

# OPERATING INSTRUCTIONS AND OWNERS MANUAL



## GAS-FIRED INFRA-RED TANK TOP HEATER

Model #

MH45T

**READ INSTRUCTIONS CAREFULLY:** Read and follow all instructions. Place instructions in a safe place for future reference. Do not allow anyone who has not read these instructions to assemble, light, adjust or operate the heater.



CYLINDER NOT INCLUDED

### LANGUAGES INCLUDED:

- ENGLISH
- SPANISH
- FRENCH

MH45T

**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 YOU SMELL GAS
  - Do not try to light appliance.
  - Extinguish any open flame.
  - Shut off gas to appliance.
- DO NOT LEAVE HEATER UNATTENDED OR IN OPERATION WHILE SLEEPING

This is an unvented gas-fired portable heater. It uses air (oxygen) from the area in which it is used. Adequate combustion and ventilation air must be provided. Refer to page 2.

## WARNING:

⚠ YOUR SAFETY IS IMPORTANT TO YOU AND TO OTHERS,

## GENERAL HAZARD WARNING:

⚠ FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSION, BURN, ASPHYXIA-TION, 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, LABELS, ETC. CONTACT THE MANUFACTURER. SO PLEASE READ THESE INSTRUCTIONS BEFORE YOU OPERATE THIS HEATER.

## WARNING:

⚠ **CARBON MONOXIDE CAN KILL YOU**

USING A PORTABLE GAS CAMPING HEATER INSIDE A TENT, RV, CAMPER, VEHICLE, SHELTER OR OTHER ENCLOSED AREAS CAN PRODUCE DEADLY CARBON MONOXIDE

## WARNING:

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

## 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:

⚠ The State of California requires the following warning: COMBUSTION BY-PRODUCTS PRODUCED WHEN USING THIS PRODUCT CONTAIN CARBON MONOXIDE, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS (OR OTHER REPRODUCTIVE HARM).

## WARNING:

⚠ This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

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The heater is designed and approved for use as, a construction heater and in accordance with ANSI Z83.7-CSA 2.14. 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 and specific applications. Your local authority can advise you about these standards.

## ASSEMBLY AND HOOK-UP INFORMATION

1. Heater model MH45T is packaged complete. Propane cylinders (tanks) are not included with heater model.
2. Remove heater from carton.
3. Use only vapor withdrawal LP gas cylinders constructed for use with propane only (HD-5) and marked in accordance with the specifications for LP gas cylinders of the U.S. Department of Transportation (DOT SPEC. 39).
4. This heater must be used only with a vapor withdrawal LP gas bulk tank equipped with a standard POL valve.
5. **MH45T Triple Burner Model (see Figure 1.)**
  - The tank collar bracket must be assembled before the heater can be attached to the propane tank.
  - Remove screws from manifold center plate and retain for later use.
  - Align bolt holes in tank collar bracket with bolt holes in center plate on manifold such that the heater is facing outward once attached to cylinder collar.
  - Attached with screws removed above, to manifold center plate.
  - Place heater onto tank with tank collar bracket over tank collar. Mounting bolt knob should be positioned to the outside of tank collar.
  - Firmly secure to tank by hand-tightening mounting bolt knob. Do not overtighten.
  - Make sure heater regulator is in the "OFF" position.
  - Insert regulator's connector into tank's valve and turn left (counterclock-wise) with hand as much as possible. Do not overtighten.
6. Operate only on a stable, level surface.
7. Open propane tank valve slowly.
8. Check all fittings for leaks. Apply a 50/50 mixture of liquid soap and water to all joints. Bubbles forming indicate a leaking connection. Correct all leaks before proceeding.

## WARNING

 Never touch heater while in operation to avoid injury. Move heater by grasping the propane cylinder carefully.

