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***Propane***  
***Portable Heaters***  
**OPERATOR'S MANUAL**

***MH-0060-LM10***

***MH-0150-LM10***

***MH-0150-LMT0***



**CAUTION: CONSUMER READ AND RETAIN THESE INSTRUCTIONS FOR FUTURE USE.**



**CAUTION**

**RISK OF INJURY! READ ENTIRE MANUAL BEFORE OPERATING!  
THIS MANUAL IS AN IMPORTANT PART OF THE PORTABLE HEATER  
AND MUST REMAIN WITH THIS UNIT!**



MH-0060-LM10, MH-0150-LM10 : USA & CANADA  
MH-0150-LMT0 : USA ONLY

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Factory ID 522

37-1063-E/F/S-050720

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**⚠ GENERAL HAZARD WARNING: FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, OR 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.**

**IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABEL, ETC. CONTACT THE MANUFACTURER.**

**⚠ 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: NOT FOR HOME OR RECREATIONAL VEHICLE USE.**

### **⚠ WARNING**

**⚠ WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## INTRODUCTION

Congratulations on the purchase of your new Mi-T-M® Portable Heater! You can be assured your Mi-T-M® Portable Heater was constructed with the highest level of precision and accuracy. Each component has been rigorously tested by technicians to ensure the quality, endurance and performance of this heater.

This operator's manual was compiled for your benefit. By reading and following the simple safety, installation and operation, maintenance and troubleshooting steps described in this manual, you will receive years of troublefree operation from your new Portable Heater. The contents of this manual are based on the latest product information available at the time of publication. The Manufacturer reserves the right to make changes in price, color, materials equipment, specifications or models at any time without notice.



### IMPORTANT!

A "DANGER, WARNING or CAUTION" safety warning will be surrounded by a "SAFETY ALERT BOX". This box is used to designate and emphasize Safety Warnings that must be followed when operating this heater. Accompanying the safety warnings are "Signal Words" which designate the degree or level of hazard seriousness. The "Signal Words" used in this manual are as follows:

**DANGER: INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.**

**WARNING: INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**

**CAUTION: INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED MAY RESULT IN MINOR OR MODERATE INJURY OR DAMAGE TO THE HEATER.**

The symbols set below are "Safety Alert Symbols". These symbols are used to call attention to items or procedures that could be dangerous to you or other persons using this equipment.



**ALWAYS PROVIDE A COPY OF THIS MANUAL TO ANYONE USING THIS EQUIPMENT. READ ALL INSTRUCTIONS IN THIS MANUAL AND ANY INSTRUCTIONS SUPPLIED BY MANUFACTURERS OF SUPPORTING EQUIPMENT BEFORE OPERATING THE PORTABLE HEATER AND ESPECIALLY POINT OUT THE "SAFETY WARNINGS" TO PREVENT THE POSSIBILITY OF PERSONAL INJURY TO THE OPERATOR.**

Once the unit has been uncrated, immediately write in the serial number of your unit in the space provided below.

**SERIAL NUMBER** \_\_\_\_\_

Inspect for signs of obvious or concealed freight damage. If damage does exist, file a claim with the transportation company immediately. Be sure that all damaged parts are replaced and that the mechanical and electrical problems are corrected prior to operation of the unit. If you require service, contact Mi-T-M® Customer Service.

Mi-T-M® Corporation, 50 Mi-T-M Drive, Peosta, IA 52068  
563-556-7484 / 800-553-9053 / Fax 563-556-1235  
Monday - Friday 8:00 a.m. - 5:00 p.m. CST

Please have the following information available for all service calls:



