1 | 30257-1 | Collar, PH Black Slip |
| 2 | 70026 | Screw, #8 x 3/8" SWHSMS |
| 3 | 80008 | Pipe, 1/2" x 62 1/4" Blk |
| 4 | 30266 | Post, A265 Blk-84" L |
| 5 | 80023 | Elbow, 1/2" Blk |
| 6 | 80078 | Elbow, 1/2" Street Blk |
| 7 | 80054 | Nipple, 1/2" X 1 1/2" Blk |
| 8 | 80024-2 | Union, 1/2" Blk |
| 9 | 80003 | Nipple, 1/2" x Close |
| 10 | 90063 | Valve, Jomar T205 1/2" |

MODEL A242
GAS-FIRED INFRARED HEATER
 For Indoor/Outdoor Operation

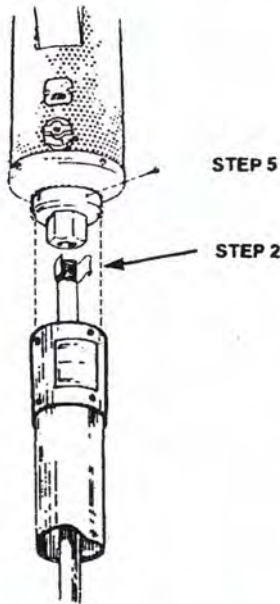
Step 1.

- Insert 3" dia. post squarely into base socket.
- Tighten nut on bolt to secure post until 1/2" of thread is exposed. Slight indent of post should occur. Install cap nut.



Step 2.

- Thread 62" long internal pipe nipple into base of heater head as shown below. If teflon tape is not provided, gas pipe joint compound must be used at this joint.

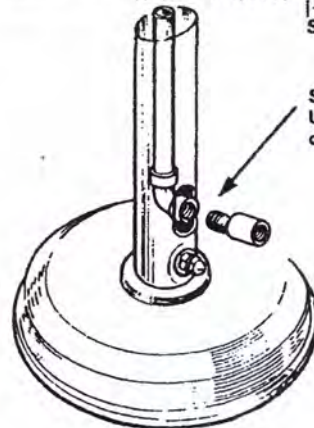


Step 3.

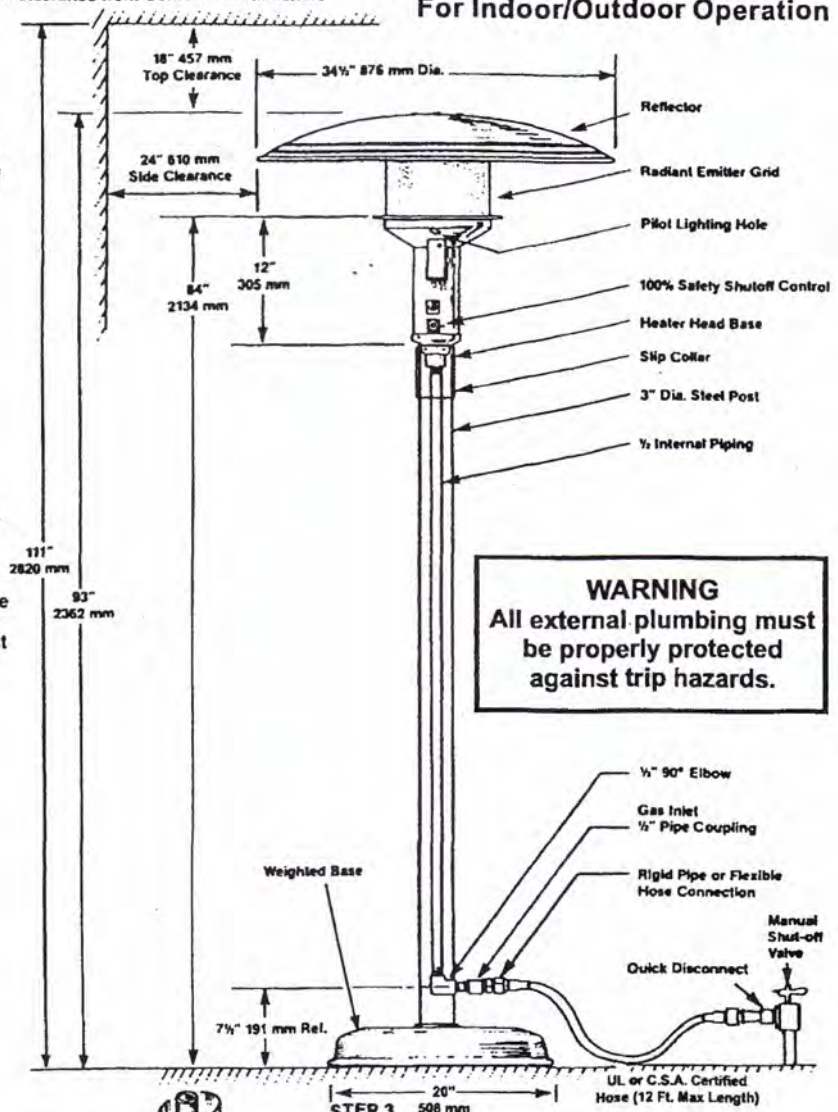
- Slide assembled gas pipe and heater head into post.
- Turn heater head so pipe elbow fitting lines up with hole at the bottom of the post.

Step 4.

- Screw 1/2" nipple into elbow using gas pipe joint compound as shown below.