9. The heater should be inspected before each use and at least annually by a qualified service person.
10. The hose assembly shall be visually inspected prior to use of heater. If it is evident there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the heater being put into operation. Replacement hose assembly shall be Mr. Heater hose assembly as listed in the parts list.
11. Minimum inlet gas pressure is 20 psi (138 kPa).
12. Maximum inlet gas pressure is 120 psi (827 kPa (equivalent to an ambient temperature of 75°F (24°C)).

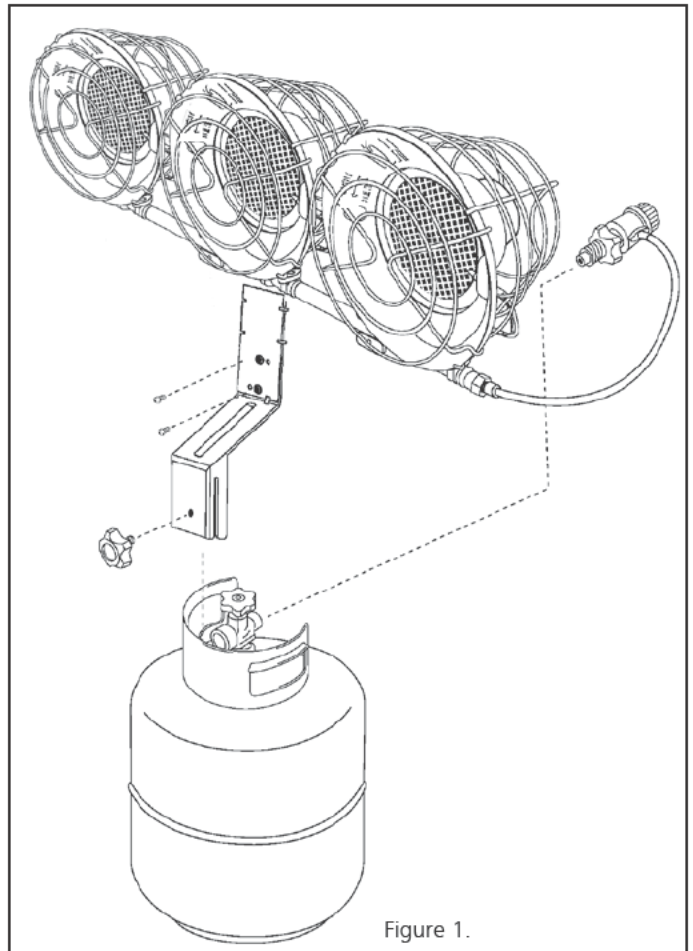


Figure 1.

## ODOR FADE WARNING

### WARNING

- ⚠ Asphyxiation Hazard**
- Do not use this heater for heating human living quarters.
  - Do not use in unventilated areas.
  - The flow of combustion and ventilation air must not be obstructed.
  - Proper ventilation air must be provided to support the combustion air requirements of the heater being used.
  - Refer to the specification section of the heater's manual, heater dataplate, or contact the factory to determine combustion air ventilation requirements of the heater.
  - Lack of proper ventilation air will lead to improper combustion.
  - Improper combustion can lead to carbon monoxide poisoning leading to serious injury or death. Symptom of carbon monoxide poisoning can include headaches, dizziness and difficulty in breathing.
- Smoking can decrease your ability to smell. Being around an odor for a period of time can affect your sensitivity to that particular odor. Odors present in animal confinement buildings can mask fuel gas odor.
  - The odorant in propane (LP) gas and natural gas is colorless and the intensity of its odor can fade under some circumstances.**
  - If there is an underground leak, the movement of gas through the soil can filter the odorant.
  - Propane (LP) gas odor may differ in intensity at different levels. Since Propane (LP) gas is heavier than air, there may be more odor at lower levels.
  - Always be sensitive to the slightest gas odor.** If you continue to detect any gas odor, no matter how small, treat it as a serious leak. Immediately go into action as discussed previously.