1. Model Number
2. Serial Number
3. Date and Place of Purchase

## IMPORTANT SAFETY INSTRUCTIONS



READ ALL SAFETY WARNINGS BEFORE USING PORTABLE HEATER





Hazard	Potential Consequence	Prevention
<p><b>RISK OF ELECTRIC SHOCK OR ELECTROCUTION</b></p> 	<p>Serious injury or death could occur if the portable heater is not properly grounded. Your heater is powered by electricity and may cause electric shock or electrocution if not used properly.</p> <p>Electrical shock may occur if portable heater is not operated properly.</p> <p>Serious injury or death may occur if electrical repairs are attempted by unqualified persons.</p>	<p>Installation of this unit, including all electrical connections, must comply with all local, state and national codes.</p> <p>This product must be grounded. Connect to a GFCI circuit breaker when available. If the unit should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. Do not ground to a gas supply line.</p> <p>Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the system is properly grounded.</p> <p>Always be certain the unit is receiving proper voltage. Specified on the model plate of the heater. Use only a three-prong, grounded outlet and extension cord.</p> <p>Keep all connections dry and install the heater so that it is not directly exposed to water spray, rain, dripping water or wind.</p> <p>Any electrical wiring or repairs performed on this heater should be done by Authorized Service Personnel in accordance with National and Local electrical codes.</p> <p>Always unplug the heater when not in use.</p>
<p><b>RISK OF BURNS</b></p> 	<p>Serious injury could occur from touching exposed metal parts. These areas can remain hot for some time after the heater is turned off.</p>	<p>Never allow any part of your body or other materials to make contact with any exposed metal parts on the heater.</p>



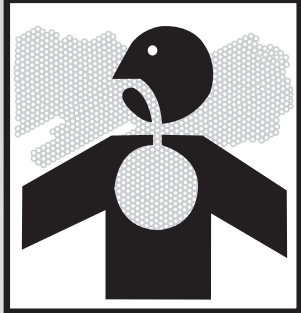
**NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## IMPORTANT SAFETY INSTRUCTIONS

Hazard	Potential Consequence	Prevention
<p><b>RISK OF EXPLOSION OR FIRE</b></p>  	<p>Serious injury or death may occur from normal electrical sparks in motor and pressure switch</p> <p>Serious injury may occur if the heater air inlet or outlet is blocked.</p> <p>Serious injury or death may occur if improper fuels are used.</p> <p>Serious injury may occur if heater is not placed on level surface.</p>	<p>The appliance are to be kept clear and free from combustible materials gasoline and other flammable vapors and liquids.</p> <p>Never place objects in front of air inlet (rear) or air outlet (front) of heater. Never use duct work in front or at rear of heater. Keep all combustible material away from this heater.</p> <p>The propane (LP) gas pressure regulator and hose assembly supplied with the heater must be used without alteration</p> <p>This heater is <b>EXTREMELY HOT</b> while in operation.</p> <p>Bulk fuel storage should be a minimum of 25 ft. from heaters, torches, portable generators, or other sources of ignition. All fuel storage should be in accordance with federal, state, or local authorities having jurisdiction.</p> <p>Never move or handle heater while still hot.</p> <p>If equipped with a thermostat, the heater may start at any time.</p> <p>Always locate heater on a stable and level surface.</p> <p>Always keep away from children and animals.</p>


**⚠ NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## IMPORTANT SAFETY INSTRUCTIONS

Hazard	Potential Consequence	Prevention
<p><b>RISK TO BREATHING</b></p> 	<p>Serious injury or death could occur from failure to provide proper ventilation according to this manual.</p>	<p>This is a direct-fired, forced heater. It is primarily intended for use for temporary heating of buildings under construction, alteration or repair. Direct-fired means that all of the combustion products of the heater enter the heated space. This appliance does produce small amounts of carbon monoxide. Carbon monoxide is toxic. Humans can tolerate small amounts of carbon monoxide, and precautions should be taken to provide proper ventilation.</p> <p>Early signs of carbon monoxide poisoning resemble the flu. Symptoms of improper ventilation are: * headache * dizziness * burning of the nose and eyes * nausea * dry mouth * sore throat</p> <p>Use this heater only in well ventilated areas! Provide at least a three square foot (2,800 sq cm) opening of outside air for every 100,000 BTU/hr of heater rating.</p> <p>People with breathing problems should consult a physician before using the heater.</p> <p><b>Carbon Monoxide Poisoning:</b> Early signs of carbon monoxide poisoning resemble flu-like symptoms such as headaches, dizziness, and/or nausea. If you have these symptoms, your heater may not be working properly.</p> <p>Get fresh air at once! Have the heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, those with heart or lung problems, anemia, or those under the influence of alcohol, or at high altitudes.</p> <p>Never use this heater in living or sleeping areas.</p> <p>This is an unvented portable heater. It uses air (oxygen) from the area which it is used. Ample combustion and ventilation must be provided.</p>

