

INFRARED LP GAS HEATER

Model 93164

ASSEMBLY AND OPERATION INSTRUCTIONS

FOR YOUR SAFETY

If you smell gas:

1. Shut off gas to the appliance.
2. Extinguish any open flame.
3. If odor continues, immediately call your gas supplier.

WARNING: For Outdoor Use Only.

FOR YOUR SAFETY

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

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

Due to continuing improvements, actual product may differ slightly from the product described herein.



3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>

TO PREVENT SERIOUS INJURY AND DEATH, READ AND UNDERSTAND ALL WARNINGS AND INSTRUCTIONS BEFORE USE.

Copyright© 2005 by Harbor Freight Tools®. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools.

For technical questions or replacement parts, please call 1-800-444-3353.

SPECIFICATIONS

Fuel Source	Propane – Standard Bulk Tank (not included)
Ignition System	Spark Igniter – Piezo Electric for Matchless Starting
Dial Settings	Pilot-High-Low
Gas Hose	20" L x 9/16" O.D. x 5/16" I.D. 1 PSIG Rated Maximum Working Pressure
Output Rating	15,000 BTU (Heat Adjustable)
Housing Dimensions	12" W x 9-1/2" H x 4" Deep
Overall Dimensions	15" H x 14" W x 15-1/2" Deep
Weight	5.3 Pounds

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

UNPACKING

When unpacking, check to make sure all the parts shown in the **Parts List on page 8** are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the front cover of this manual as soon as possible.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

 **WARNING!** When using this product, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

1. **Keep children away.** Children must never be allowed in the work area. Do not let them handle, move, or adjust this product.
2. **Store idle equipment.** When not in use, this product must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
3. **Check for damaged parts.** Before using any product, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for any broken parts or mounting fixtures, and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the product if any switch does not turn on and off properly.
4. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.

5. **Do not operate this product if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not operate this product.
6. **Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.

SPECIFIC SAFETY WARNINGS AND PRECAUTIONS

1. **Read these instructions carefully before setting up and using the Heater. Do not allow anyone who has not read the instructions to assemble, light, or operate the Heater.**
2. **Improper assembly, installation, adjustment, alteration, service, use, or maintenance can cause property damage, PERSONAL INJURY, or DEATH.**
3. **Installation and repair should be done only by a qualified service technician. The Heater should be inspected before use and at least annually by a qualified service technician.**
4. **More frequent cleaning may be required as necessary. It is imperative that the Radiating Panel, Burner Regulating Valve, Piezo, and circulating air passageways of the heater be kept clean.**
5. **This Heater must be used only with HD-5 propane gas. The propane tank should hold no more than 20 pounds of LP gas. Do not use bulk tanks of larger capacity. Do not use any other fuel. The Heater must be used only with a vapor withdrawal LP propane tank equipped with a POL valve. The tank must be constructed and marked in such a way as to comply with the specifications for LP gas tanks by the U.S. Department of Transportation (DOT).**
6. **The installation of the Heater must be in conformity with local codes or, in the absence of local codes, with the standard for storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA 58. For Canada, the installation must be in accordance with the current CAN/CGA B149.2 installation codes.**

CARBON MONOXIDE INHALATION HAZARD



The Infrared Heater is an unvented LP Gas-fired heater. **It is only for outdoor use and must never be used inside vehicles, campers, in a house, or any other structure. Carbon monoxide is produced during operation and is DEADLY in a closed environment.** Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the Infrared Heater may not be working properly or is improperly vented. Get fresh air **immediately**.



RISK OF FIRE AND/OR EXPLOSION



1. **Do not store extra propane tanks in the vicinity of the Infrared Heater or any other appliance. This Heater should not be directed towards any LP gas container located within 20 feet.**
2. **If gas is smelled during operation, immediately close the valve on the propane tank.** Extinguish any open flame. Never light a match. Never turn on an electrical switch. Evacuate the area at once. Call for professional help. Propane gas is odorless. An odor-making agent is added to propane/LP gas to enable you to smell the gas if it may be leaking.
3. **If the Infrared Heater shuts off during operation, close the valve on the propane tank. Check the amount of gas in the tank and wait 5 minutes for the gas to clear before restarting.** If it continues to shut off during operation, have it serviced by a qualified technician.
4. **Never place the Infrared Heater within 15 feet of flammable objects such as wood, trees, overhangs, and umbrellas. This Heater also requires a clearance of at least 3 feet from nonflammable materials to allow proper combustion.**
5. **Keep solid combustibles such as building materials, paper or cardboard a safe distance away from the Heater. 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.**
6. **Always operate the Heater with the propane tank in its vertical upright position, on a noncombustible surface.** While in operation, do not tilt or lean the propane tank on its side. Never turn the tank upside down, not even when it seems empty, as this may cause clogging of valves and components which could lead to dangerous flare-ups or fire.
7. **Do not use this Heater for cooking.**
8. **This Heater must be installed and operated so that it is not directly exposed to water spray, rain, or dripping water.**

RISK OF BURNS -- HEATER GETS VERY HOT DURING USE.