## FUEL GAS ODOR

**LP gas and natural gas have man-made odorants added specifically for detection of fuel gas leaks.**

**If a gas leak occurs you should be able to smell the fuel gas. Since Propane (LP) is heavier than air you should smell for the gas odor low to the floor. ANY GAS ODOR IS YOUR SIGNAL TO GO INTO IMMEDIATE ACTION!**

- Do not take any action that could ignite the fuel gas. Do not operate any electrical switches. Do not pull any power supply or extension cords. Do not light matches or any other source of flame. Do not use your telephone.
- Get everyone out of the building and away from the area immediately.
- Close all propane (LP) gas tank or cylinder fuel supply valves, or the main fuel supply valve located at the meter if you use natural gas.
- Propane (LP) gas is heavier than air and may settle in low areas. When you have reason to suspect a propane leak, keep out of all low areas.
- Use your neighbor's phone and call your fuel gas supplier and your fire department. Do not re-enter the building or area.
- Stay out of the building and away from the area until declared safe by the firefighters and your fuel gas supplier.
- FINALLY, let the fuel gas service person and the firefighters check for escaped gas. Have them air out the building and area before you return. Properly trained service people must repair any leaks, check for further leakages, and then relight the appliance for you.

## ODOR FADING - NO ODOR DETECTED

- Some people cannot smell well. Some people cannot smell the odor of the man-made chemical added to propane (LP) or natural gas. You must determine if you can smell the odorant in these fuel gases.
- Learn to recognize the odor of propane (LP) gas and natural gas. Local propane (LP) gas dealers will be more than happy to give you a scratch and sniff pamphlet. Use it to become familiar with the fuel gas odor.

## ATTENTION - CRITICAL POINTS TO REMEMBER!

- Propane (LP) gas has a distinctive odor. Learn to recognize these odors. (Reference Fuel Gas Odor and Odor Fading sections to the left and above).
- Even if you are not properly trained in the service and repair of the heater, ALWAYS be consciously aware of the odors of propane (LP) gas and natural gas.
- If you have not been properly trained in repair and service of propane (LP) gas then do not attempt to light heater, perform service or repairs, or make any adjustments to the heater on the propane (LP) gas fuel system.
- A periodic sniff test around the heater or at the heater's joints; i.e. hose, connections, etc., is a good safety practice under any conditions. If you smell even a small amount of gas, CONTACT YOUR FUEL GAS SUPPLIER IMMEDIATELY. DO NOT WAIT!

## GENERAL INFORMATION

- A.** The MH45T is a high pressure propane appliances and is designed to be connected to a bulk propane tank.
- B.** These heaters are equipped with an automatic Safety Shutoff Valve. The gas flow will automatically stop if the heater fails to operate for any reason.
- C.** Maximum safety and convenience have been built into the Hi-Med-Lo-Off Control Valve/Regulator. The following table lists the approximate BTU's consumed and the operating hours you can reasonably expect from bulk propane cylinders.
- D.** This heater is for temporary heating of buildings under construction, alterations, or repair.

Burners Operating	Valve Position	BTU Input	Approximate Hours of Operation	
			20 Lb. Cylinder	100 Lb. Cylinder
1	Hi	15,000	23	144
1	Med	12,000	29	180
1	Lo	10,000	35	216
2	Hi	30,000	12	72
2	Med	24,000	15	90
2	Lo	20,000	18	110
3	Hi	45,000	8	48
3	Med	36,000	9	56
3	Lo	30,000	12	72

Figure 3.

Actual BTU/HR input rate and fuel consumption times for this appliance may vary.



## FOR SAFE OPERATION

- A. READ INSTRUCTIONS CAREFULLY:** Read and adhere to these instructions. Do not allow anyone who has not read the instructions to assemble, light, adjust or operate the heater.