**⚠ NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## IMPORTANT SAFETY INSTRUCTIONS

 **FIRE, BURN, INHALATION, AND EXPLOSION HAZARD. KEEP COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE HEATER AS RECOMMENDED BY THESE INSTRUCTIONS. NEVER USE THE HEATER IN SPACES WHICH CONTAIN PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNERS, DUST PARTICLES, VOLATILE OR AIRBORNE COMBUSTIBLES, OR ANY UNKNOWN CHEMICALS. THIS IS AN UNVENTED PORTABLE HEATER. IT USES AIR (OXYGEN) FROM THE AREA IN WHICH IT IS USED. ADEQUATE COMBUSTION AND VENTILATION AIR MUST BE PROVIDED. REFER TO VENTILATION.**

 **WARNING: IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.**

**DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

**AN LP CYLINDER NOT CONNECTED FOR USE SHALL NOT BE STORED IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

### WHAT TO DO IF THE SMELL OF GAS IS PRESENT:

**DO NOT attempt to light heater**

**Extinguish any open flame**

**Shut off gas to heater**


**If odor continues, contact your local gas supplier or fire department.**

**Do not touch any electric switch, do not use any phone in your building**

**Immediately call your gas supplier from a neighbors phone. Follow the gas suppliers instructions**

**If you can not reach your gas supplier, call the fire department**

**Service must be done by a qualified service agency or the gas supplier.**

 **CALIFORNIA RESIDENTS: 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). DO NOT OPERATE THIS HEATER UNTIL YOU HAVE READ, AND THOROUGHLY UNDERSTAND THESE SAFETY AND OPERATING INSTRUCTION. FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER CAN RESULT IN DEATH, SERIOUS BODILY INJURY, PROPERTY LOSS OR DAMAGE FROM THE HAZARDS OF FIRE, EXPLOSION, BURNS, ASPHYXIATION OR CARBON MONOXIDE POISONING. ONLY PERSONS WHO CAN READ AND UNDERSTAND THESE INSTRUCTIONS SHOULD USE OR SERVICE THIS HEATER.**

 **! SAVE THESE INSTRUCTIONS !** 

 **NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

 **WARNING** 

**THE FOLLOWING PAGES CONTAIN OPERATING AND  
MAINTENANCE INSTRUCTIONS.**

**DO NOT ATTEMPT TO OPERATE THIS PORTABLE HEATER  
UNTIL YOU HAVE READ AND UNDERSTOOD ALL SAFETY  
PRECAUTIONS AND INSTRUCTIONS LISTED IN THIS MANUAL.**

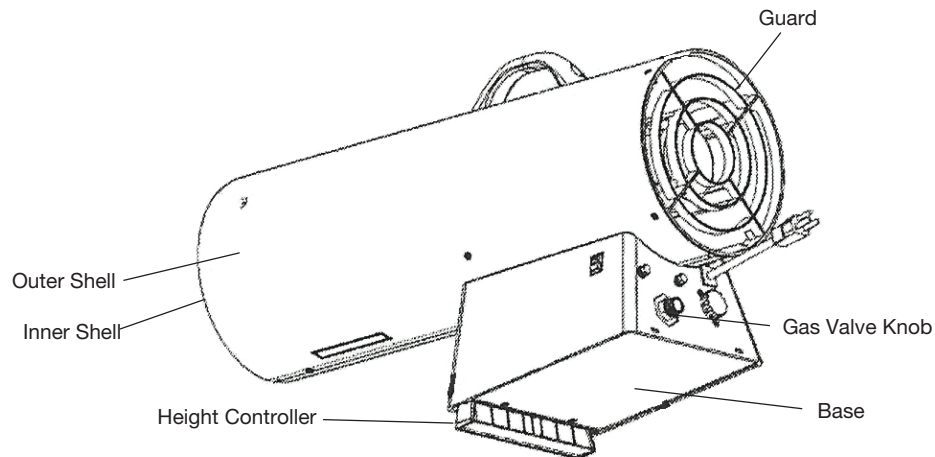
**INCORRECT OPERATION OF THIS UNIT CAN CAUSE SERIOUS  
INJURY!!**

**DO NOT ALTER OR MODIFY THIS EQUIPMENT  
IN ANY MANNER!**

**NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR  
WHILE CONNECTED TO A FUEL SOURCE**

## PORTABLE HEATER FEATURES

Model Shown: MH-0150-LM10



### PRODUCT FEATURES

- Portable, stable and fully assembled.
- Wind resistant and rain protected.
- Continuous spark ignition or piezo spark ignition.
- 100% safety shut-off system.
- Adjustable input ratings.
- Adjustable Height Controller.