1. **Do not attempt to move the Infrared Heater while it is in operation.** Turn it off and wait one-half hour until it cools down before moving.
2. **Do not touch the Radiating Panel while the Infrared Heater is lit.** Before servicing, wait one-half hour for the Infrared Heater to cool down.

3. **Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.**
 4. **Young children should be carefully supervised when they are in the area of the Infrared Heater.**
 5. **Clothing or other flammable materials should not be hung from the Infrared Heater, or placed on or near the Heater.**
 6. **Never allow the Heater to operate the while you are sleeping.**
-
1. ** WARNING!** The brass components of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5, *et seq.*)
 2. ** WARNING!** The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

ASSEMBLY INSTRUCTIONS

Note: See Assembly Diagram at back of manual for parts referenced in the following pages.

1. **WARNING!** Always make sure to close the valve on the propane tank (not included) prior to heater assembly, maintenance, and/or adjustment.
2. Attach the Base (1) of the Infrared Heater to the handle of a full, 20 pound propane/LP gas tank, using the Locking Screw (5) provided.
NOTE: The gas tank used must be constructed and marked in accordance with the specifications for LP gas cylinders by the U.S. Department of Transportation.
3. Loosen the Wing Nut (4), and tilt the Infrared Heater to the desired angle. Then, retighten the Wing Nut.
4. By hand, screw the Gas Valve (6) of the Infrared Heater firmly onto the discharge pipe of the propane tank.

OPERATION INSTRUCTIONS

1.  **WARNING!** Place the Infrared Heater outdoors, and at least 15 feet from any flammable materials before using. The outdoor location must be readily accessible and have at least 3 feet of clearance from any nonflammable obstructions to allow proper combustion.
2. Before each use, carefully inspect the visible portion of the Hose (8). Inspect the Hose for cracks, excessive abrasion or wear, and any other damage.
3. Turn the Burner Regulating Valve (10) so that the “**PILOT**” (solid circle) position on the dial lines up with the aluminum tube leading to the burner.
4. Turn the propane/LP gas tank valve counterclockwise to open and check and smell for gas leaks. Perform a bubble test by applying warm soapy water over every joint, regulator, fitting, and anywhere else there may be a possible leak. Observe carefully to see if bubbles expand, indicating a leak. A large leak can blow the soapy solution away instead of forming bubbles. If leaks are found, do not use the Infrared Heater until the leaks have been stopped.
5. The Infrared Heater is equipped with a piezo electric ignitor (12). This system normally requires no matches, batteries, or other sources to light the Heater. With the Burner Regulating Valve (10) in the “**PILOT**” (solid circle) position, hold it down* while you press in the red piezo ignitor button several times to light the Infrared Heater. Sometimes repeated attempts (10 or more) are needed to ignite the pilot. The Button will click each time it is properly activated.

* This Heater has a built-in thermocouple designed to prevent gas from flowing while the flame is out or the thermocouple is cold. Holding the Burner Regulating Valve (10) down while in the “**PILOT**” position temporarily overrides this safety feature to allow the heater to start.

6. Hold the Burner Regulator Valve in for about one minute after ignition. If the pilot goes out after releasing, then the Valve was not held in long enough. Relight and hold the valve down longer.
7. After the pilot remains lit, keep away from directly above the heater while you *slightly press* and turn the Burner Regulator valve so that the desired position between the small flame (low) and the larger flame (high) is aligned with the aluminum tube.
Note: The panel directly above the pilot will typically heat much faster than the second one.
8.  **WARNING! Do not attempt to move the Infrared Heater while it is on or while it is hot. Do not touch any area of the Radiating Panel (2). Serious burns will occur. Turn the Infrared Heater off and wait one-half hour until it cools down before moving or storing.**
9. When finished using the Infrared Heater, turn the propane/LP gas tank valve clockwise to close the valve. The flame should go out. Then, turn the Burner Regulating Valve (10) to its “PILOT” (solid circle) position.
IMPORTANT! GAS TANK valve must be closed after use to prevent gas flow, otherwise pilot may still be lit creating a fire hazard.
10. Allow the unit to cool completely. The propane/LP gas tank must be stored outside. If the Infrared Heater is to be stored inside a building, the propane/LP cylinder should be turned off, removed from the Heater, and left outside. Cylinders must be stored outdoors in a well-ventilated area out of reach of children. Disconnected cylinders must have threaded valve plugs (not included) tightly installed, and must not be stored in building, garage, or any other enclosed area.