### WARNING

- ⚠️ KEEP THE HEATER OUT OF THE REACH OF CHILDREN**

- B.** Use only in accordance with local codes or, in the absence of local codes, with the standard for the Storage and handling of Liquefied Petroleum Gases ANSI/NFPA 58 and CSA B 149.1, Natural Gas and Propane Installation Code.
- C. PROPANE IS VERY FLAMMABLE:** In the event of a leak, propane will accumulate and the possibility of a fire is present. Propane gas is scented and its strong odor is readily detectable. Never strike a match or bring any flame or create an electric spark in an enclosure when you smell propane gas. Ventilate the area thoroughly, move the heater outside, find and correct the source of the leak before attempting to light any appliance. If you are unsure of these instructions evacuate immediately and call for help.
- D. GAS LEAKAGE:** If the leak cannot be corrected do not tamper with the heater, follow the shut down instructions and return the heater to the dealer or address given on last page.

### WARNING

- ⚠️ DO NOT USE THIS HEATER ON BULK TANKS OF GREATER CAPACITY THAN 100 POUNDS LPG (50 POUNDS WATER CAPACITY).**

- E. LEAK DETECTION:** Before each use of the heater check all fittings and connections with a soap solution to be sure there are no leaks. NEVER, NEVER USE ANY FLAME FOR LEAK TEST.
- F. CONNECTING HEATER TO PROPANE CYLINDER:** Always connect the heater to the bulk cylinder in the outdoors or in a well ventilated area. NEVER connect this heater to a cylinder near an open flame.
- G. USE OF HEATER:** Always operate the heater with the propane cylinder in an upright position on a level noncombustible surface. NEVER place the cylinder on its side when operating the heater.
- H. ATTEND HEATER:** Do not leave heater unattended while it is in operation.
- I. ALWAYS LIGHT HEATER WITH MATCH: NEVER** attempt to light the heater with a spark lighter.
- J. DO NOT TAMPER:** Should the heater not perform properly, such as little or no heat when operating in the "Hi" position, or for any other reason, DO NOT ATTEMPT TO REPAIR OR TAMPER with the heater. Any tampering could make the use of the heater unsafe and dangerous. Return the heater to the dealer or the address given on last page for repair or replacement.
- K. FOR STORAGE:** The heater Hi-Med-Lo-Off regulating valve should always be turned to "off" when the heater is not in use. Allow at least 15 minutes for cooling before handling and storing. Detach propane cylinder from heater before storing. DO NOT store propane cylinders indoors or near open flame or heat.

- L. DO NOT TRANSPORT OR MOVE APPLIANCE WHILE IN OPERATION. FOLLOW SHUTDOWN AND STORAGE INSTRUCTIONS TO TRANSPORT OR MOVE THIS APPLIANCE.**

## VENTILATION

- A. WARNING:** This heater is an unvented appliance and **MUST** be used **ONLY** in a well ventilated area. NEVER attempt to operate the heater inside any vehicle, camper or enclosure.
- B. OUTDOOR USE ONLY.** Any combustion process requires and consumes oxygen, and will produce carbon monoxide. **THIS HEATER MUST BE USED WITH ADEQUATE VENTILATION.** Do not use inside a house, camper, tent or any type of unvented or a tightly enclosed area.
- C. WARNING:** Provide ample ventilation. This heater consumes air (oxygen). Do not use this heater in unventilated structures to avoid endangering your life. Provide additional ventilation for any additional fuel-burning appliances and additional occupants.
- D.** Flow of combustion and ventilation air must not be obstructed.

## MINIMUM CLEARANCE FROM COMBUSTIBLE MATERIALS

- A.** When operating, the heater surfaces are extremely hot. Keep sleeping bags, clothing, and all combustible materials clear of the heater by at least the distances shown in figure 4.

BTU/HR. Rating		Normal Operating Procedure	Clearances to Combustibles				
Model no.	Gas LP		From C.L. OF HTR. TO FLOOR	FRONT	SIDES	REAR	CEILING
MH45T	45,000	Vertical	32" (0.82m)	36" (.92m)	36" (.92m)	48" (1.22m)	48" (1.22m)

Figure 4.