### PROPANE INFORMATION

The Propane (LP) cylinder must also be equipped with the following:

- A collar to protect the gas valve.
- A shut-off valve terminating a LP cylinder valve outlet as specified in the American National Standard for Compressed Gas Cylinder Valve Outlets and Inlet Connections.
- A safety relief valve having direct communications with the vapor space of the LP cylinder.
- An arrangement of vapor withdrawal.



**NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## PORTABLE HEATER SPECIFICATIONS

Model	MH-0060-LM10	MH-0150-LM10	MH-0150-LMT0
Rating BTU/Hr	40-50-60,000	120,000-150,000	150,000
Fuel Consumption Lbs/Hr	1.9 / 2.3 / 2.8 lbs per hr	5.5 / 6.2 / 6.9 lbs per hr	6.9 lbs per hr
Electrical Input	120V, 60 Hz	120V, 60 Hz	120V, 60 Hz
Manifold Pressure	11" W.C.	8.3" W.C.	8.3" W.C.
Amps	0.6	1.02	1.02
Size (L x W x H)	18.1" x 7.1" x 13.0"	25.1" x 8.7" x 15.4"	25.1" x 8.7" x 15.4"
Net Weight (Lbs)	11.2	17.6	19.8
Fuel Type	Propane		
Required cylinder lb (kg)	20 (9)	100 (45)	100 (45)



**NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## GENERAL SAFETY INFORMATION

 **WARNING: IMPROPER USE OF THIS HEATER CAN RESULT IN SERIOUS INJURY OR DEATH FROM BURNS, FIRE, EXPLOSION, ELECTRICAL SHOCK AND /OR CARBON MONOXIDE POISONING.**

This heater is designed and approved for use as a construction heater in accordance with the standard for Gas-Fired Construction Heaters ANS Z83.7 \* CSA 2.14-2017. CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE ANY QUESTIONS ABOUT APPLICATIONS. Other standards govern the use of fuel gasses and heating products for specific uses. Your local authority can advise you about these.

 **WARNING: NOT FOR USE WITH DUCTWORK.**

 **WARNING: NOT FOR HOME OR RECREATIONAL VEHICLE USE. THE HOSE ASSEMBLY SHALL BE PROTECTED FROM TRAFFIC, BUILDING MATERIAL AND CONTACT WITH HOT SURFACES BOTH DURING USE AND WHILE IN STORAGE.**

IMPORTANT: Read this User's Manual carefully and completely before attempting to operate or service this heater. Improper use of the heater can cause serious injury or death from fire, explosion and carbon monoxide poisoning.

Every possible circumstance that may involve a hazard cannot be anticipated. The warnings in this manual and attached to the unit are therefore not all-inclusive. If a procedure, work method or operating technique not specifically recommended by the manufacturer is used, you must be sure it is safe for you and others. You should also insure that equipment will not be damaged or made unsafe by the operating or maintenance method you choose. CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE ANY QUESTIONS ABOUT APPLICATIONS.

Other standards govern the use of fuel gases and heat producing products in specific applications. Your local authority can advise you of these. You must provide the propane gas and cylinder(s). Use this heater only with a propane vapor withdrawal supply system. Refer to Chapter 5 of the Standard for Storage and Handling of Liquefied Petroleum Gas , ANSI/NFPA 58. Your local library or fire department will have this booklet.

 **WARNING: AIR QUALITY HAZARD**

- Do not use this heater for heating human living quarters
- Use of direct-fired heaters in the construction environment can result in exposure to levels of CO, CO<sub>2</sub>, and NO<sub>2</sub> considered to be hazardous to health and potentially life threatening
- Do not use in unventilated areas
- Know the signs of CO and CO<sub>2</sub> poisoning • Headaches, stinging eyes • Dizziness, disorientation • Difficulty breathing, feels of being suffocated
- Proper ventilation air exchange (OSHA 29 CFR 1926.57) to support combustions and maintain acceptable air quality shall be provided in accordance with OSHA 29 CFR Part 1926.154, ANSI A10.10 Safety Requirements for Temporary and Portable Space Heating Devices and Equipment used in the Construction Industry or the Natural Gas and Propane Installation Codes CSA B149.1
- Periodically monitor levels of CO, CO<sub>2</sub> and NO<sub>2</sub> existing at the construction site – at the minimum at the start of the shift and after 4 hours.
- Provide ventilation air exchange, either natural or mechanical, as required to maintain acceptable indoor air quality
- Ensure that the flow of combustion and ventilation air exchanges cannot become obstructed
- As the building “tightens up” during the construction phase ventilation may need to be increased