INSPECTION, MAINTENANCE, AND CLEANING

1. **Any guard or other protective device removed for servicing the Infrared Heater must be replaced prior to operating the Heater.**
2. **Before each use**, check all gas fittings for tightness. Also, check for cracks, excessive abrasion or wear, and any other damage.
3. **After each use:** Wait until the Infrared Heater is cool. Wipe down all parts with a clean cloth and mild soapy water.
4. **Store the Infrared Heater** in a clean, dry location out of reach of children. If storing the unit indoors, first shut off and remove the propane/LP gas tank and leave it outdoors. Keep the area near the Infrared Heater clear and free from combustible materials, gasoline, and other flammable vapors and liquids.
5.  **WARNING: All maintenance, service, or repair procedures not listed in this manual are only to be attempted by a qualified service technician.**

PARTS LIST AND ASSEMBLY DIAGRAM

Part	Description	Qty.
1*	Base Assy.	1
2**	Radiating Panel	1
3	Lock Washer	1
4	Wing Nut	1
5	Locking Screw	1
6	Gas Valve	1

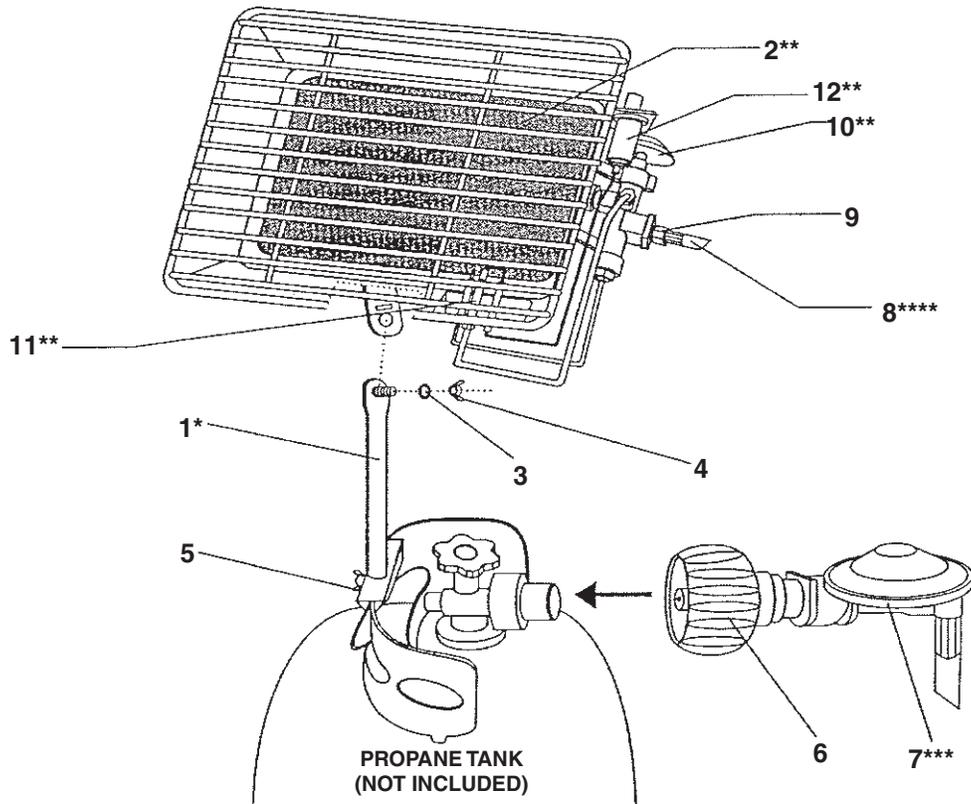
Part	Description	Qty.
7***	Regulator Assy.	1
8****	Hose Assy.	1
9	Nut	1
10**	Burner Regulating Valve	1
11**	O.D.S.	1
12**	Piezo Ignition	1

* Includes parts #1, #3, #4, #5.

** Individual gas control components not available as replacement parts.

*** Includes parts #6, #7.

**** Includes parts #8, #9.



Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.