- B. WARNING:** To avoid injury or property damage never allow clothing, tents or other combustible materials within 48"(1.22m) of the face of the heater. This heater must be located at least 32"(0.82m) above the floor level when in use. Never operate the heater when sleeping.
- C. WARNING:** Never direct the heat output of this heater toward any propane tank within 20 feet (6.0m).
- D. WARNING: THIS HEATER IS AN UNVENTED APPLIANCE AND MUST BE USED ONLY IN A WELL VENTILATED AREA. NEVER ATTEMPT TO OPERATE THE HEATER INSIDE ANY VEHICLE, CAMPER OR ENCLOSURE.**

## LIGHTING INSTRUCTIONS

- A. Before attempting to light the heater, check all fittings and connections with a soap solution. **NEVER USE A MATCH TO CHECK FOR LEAKS.** Should a gas leak occur, do not attempt to repair or use heater. Return the heater to your dealer or the address given on back page.
- B. Fuel – This heater must be used only with a vapor withdrawal LP gas bulk cylinder. THE BULK TANK MUST BE EQUIPPED WITH A STANDARD POL VALVE.

Mr. Heater Tank Top Heaters should not be used with composite fiberglass tanks, due to the design and reduced weight of the tanks.

## WARNING

- ⚠** USE HD.5 PROPANE GAS ONLY. DO NOT USE ANY OTHER TYPE FUEL. SEE YOUR PROPANE DEALER IF YOU HAVE ANY QUESTIONS REGARDING FUEL.

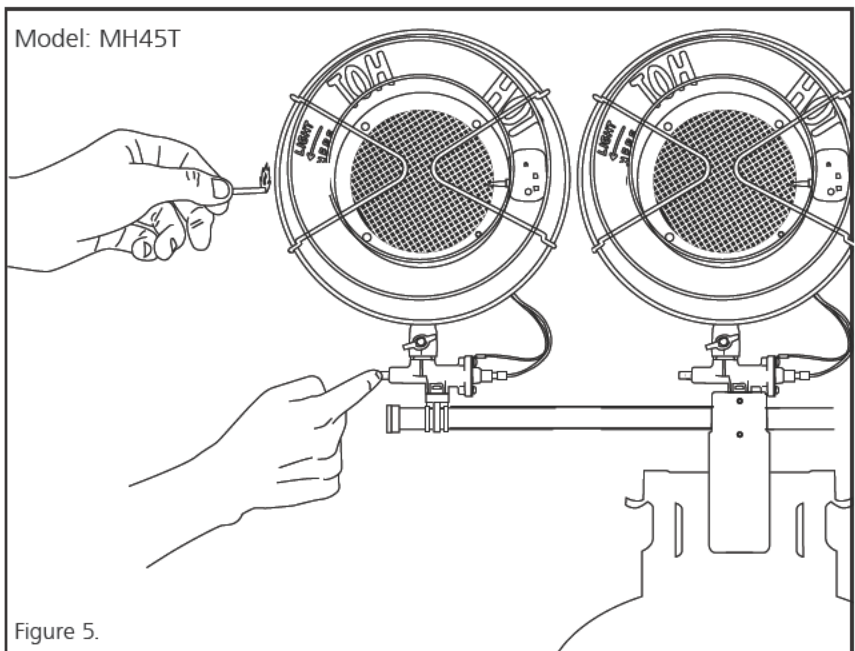
- C. Turn the heater's "Hi-Med-Lo-Off" regulator knob to "Med" (counterclockwise).
- D. Always start lighting process with middle burner. To light heater, place a lit match near the reflector where marked "light here". (See Figure 5) THEN push in valve button on Safety Shutoff Valve. After the heater is lit, continue to hold valve button in for 30 seconds, then release the button slowly. **CAUTION:** DO NOT PUSH IN VALVE BUTTON BEFORE INSERTING LIT MATCH. NEVER STAND IN FRONT OF HEATER WHILE LIGHTING. REPEAT STEP "D" FOR EACH BURNER.
- E. If burner does not light within 30 seconds, turn the heater's regulator knob to "off" (clockwise) and allow at least five minutes for gas to dissipate before attempting to relight.
- F. NOTE: Should the orifice become clogged as indicated by low volume of gas when operating on "Hi" with a full cylinder, or should the heater fail to operate properly for any reason, return the heater to the dealer or the address given on back page for repair or replacement. DO NOT ATTEMPT TO REPAIR OR TAMPER WITH HEATER.
- G. Adjust heat output by turning knob to desired position.
- H. **DO NOT USE THIS HEATER FOR COOKING.**