Minimum Clearance from Combustible Materials



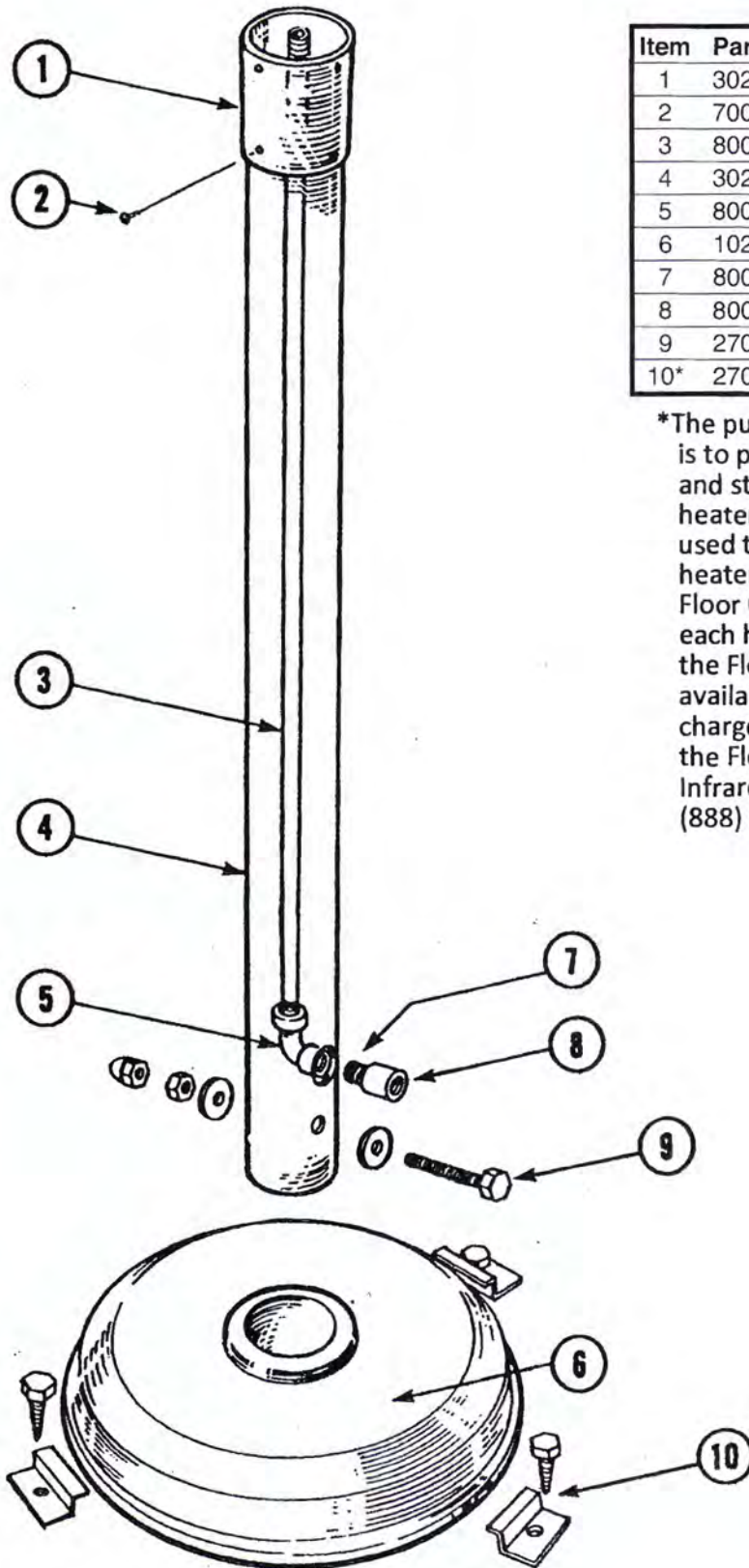
WARNING
 All external plumbing must be properly protected against trip hazards.

Floor Clamp Kit (Item No. 27020) should be used to secure heater base to deck. See page 14 for details

Step 5.

- Secure heater slip collar with four (4) screws provided.
- Attach reflector to top of heater with stainless steel nuts provided.
- Secure heater base to deck using Floor Clamp using Floor Clamp Kit (Item No. 27020) provided.

MODEL A242 Replacement Parts List

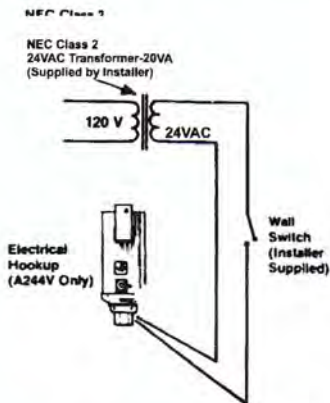
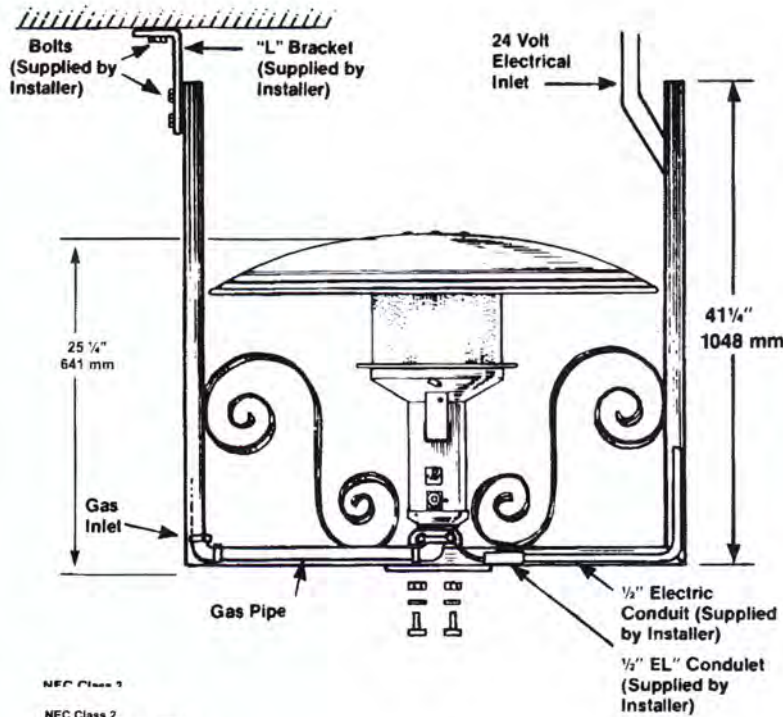


| Item | Part No. | Description |
|------|----------|-----------------------------|
| 1 | 30257-1 | Collar, PH Black Slip |
| 2 | 70026 | Screw, #8 x 3/8" SWHSMS, ZN |
| 3 | 80008 | Pipe, 1/2" x 62 1/4" Blk |
| 4 | 30264 | Post, A242 Blk-68 1/2" L |
| 5 | 80023 | Elbow, 1/2" |
| 6 | 10264-3 | Assy, A242 Base |
| 7 | 80054 | Nipple, 1/2" x 1 1/2" Blk |
| 8 | 80019 | Coupling, 1/2" Blk |
| 9 | 27027 | PKG, A242 Post Bolt |
| 10* | 27020 | Floor Clamp Kit |

*The purpose of the **Floor Clamp Kit** is to provide supplementary safety and stability for our portable heaters. Floor Clamps should be used to secure portable patio heaters to help prevent tip over. Floor Clamp Kits are provided with each heater. If for some reason the Floor Clamp Kit is missing it is available from the factory at no charge. For questions regarding the Floor Clamp Kit contact Infrared Dynamics, Inc. toll free at (888) 317-5255.