 **NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## GENERAL SAFETY INFORMATION

USA 8-Hr Time weighted average (OSHA 29 CFR 1926.55 App A)

CO	50 ppm
CO <sub>2</sub>	5000 ppm
NO <sub>2</sub>	

USA – Ceiling Limit (Short Term Exposure Limit = 15 minutes)

CO	
CO <sub>2</sub>	
NO <sub>2</sub>	5 ppm

Canada 8-hr time weighted average WorkSafe BC OHS Guidelines Part 5.1 and Ontario Work-places Reg 833

CO	25 ppm
CO <sub>2</sub>	5000 ppm
NO <sub>2</sub>	3 ppm (Reg 833)

Canada STEL (15 minutes Reg 833/1 hour WSBC) WorkSafe BC OHS Guidelines Part 5.1 and Ontario Work-places Reg 833

CO	100 ppm
CO <sub>2</sub>	15,000 ppm (WSCB) 30,000 ppm (Reg 833)
NO <sub>2</sub>	1.0 ppm (WorkSafeBC) 5.0 ppm (Reg 833)

*Note: Installation of this appliance at altitudes above 2000 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 National Standard of Canada, Natural Gas and Propane Installation Code, CSA B149.1.*

### IMPORTANT SAFETY INFORMATION

1. Children should be kept away.
2. Always maintain proper clearance from combustible materials.
3. Minimum clearance should be: Sides - 24" Top - 36" Front - 72"
4. Heater must be placed on level and solid footing.
5. Never place anything, including clothes or other flammable items on heater.
6. Do not modify heater, or operate a heater that has been modified.
7. Adequate clearance for accessibility, combustion and ventilation (air supply) must be maintained at all times when heater is operating.
8. Service and repair should be performed by a qualified service person. The heater should be inspected before each use, and at least annually by a qualified person. More frequent cleaning may be required as necessary. Do not service heater while hot or operating.
9. Never connect heater to an unregulated gas supply.
10. Use only the electrical/power cord specified. Electrical and grounding connection must comply with National Electrical Code - ANSI/NFPA 70 (USA) and CSA C22.1 Canadian Electrical Code, Part 1 (Canada).
11. To prevent injury, always wear gloves when handling heater. Never handle an operating or hot heater, as severe burns may result.

** NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## GENERAL SAFETY INFORMATION

12. Use heater in accordance with all local codes. In the absence of local codes, refer to The National Fuel Code, ANSI Z223.1
13. This heater is shipped from the factory for use with LP (propane) gas only. Do not convert to any other gas. Installation must conform to local codes, or in their absence, with the standard for the Storage and Handling of Liquefied Petroleum Gases ANSI/NFPA 58.
14. The hose assembly shall be visually inspected prior to each use of the heater. If it is evident there is excessive abrasion or wear, or the hose is cut, it shall be replaced prior to the heater being put into operation. The replacement hose assembly shall be that specified by the manufacturer.
15. Gas supply connections should be checked by using a 50/50 soap and water solution. Never use a flame to check for gas leaks.
16. Locate LP cylinder at least 6 feet from the heater, and do not direct heater discharge towards the LP cylinder unless it is at least 20 feet from the heater.
17. The electrical connection and grounding must comply with the National Electrical Code, ANSI/NFPA 70. Use only a properly grounded three (3) prong receptacle.
18. Do not restrict air inlet or outlet areas of the heater.



**NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE,  
OR WHILE CONNECTED TO A FUEL SOURCE**

## OPERATION

### REFILLING THE LP CYLINDER

ALL NEW LP CYLINDERS MUST BE PURGED BEFORE THE FIRST FILLING.

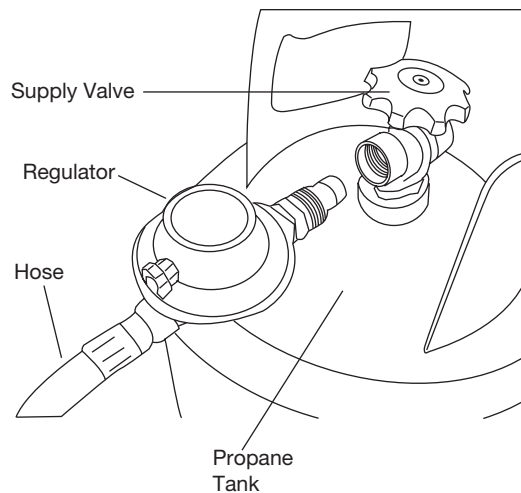
**⚠ WARNING: PURGING AND FILLING OF LP CYLINDERS MUST BE PERFORMED BY PERSONNEL WHO HAVE BEEN THOROUGHLY TRAINED IN ACCEPTED LP GAS INDUSTRY PROCEDURES. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN EXPLOSION, FIRE, SEVERE PERSONAL INJURY OR DEATH.**