## SHUTDOWN AND STORAGE INSTRUCTIONS

- A. The bulk propane tank "on-off" valve should ALWAYS be completely turned "OFF" when the heater is not in use.
- B. When shutting off the heater, turn the regulator knob on the heater to "OFF" (clockwise).
- C. **CAUTION:** After turning unit off, heater will remain extremely hot. Allow at least 15 minutes for cooling before handling and storing. Detach heater from bulk tank before handling and storage. REMEMBER – POL fitting is a left-hand thread.
- D. **HEATER STORAGE:** Indoor storage of the heater is permissible only if the cylinder is disconnected and removed from the heater. Cylinders must be stored outdoors out of the reach of children and must not be stored in a building, garage or any other enclosed area. Store cylinders only in accordance with the Standard for the Storage and Handling of Liquefied Petroleum Gases ANSI/NFPA 58 and CSA B149.1, Natural Gas and Petroleum Installation Code.
- E. See page 7 for spare parts list.

## MAINTENANCE

- A. Remove thermocouple (3) retaining bracket screw from back of burner assembly (2). Remove bracket.
- B. Note position of thermocouple (3) in retaining tabs on the back of the Burner assembly (2). Remove the thermocouple.
- C. Remove wing bolt (18) and fiber washer (19) that attached the safety shut-off (6) to the burner Assembly (2).
- D. Slide the safety shut-off (6) from burner assembly (2).
- E. Remove burner orifice (20) from the safety shut-off (6).
- F. Clean burner orifice with compressed air (80 psi max).
- G. Direct compressed air through the burner(2) venturi tube toward the burner plenum so that dust collected on the grid screen will be blown outward. Keep face away from the grid screen.
- H. Reassemble heater in reverse order of disassembly.





# OPERATING INSTRUCTIONS AND OWNER'S MANUAL

Model #

MH45T

## Gas-fired Infra-Red Tank Top Heater

CYLINDER NOT INCLUDED



### WARNING:

USE ONLY MANUFACTURER'S REPLACEMENT PARTS. USE OF ANY OTHER PARTS COULD CAUSE INJURY OR DEATH. REPLACEMENT PARTS ARE ONLY AVAILABLE DIRECT FROM THE FACTORY AND MUST BE INSTALLED BY A QUALIFIED SERVICE AGENCY.

### PARTS ORDERING INFORMATION:

**PURCHASING:** Accessories may be purchased at any Mr. Heater Products local dealer or direct from the factory

#### FOR INFORMATION REGARDING SERVICE

Please call Toll-Free 800-251-0001

[www.mrheater.com](http://www.mrheater.com)

Our office hours are 8:00 AM – 5:00 PM, EST, Monday through Friday.  
Please include the model number, date of purchase, and description of problem in all communication.

### LIMITED WARRANTY

Mr. Heater, Inc. warrants its heaters and accessories to be free from defects in material and workmanship for a period of 1 year from date of purchase. Mr. Heater, Inc. will repair or replace this product free of charge if it has been proven to be defective within the 1-year period, and is returned at customer expense with proof of purchase to Mr. Heater, Inc. within the warranty period.

Mr. Heater, Inc. reserves the right to make changes at any time, without notice or obligation, in colors, specifications, accessories, materials and models.

PRODUCT REGISTRATION: Thank you for your purchase.

Please log in to <http://www.egiregistration.com> to register your product.

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