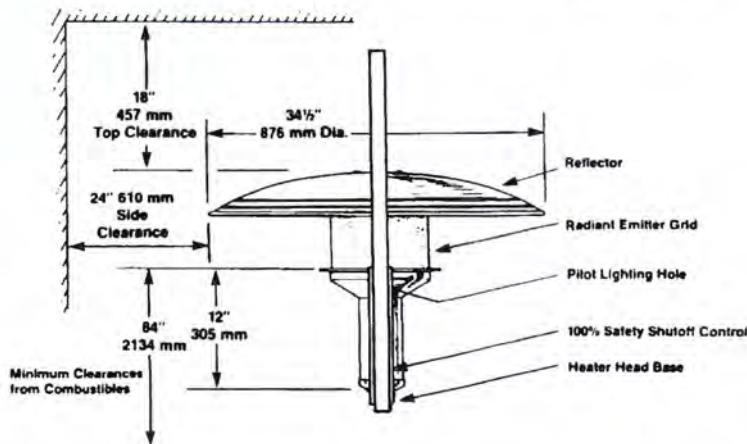
MODEL A244 & A244V

Installation Instructions



If any of the original wire as supplied with the appliance must be replaced, it must be replaced with wiring material having a temperature rating of at least 105 degrees Centigrade.

Maintain clearances shown for adequate clearance around air openings into the combustion chamber and for accessibility as well as for combustion and ventilating air supply.



1. Hanging Frame Mounting: Before attaching the heater to the U" shaped hanging frame, mount the frame in position to the overhead building structure. Use 1/2 inch diameter or larger bolts on each side leg. Position the frame to facilitate the connection of gas supply piping, and on models equipped with an electrical valve, the electrical supply wiring.

2. Gas Supply Piping: The piping provided with the heater is assembled to nestle in the channel of the hanging frame. Connect an additional length of 1/2 inch pipe long enough to clear the top of the frame.

Screw the heater onto the 1/2" NPT x 1 inch long nipple at the outlet end of the piping. The heater should be turned to allow the control handle to face in the desired direction.

Note: A 1/8 inch NPT plugged tapping, accessible for test gauge connection, must be installed immediately upstream of the gas supply connection to the heater. Use a suitable pipe thread sealant on all gas connections.

3. Heater Mounting: Set the heater (less reflector) with the piping assembly attached into the suspended hanging frame. The piping will nestle in the hanging bracket channel. Install and tighten the two (2) 3/8 inch bolts supplied with the frame and firmly secure the base of the heater in place.

Electrical Supply: On the A244V 24 volt model, the electrical inlet is provided on the right side of the heater opposite the gas inlet piping. The electrician should supply a connection box as shown adjacent to the heater electrical inlet and run 1/2" rigid waterproof conduit up to the right just inside the frame channel.

WARNING: The minimum fire hazard clearance marked on the heater must be maintained from vehicles parked below the heater.

The electrical input required to the heater is 0.550 Amps at 24V (rated at 8 Watts). A 40VA transformer will service up to three (3) heaters.

A NEC Class 2, 24 volt transformer (20 VA rating) circuit must be supplied to the heater. The transformer is to be installed in the junction box or in accordance with local codes, but in no case closer than three (3) feet to the reflector.

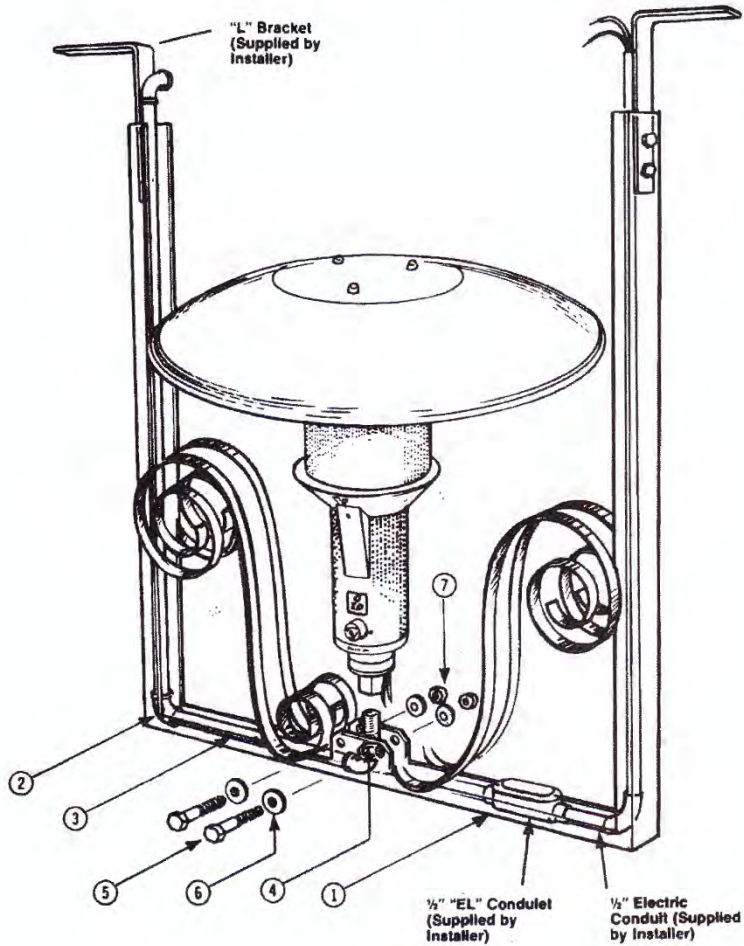
4. Piping Hook-up: Connect the additional gas supply piping. Leak test all piping joints with a soap-water solution. Do NOT use a match to test for gas leaks.