Average Temp. (°F)	MH-0060-LM10 20 or 100 lb cylinder	MH-150-LM10 100 lb. cylinder	MH-150-LMT0 100 lb. cylinder
32°	1	2	2
20°	1	2	2
10°	1	3	3
0°	1	3	3
-10°	2	Use larger tank	Use larger tank
-20°	2	Use larger tank	Use larger tank

1. Turn heater gas valve knob and LP cylinder valve to OFF position.
2. LP cylinder valve equipped with old style fitting has LEFTHANDED THREADS. Turn fitting CLOCKWISE to loosen. Protect this fitting when disconnected from LP cylinder.
3. Have your LP cylinder filled by your local Propane gas supplier.
4. Some LP cylinders have a bleed-off valve. This valve should be inspected for leaks after each filling of the LP cylinder. Turn the valve clockwise to close.
5. Fasten full Propane tank and connect proper fitting to LP cylinder valve by turning COUNTERCLOCKWISE.
6. With heater gas valve knob still in OFF position, turn ON LP cylinder valve and check for leaks with soap solution.

**⚠ CAUTION: PROPANE IS SAFE TO USE WHEN PROPERLY HANDLED. CARELESS HANDLING OF THE LP CYLINDER COULD RESULT IN A FIRE AND/OR AN EXPLOSION. THEREFORE:**

7. Always keep LP cylinder securely fastened and in an upright position.
8. Avoid tipping the LP cylinder on its side when connected to a regulator, since this may cause damage to the diaphragm in the regulator.
9. Handle valves with care.
10. Never connect an unregulated LP cylinder to a construction heater.
11. Do not subject LP cylinder to excessive heat.
12. Tightly close the gas shutoff valve on the LP cylinder after each use.
13. All fittings must be protected when disconnected from the LP cylinder.
14. Never store an LP cylinder inside a building or in the vicinity of any gas burning appliance.



**⚠ CAUTION: THE DISCONNECTED TANK MUST NEVER BE STORED IN A BUILDING, GARAGE OR ANY OTHER ENCLOSED AREA.**

15. Do not restrict inlet or outlet of heater. Heater is never to be used with ductwork.

**⚠ NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## OPERATION

### CHECKING FOR LEAKS

To check for leaks, make up a 50/50 solution of dish soap and water. Apply this solution to all gas connections. If bubbles appear, there is a leak. If a leak is found, turn off the gas supply, and re-connect the leaking connection. If the leak persists after several tries, contact Mi-T-M Customer Service at 800-553-9053.

The installation of this heater must meet all local codes and/or gas utility requirements. In the absence of local codes, the National Fuel Code ANSI Z223.1 should be followed.

The minimum clearances to any combustible construction materials must be maintained at all times.

### VENTILATION

Always provide a fresh air opening in the heated space of at least three square feet (2,800 sq. cm.) for each 100,000 BTU/Hr of heater output. For example, a MH-0150-LM10 will require:

- a two-car garage door open 6 inches, or
- a single car garage open 9 inches, or
- two thirty two inch wide windows open 15 inches.

### LIGHTING INSTRUCTIONS (MODELS MH-0060-LM10, MH-0150-LM10)

1. Connect power cord to a properly grounded three (3) prong 120V, 60 Hz, extension cord.

#### EXTENSION CORD WIRE REQUIREMENTS:

- 6 to 10 feet (1.8 to 3 meters) long, use 18 AWG conductor.
- 11 to 100 feet (3.4 to 30.53 meters) long, use 16 AWG conductor.
- 101 to 200 feet (30.8 to 61 meters) long, use 14 AWG conductor.