5. Reflector Mounting: Attach the reflector by means of the three (3) stainless steel wingnuts at the top of the heater.

6. Heater Start-up: Follow the lighting and operating instructions on the rating plate attached to the hanging frame.

Model A244 Replacement Parts List

| Item | Part No. | Description |
|------|----------|-------------------------|
| 1 | 35031 | Frame, PH Hanging |
| 2 | 80023 | Elbow, 1/2" |
| 3 | 80036 | Nipple, 1/2" X 16 1/2" |
| 4 | 8003 | Nipple, 1/2" X Close |
| 5 | 70036 | Bolt, 3/8" X 2 1/2"-Hex |
| 6 | 70055 | Washer, 3/8" SAE Zn |
| 7 | 70059 | Nut, 3/8"-16 Hex-Zn |



The Sunglo™ E Series heaters have a new fully automatic 24 volt ignition and flame monitoring system. The E Series head is a direct replacement for Models A244V and PSA265V. Use the installation instructions provided for those heaters for the E Series.

Once the Sunglo™ E Series heater is properly installed and wired to an appropriate 24 volt power source, follow the lighting instructions below.

To Turn "ON" Heater:

1. Turn the gas valve "ON".
2. Turn the electrical power "ON".

To Turn "OFF" Heater:

1. Turn the electrical power "OFF".
2. Turn the gas valve "OFF".

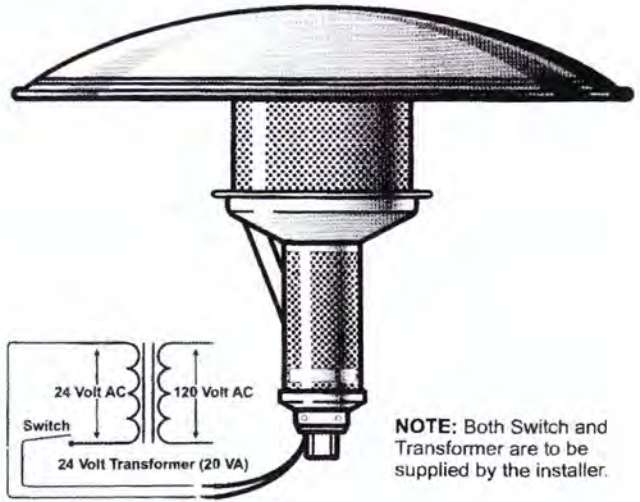
⚠ CAUTION

If burner fails to ignite, shut OFF electrical power and wait (5) five minutes to repeat the lighting process.

⚠ WARNING

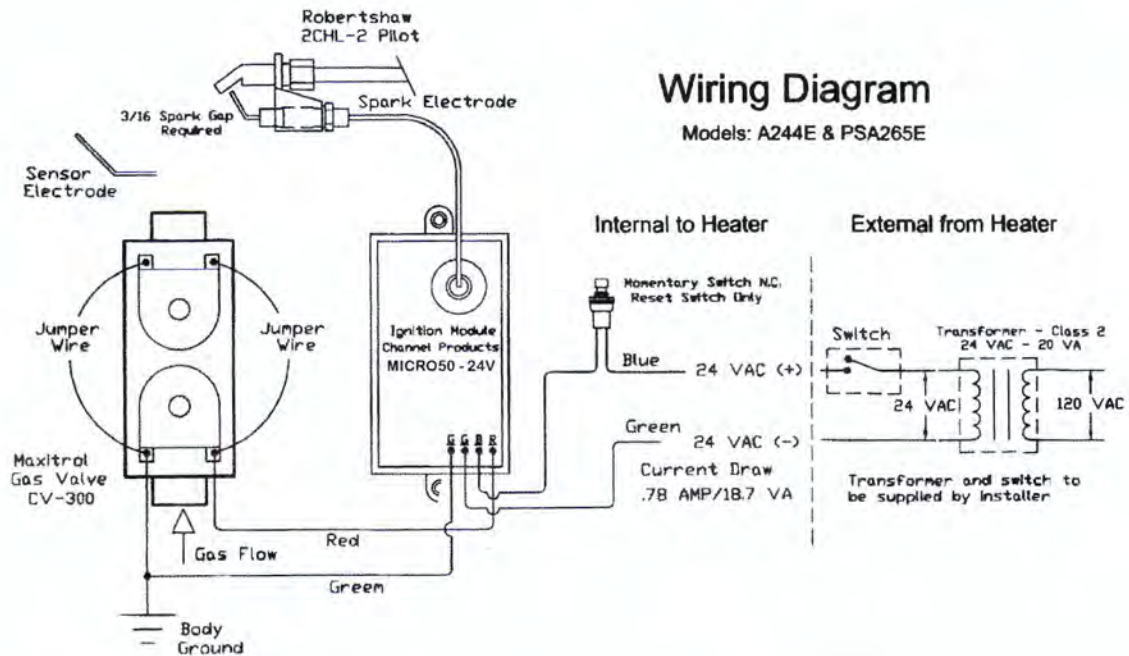
DO NOT attempt to light this heater manually.

**MODEL E Series
GAS-FIRED INFRARED HEATER
For Indoor/Outdoor Operation**



NOTE: Both Switch and Transformer are to be supplied by the installer.

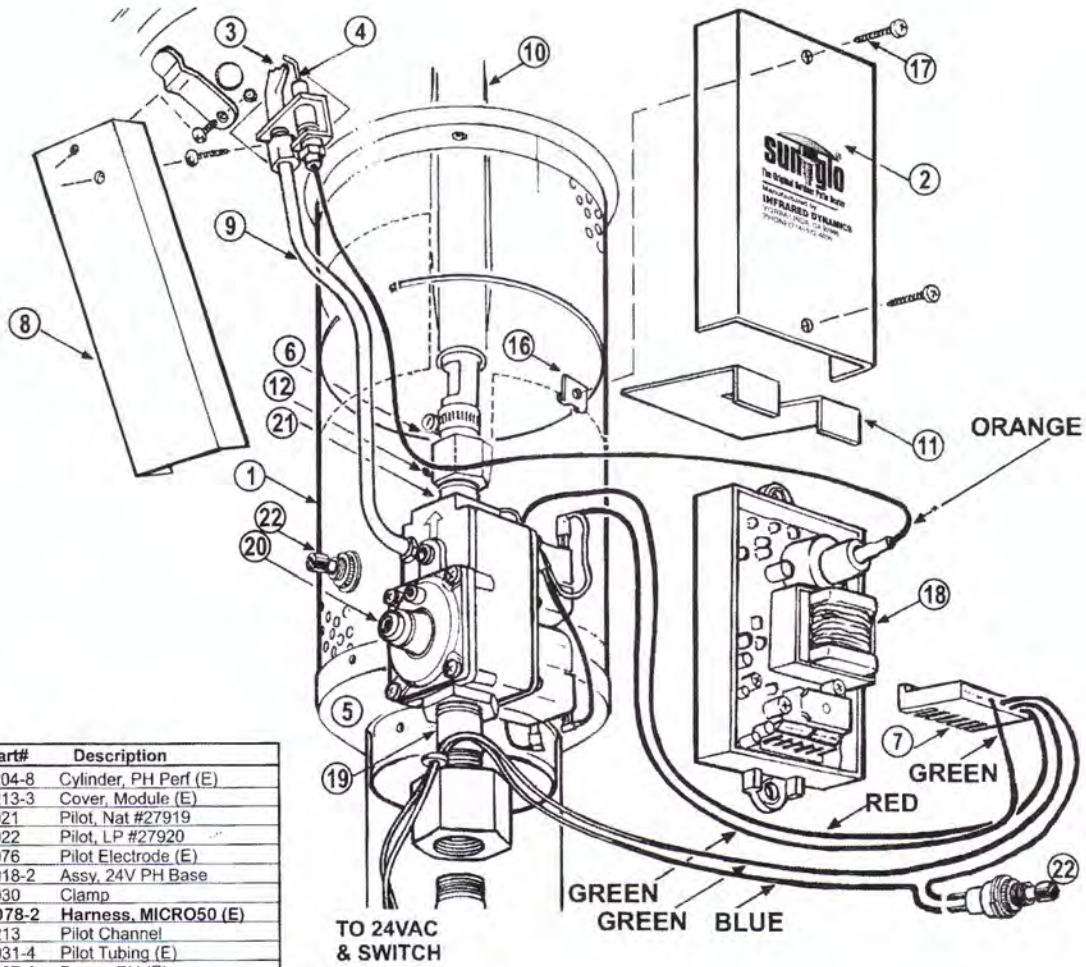
It is recommended that multiple units be placed on individual switches to provide more flexibility in heating, and, to allow for easy reset of a single unit.



Wiring Diagram

Models: A244E & PSA265E

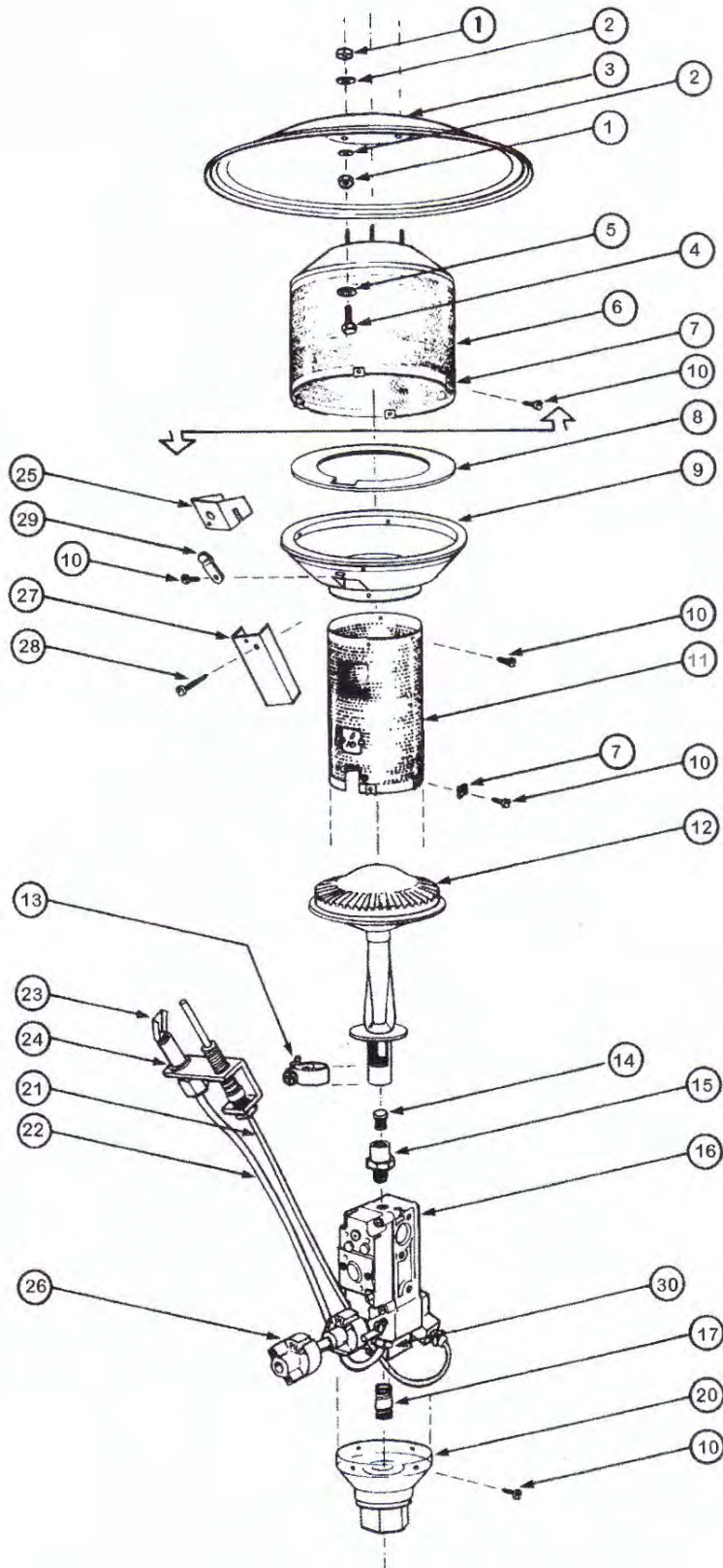
MODEL 265E & A244E
GAS-FIRED INFRARED HEATER
 For Indoor/Outdoor Operation