2. Connect heater to a proper LP cylinder.
3. Turn gas valve clockwise to OFF position.
4. Wait five (5) minutes for any gas to clear. Smell for gas; if you do not smell gas, go to Step 5.
5. Push in and turn gas control knob counterclockwise to LOW/IGN position. This will light the burner. If needed, keep pressing control knob until the burner lights.
6. Keep the valve knob depressed for at least 30 seconds after lighting the burner. After 30 seconds, release valve knob.
7. If burner does not stay lit, repeat lighting procedure.
8. When burner stays lit, turn gas valve knob counterclockwise to desired setting.

### LIGHTING INSTRUCTIONS (MODELS MH-0150-LMT0)

The theory of operation for the 150T thermostat is the incoming power is controlled by the thermostat, which uses a resistance temperature detector (RTD ) to open and close a circuit to shut off the incoming power to the circuit board. The circuit board controls a solenoid valve to control the gas flow to the nozzle and power to the fan. [This is possible for this heater because it does not use a thermocouple to rectify flame presence. Flame presence is rectified through the igniter.

1. Follow all safety, installation and ventilation instructions in this manual.
2. Position the heater on a stable and level surface, and be sure that no drafts blow into the inlet or outlet of the heater.
3. Plug the power cord of the heater into a three hole grounded extension cord. Be sure that the extension cord is at least 6 feet long, and is UL listed.

Up to 50 feet long, use 18 AWG rated cord.



**NEVER LEAVE HEATER UNATTENDED WHILE BURNING, CONNECTED TO A POWER SOURCE, OR WHILE CONNECTED TO A FUEL SOURCE**

## OPERATION

51 to 100 feet long, use 16 AWG rated cord.

101 to 200 feet long, use 14 AWG rated cord.

4. Following the extension cord requirements, plug the extension cord into a 120 volt/60 hertz, three hole grounded outlet.
5. Open gas supply valve slowly.
6. Rotate on/off switch to the ON position. Set thermostat to desired temperature. Thermostat setting may be too low if heater does not start. Select a higher temperature and start heater.

## SHUTDOWN INSTRUCTIONS

To shut off heater:

1. Turn gas valve knob clockwise to OFF position.
2. Turn gas supply OFF by turning LP cylinder valve clockwise to close.
3. Disconnect the power cord.

## TEST FIRING THE HEATER

Test fire your construction heater following the lighting instructions applicable to the gas control system employed.

Leak test all gas connections with 50/50 soap and water solution prior to start-up. Soap bubbles indicate a gas leak. DO NOT use a match or flame to test for gas leaks.

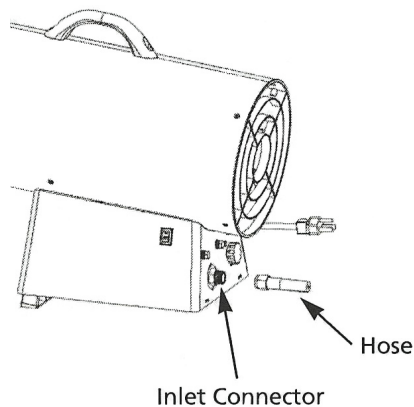
*NOTE: Heater surface temperature must be cold before initiating service, cleaning or storage.*

## STORAGE

Always disconnect the heater from the LP cylinder before putting the heater into storage. If for any reason the heater is to be stored indoors, the tank **MUST** be disconnected from the LP cylinder, and the cylinder stored outdoors in a well-ventilated area, out of the reach of children, and in accordance with the Standard for Storage and Handling of Liquefied Gases, ANSI/NFPA 58 - latest edition. The plastic valve plug or valve cover supplied with the cylinder must be re-installed on the valve to protect the fitting from damage.

**⚠ WARNING: NEVER STORE AN LP CYLINDER INSIDE OF A BUILDING, OR NEAR ANY OTHER GAS OR OIL BURNING APPLIANCES.**

*NOTE: Installation and repair of this heater should be done by a qualified service person.*



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# MAINTENANCE

## MAINTENANCE AND STORAGE

Inspect your heater before each use. Check all connections for leaks, following the procedure outlined in this manual. Check the Regulator Hose for any cracks, breaks or wear. If the hose is damaged replace it with the correct manufacturers part.

After use, always disconnect the heater from the cylinder, and store the heater separately from the tank. Be sure to close the tank valve after use, and before storage.