| Item | Part# | Description |
|------|----------|------------------------------|
| 1. | 30204-8 | Cylinder, PH Perf (E) |
| 2. | 30213-3 | Cover, Module (E) |
| 3. | 90021 | Pilot, Nat #27919 |
| | 90022 | Pilot, LP #27920 |
| 4. | 90076 | Pilot Electrode (E) |
| 5. | 27018-2 | Assy, 24V PH Base |
| 6. | 70030 | Clamp |
| 7. | 90078-2 | Harness, MICRO50 (E) |
| 8. | 30213 | Pilot Channel |
| 9. | 80031-4 | Pilot Tubing (E) |
| 10. | 27007-1 | Burner PH (E) |
| 11. | 30214 | Shield, Module (E) |
| 12. | 35015 | Adapter, Orifice (E) |
| 13. | 35001-31 | Orifice, Natural Gas |
| | 35001-48 | Orifice, Propane Gas |
| 14. | | |
| 15. | | |
| 16. | 70025-2 | Clip, Stainless Steel |
| 17. | 70052 | Screw #8 x3/4 RHSM |
| 18. | 90080 | Module, MICRO50-24v |
| 19. | 80053-2 | Nipple, 1/2" x 2" L |
| 20. | 90072-1 | Ctrl, CV300-Natural |
| 21. | 80025 | Face Bushing, 1/2" x3/8" STL |
| 22. | 85861 | Switch, Momentary N.C. |

10302 Kit, A244E MIRO Replacement (includes Harness)

Parts not listed are common to all Sunglo heaters.