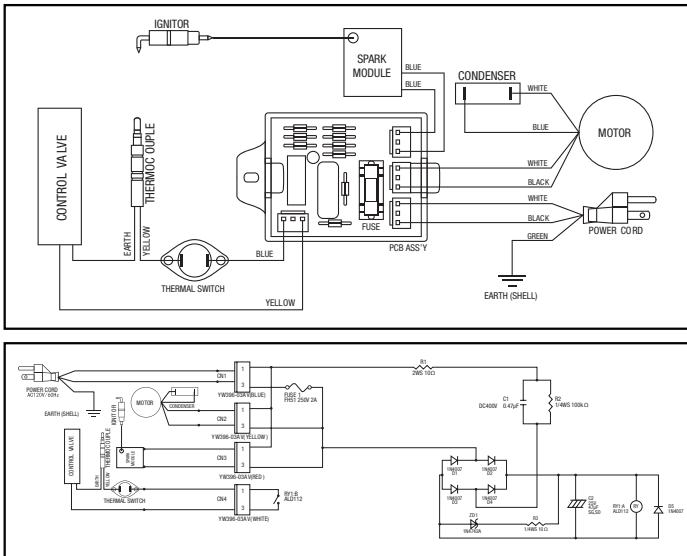
Always store the propane cylinder outdoors, but not in an enclosed area. Never store the cylinder near high heat, direct sunlight or open flames. Never store the cylinder indoors. The cylinder should be stored outdoors in accordance with chapter 5 of the Standard for Storage and Handling of Liquefied Petroleum Gasses (ANSI/INFPA 58).

Always keep your heater clean, inside and out.

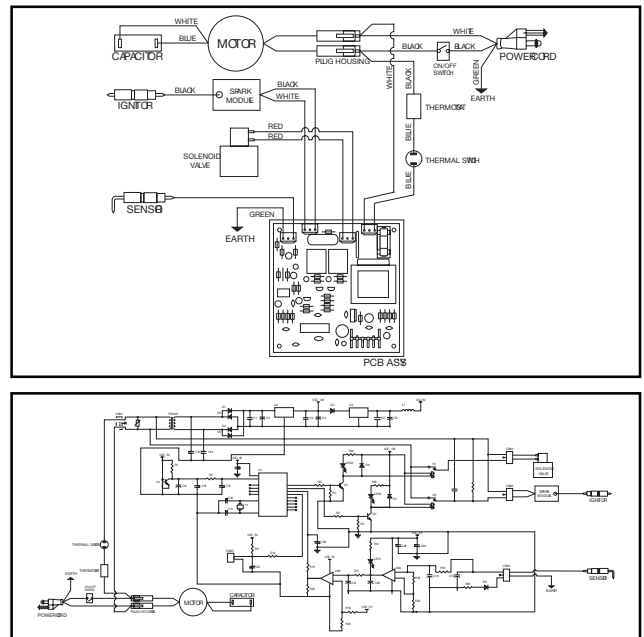
Have heater inspected annually by a qualified service technician.

Place the plastic covers over the fittings the heater was supplied with when putting heater away for the season.

Always store the heater in a clean, dry and safe place.



**MH-0060-LM10, MH-0150-LM10**



**MH-0150-LMT0**



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## TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	REMEDY
Fan does not turn when electricity is connected	<ol style="list-style-type: none"> <li>1. No electric power to heater</li> <li>2. Blades of fan in contact with heater housing</li> <li>3. Fan blades bent</li> <li>4. Fan motor defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Check current at outlet. If voltage is correct, inspect extension and power cords for cuts, frays or breaks</li> <li>2. Check housing for damage. Be sure there are no dents in the housing obstructing the fan</li> <li>3. Straighten all fan blades</li> <li>4. Replace Motor Assembly</li> </ol>
Heater will not fire (ignite)	<ol style="list-style-type: none"> <li>1. No spark at module</li> <li>2. Incorrect spark gap</li> <li>3. Corroded electrode</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect module wire. Re-attach, or tighten if loose. Inspect Spark module, and replace if necessary. Inspect all other electrical components</li> <li>2. Set plug gap to 0.16" (4mm)</li> <li>3. Replace spark plug (Multi-Bracket Assembly)</li> </ol>
Heater stops running by itself	<ol style="list-style-type: none"> <li>1. Temperature inside heater is too high, causing thermal switch to shut down operation</li> <li>2. Damaged control valve</li> <li>3. Dust or debris accumulated in heater</li> </ol>	<ol style="list-style-type: none"> <li>1. If heater input or output is restricted, the inside temperature can become too hot. Keep the areas in front and behind heater clear of obstructions</li> <li>2. Replace control valve (Valve Assembly)</li> <li>3. Clean inside of heater</li> </ol>



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