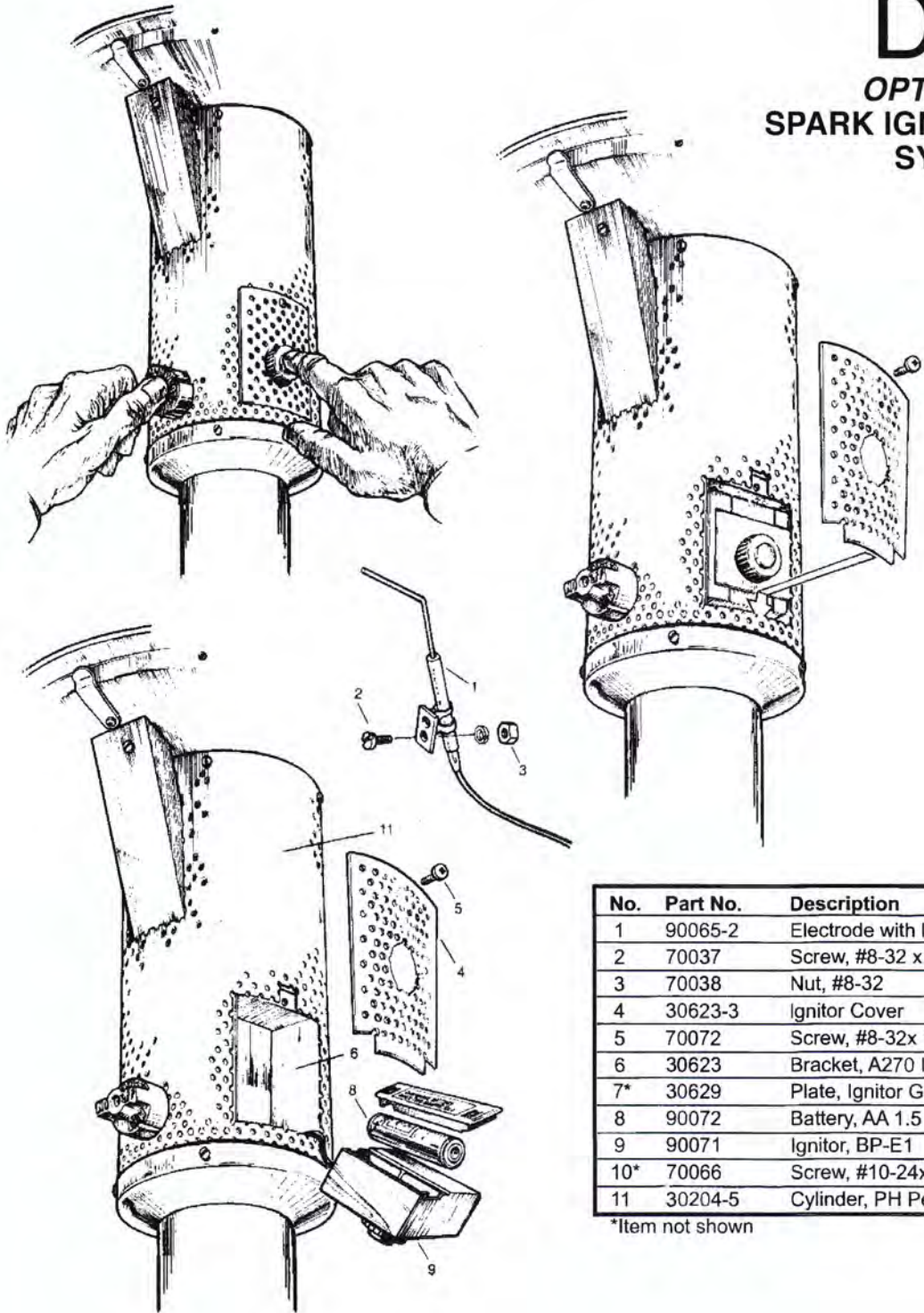


HEATER HEAD ASSEMBLY Replacement Parts List

| Item | Part No. | Description |
|------|----------|----------------------------|
| 1 | 70017 | Nut, ¼ -20 Hex SS |
| 2 | 70024 | Washer, ¼ SAE SS |
| 3 | 10261 | Reflector, PH |
| 4 | 70006 | bolt, ¼ x ¾ Hex SS |
| 5 | 70033 | Washer, ¼ Inter SS |
| 6 | 27006 | Assy, PH Emitter Grid |
| 7 | 70025 | Clip |
| 8 | 30225 | Shield, PH Head |
| 9 | 30202 | Pan, PH Head |
| 10 | 70005 | Screw, #8 x ½ SP SS |
| 11 | 30204-1 | Cylinder, PH Perf (7000) |
| 12 | 27007 | Assy, PH Burner Plt'd |
| 13 | 70030 | Clamp, 1" |
| 14 | 35001-31 | Orifice, #31 DS (Nat) |
| | 35001-49 | Orifice, #49 DS (Propane) |
| 15 | 35012 | Adapter, Orifice ¾ |
| 16 | 90002-3 | Control, 7000 MRLC Nat |
| | 90003-3 | Control, 7000 ERLC Nat-24V |
| | 90004-3 | Control, 7000 MLC-Propane |
| 17 | 80005 | Nipple, ½ x 2 ½ Blk |
| 20 | 27018-1 | Assy, PH H Base |
| | 27018-2 | Assy, 24V PH Head Base |
| 21 | 90031 | Thermocouple T46518 |
| 22 | 80031 | Tubing, AL-¼ x 14L |
| 23 | 90021 | Pilot, Natural #27919 |
| | 90022 | Pilot, Propane 327920 |
| 24 | 90015 | Natural Pilot Orifice |
| | 90016 | Propane Pilot Orifice |
| 25 | 30258 | PH Pilot Shield |
| 26 | 27025 | Assy, 7000 Handle |
| 27 | 30213 | Channel, PH Pilot |
| 28 | 70020 | Screw, #10 x 1 ¼ SS |
| 29 | 30299 | Cover, PH Pilot Hole |
| 30 | 80026 | Tubing Fastener-¼" |

DSI

OPTIONAL
SPARK IGNITION
SYSTEM

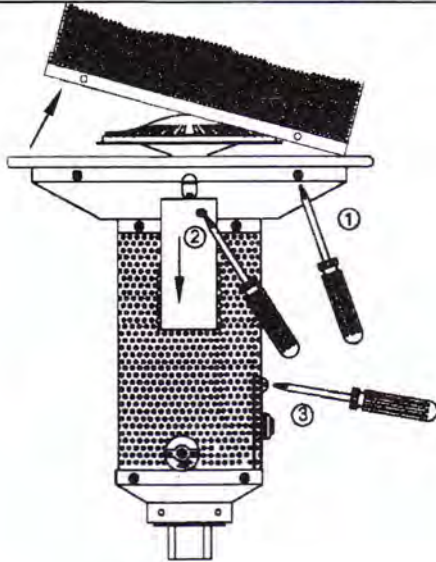


| No. | Part No. | Description |
|-----|----------|-----------------------|
| 1 | 90065-2 | Electrode with lead |
| 2 | 70037 | Screw, #8-32 x 3/8 |
| 3 | 70038 | Nut, #8-32 |
| 4 | 30623-3 | Ignitor Cover |
| 5 | 70072 | Screw, #8-32x 1/288 |
| 6 | 30623 | Bracket, A270 Ignitor |
| 7* | 30629 | Plate, Ignitor Ground |
| 8 | 90072 | Battery, AA 1.5 Volt |
| 9 | 90071 | Ignitor, BP-E1 |
| 10* | 70066 | Screw, #10-24x .250L |
| 11 | 30204-5 | Cylinder, PH Perf SS |

*Item not shown

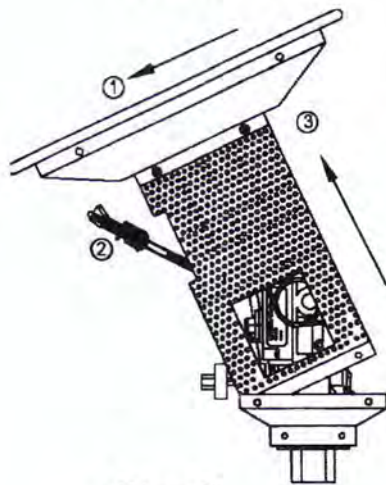
! WARNING

Repair and maintenance of Sunglo™ Heaters must be performed by a qualified service technician. Reassembled heater must be thoroughly checked for leaks and checked for proper operation before use.



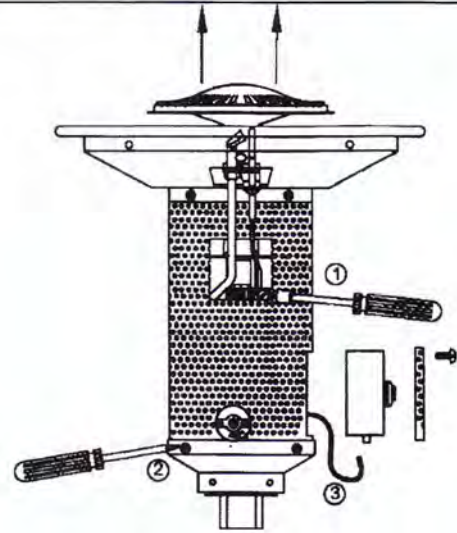
Step 1

1. Remove four (4) screws and remove the emitter grid.
2. Remove two (2) screws and remove the pilot channel and pilot hole cover
3. Remove one (1) screw and slide out ignition module.



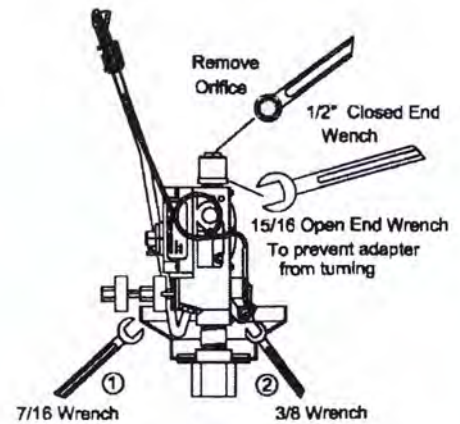
Step 3

1. Tilt housing toward pilot as shown
2. Free pilot body from housing.
3. Slide housing up over control assembly



Step 2

1. Loosen hose clamp holding burner in place and remove burner.
2. Loosen four (4) screws on the control base
3. Disconnect Wire from ignition module



Step 4

1. Loosen Pilot Tubing with 7/16 Wrench
2. Loosen Thermocouple with 3/8 Wrench

Tools Required

-  #2 Phillips Screw Driver
-  5/16 Nut Driver
-  7/16 Open End Wrench
-  3/8 Open End Wrench



Heater Maintenance

Heater maintenance or repair should be only performed by qualified service personnel such as a licensed heating, ventilation, and air conditioning contractor familiar with this type of heater.

Safety Inspection Checklist

For optimum performance and safety, it is recommended that all installation, service and annual inspection be done by a qualified agency. Below is a basic guideline for inspection. A more comprehensive inspection may be required depending on the initial inspection of heater.

- ✓ Make sure the heater Installation, Operation and Maintenance Manual is legible. Keep manual in a clean dry place. Contact the manufacturer for replacement of labels or manuals.
- ✓ Make sure the area around the heater is free of combustibles.
- ✓ Reflector should be in good, dent free condition and free of dirt and debris.
- ✓ Make sure the heater is mounted securely and there is no corrosion or damage to the post or mounting brackets.
- ✓ Inspect emitter grid for cracks or bubbles. Using a wire brush remove any soot, scale or debris from the inside of the emitter grid.
- ✓ Check the gas line for leaks using soapy water
- ✓ Light heater to verify proper ignition. If heater fails to light, clean pilot and replace thermocouple if required.
- ✓ Inspect electrodes for cracks. With the heater off verify the ignition electrode arcs to the top of the pilot hood.
- ✓ If heater fails to heat properly, the burner and orifice may need to be cleaned.
- ✓ Observe flames. If flame has a bright yellow appearance or black soot accumulates on the emitter grid, both the burner and emitter grid need to be cleaned thoroughly.
- ✓ Make sure the heater control operates easily.

TROUBLESHOOTING

MANUAL CONTROL

| Problem | Possible Causes |
|----------------------------|---|
| Pilot will not light | <ul style="list-style-type: none"> • Air in gas line • Low gas pressure • Gas line turned "Off" • Blockage of gas line |
| Pilot does not stay lit | <ul style="list-style-type: none"> • Damaged thermocouple • Corrosion of thermocouple connection to valve • Damaged Gas Valve • Wind exceeding 10 mph |
| Main Burner does not light | <ul style="list-style-type: none"> • Low gas pressure • Blockage in the main orifice • Obstruction inside the burner |

MANUAL CONTROL WITH DSI

| Problem | Possible Causes |
|----------------------------|---|
| No Spark | <ul style="list-style-type: none"> • Weak battery • Damaged Electrode • Ground Plate not in place • Loose or damaged wire |
| Spark will not light pilot | <ul style="list-style-type: none"> • No gas to pilot • Electrode not sparking to pilot hood • Improper electrode gap (3/16") |

AUTOMATIC GAS VALVE (V SERIES)

| Problem | Possible Causes |
|----------------------------|---|
| Main burner does not light | <ul style="list-style-type: none"> • No power to the heater (24 VAC required) • Control knob not in "On" Position |

ELECTRONIC IGNITION (E SERIES)

| Problem | Possible Causes |
|-------------------------|--|
| No Spark to Electrode | <ul style="list-style-type: none"> • Improper electrode ga (3/16") • Damaged electrode or wiring • Damage ground wire |
| Gas Valve does not open | <ul style="list-style-type: none"> • No power to gas valve (24 VAC required) • Loose or damaged wiring to gas valve • Damaged gas valve |
| Heater Shuts Down | <ul style="list-style-type: none"> • Wind exceeding 10 mph • Electrode damaged or out of position • Damage electrode connection |

LIMITED WARRANTY

THIS WARRANTY IS APPLICABLE TO THE ORIGINAL OWNER ONLY in accordance with the warranty terms and conditions specified below.

One-year Homeowner Warranty/90 Day Commercial Warranty

Infrared Dynamics (warrantor) will furnish the original owner replacement parts for any component part which fails before one year of residential use, or 90 days of commercial use, following installation. At our option, Infrared Dynamics may offer to rebuild or replace the heater within the limited warranty period.

Installation, use and maintenance must be in accordance with instructions contained in the installation instructions.

THE WARRANTY DOES NOT COVER

- Service and labor costs incurred for diagnosing, removing, or reinstallation of the heater(s) or parts(s) thereof.
- Shipping and delivery charges for defective parts or the heater to nearest distributor or manufacturer to the claimant.* Any costs pertaining to permits or materials for installation of the heater or parts.
- Any product purchased over the Internet, or purchased second hand.
- Damage or repairs due to faulty installation, misapplication, negligence, thermal shock, earthquake, fire, flood, and/or purposeful damage to the heater.
- Failure to work due to electrical service including voltage conditions, blown fuses or circuit breakers, or damage due to the inadequacy or interruption of electrical service.
- Failure to work due to a break or interruption in natural gas or propane lines to the heater.

GENERAL CONDITIONS PERTAINING TO WARRANTY

The warranty shall be null and void if the heater is not installed by an experienced heating contractor, or if the heater is not installed according to the Installation Instructions, normal industry practices, and/or if the heater is not maintained and repaired according to the instructions.

Normal product wear (oxidation, scratches, battery replacement, etc.) does not constitute a material defect and applicable warranty claim.

Written permission is required for the return of any parts or equipment and any such return must be made on the basis of transportation charges prepaid. Shipment may be refused unless prior written permission is obtained and goods returned prepaid.

LIMITATION ON IMPLIED WARRANTIES

Implied warranties, including any warranty of merchantability imposed on the sale of this heater under state law are limited to one year duration for the heater or any of its parts. Some states do not allow limitations on how long an implied warranty lasts.

CLAIMS PROCEDURE

Any claim under this warranty should be initiated with the dealer who sold the heater, or with any dealer handling the warrantor's products. If this is not practical, the owner of the heater should contact: Infrared Dynamics, 3830 Prospect Ave. Yorba Linda, California 92886. Toll Free: 1-888-317-5255. Hours of operation 7-3 PST MF). Website: www.infradyne.com.