KING INDUSTRIAL

FORCED AIR CONSTRUCTION PROPANE HEATERS

MODEL: KPH-60

DESIGN CERTIFIED®

CERTIFIED®

MODEL: KPH-125

INSTRUCTION MANUAL

WARRANTY INFORMATION

2-YEAR LIMITED WARRANTY FOR THIS PROPANE HEATER	**KING CANADA TOOLS OFFERS A 2-YEAR LIMITED WARRANTY INTENDED FOR COMMERCIAL USE**

PROOF OF PURCHASE

Please keep your dated proof of purchase for warranty and servicing purposes.

REPLACEMENT PARTS

Replacement parts for this product are available at our authorized King Canada service centers across Canada. Please use the 10 digit part numbers listed in this manual for all part orders where applicable.

LIMITED TOOL WARRANTY

King Canada makes every effort to ensure that this product meets high quality and durability standards. King Canada warrants to the original retail consumer a 2-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, normal wear and tear, negligence or accidents, repairs done by an unauthorized service center, alterations and lack of maintenance. King Canada shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products.

To take advantage of this limited warranty, return the product at your expense together with your dated proof of purchase to an authorized King Canada service center. Contact your retailer or visit our web site at www.kingcanada.com for an updated listing of our authorized service centers. In cooperation with our authorized serviced center, King Canada will either repair or replace the product if any part or parts covered under this warranty which examination proves to be defective in workmanship or material during the warranty period.

NOTE TO USER

This instruction manual is meant to serve as a guide only. Specifications and references are subject to change without prior notice.

KING CANADA INC. DORVAL, QUÉBEC, CANADA H9P 2Y4

www.kingcanada.com

GENERAL & SPECIFIC SAFETY RULES

1. KNOW YOUR TOOL
Read and understand the owners manual and labels affixed to the tool. Learn its application and limitations as well as its specific potential hazards.

2. GROUND THE TOOL.
This tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. **NEVER** connect the green wire to a live terminal.

3. KEEP GUARDS IN PLACE.
Keep in good working order, properly adjusted and aligned.

4. REMOVE ADJUSTING KEYS AND WRENCHES.
Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5. KEEP WORK AREA CLEAN.
Cluttered areas and benches invite accidents. Make sure the floor is clean and not slippery.

6. AVOID DANGEROUS ENVIRONMENT.
Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lit and provide adequate surrounding work space.

7. KEEP CHILDREN AWAY.
All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP CHILD-PROOF.
-with padlocks, master switches or by removing starter keys.

9. USE PROPER SPEED.
A tool will do a better and safer job when operated at the proper speed.

10. USE RIGHT TOOL.
Don't force the tool or the attachment to do a job for which it was not designed.

11. WEAR PROPER APPAREL.
Do not wear loose clothing, gloves, neckties or jewelry (rings, watch) because they could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Roll up long sleeves above the elbows.

12. ALWAYS WEAR SAFETY GLASSES.
Always wear safety glasses (ANSI Z87.1). Everyday eye-glasses only have impact resistant lenses, they are **NOT** safety glasses. Also use a face or dust mask if cutting operation is dusty.

13. DON'T OVERREACH.
Keep proper footing and balance at all times.

14. MAINTAIN TOOL WITH CARE.
Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. DISCONNECT TOOLS.
Before servicing, when changing accessories or attachments.

16. AVOID ACCIDENTAL STARTING.
Make sure the switch is in the ''OFF'' position before plugging in.

17. USE RECOMMENDED ACCESSORIES.
Consult the manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

18. NEVER STAND ON TOOL.
Serious injury could occur if the tool tips over. Do not store materials such that it is necessary to stand on the tool to reach them.

19. CHECK DAMAGED PARTS.
Before further use of the tool, a guard or other parts that are damaged should be carefully checked to ensure that they will operate properly and perform their intended function. Check for alignment of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other parts that are damaged should be properly repaired or replaced.

20. NEVER LEAVE MACHINE RUNNING UNATTENDED.
Turn power ''OFF''. Don't leave any tool running until it comes to a complete stop.

WARNING: Never leave the propane heater unattended while operating. Disconnect the heater from its power source when not in use.

SPECIFIC SAFETY INSTRUCTIONS FOR PROPANE HEATERS

⚠WARNING: READ AND SAVE THESE INSTRUCTIONS
Carefully read and understand these specific safety instructions before operating, or servicing this propane heater. Injury is possible if you do not follow the instructions. This manual covers how to maintain, store, and most importantly, how to operate the propane heater in a safe and efficient way. **Do not** allow anyone who has not read these instructions to light, adjust or operate the propane heater.

THIS PROPANE HEATER IS DESIGNED FOR USE AS A FORCED AIR CONSTRUCTION PROPANE HEATER IN ACCORDANCE WITH STANDARD ANSI Z83.7 & CSA 2.14. CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE QUESTIONS ABOUT APPLICATIONS.

GENERAL HAZARD WARNING
FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED IN THIS MANUAL CAN RESULT IN DEATH, 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 THESE INSTRUCTIONS SHOULD USE OR SERVICE THIS PROPANE HEATER.

⚠WARNING: FIRE, BURN, INHALATION, AND EXPLOSION HAZARD.
IT IS RECOMMENDED TO KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER, OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE PROPANE HEATER. NEVER USE THE PROPANE HEATER IN SPACES WHICH DO CONTAIN 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.

SPECIFIC SAFETY RULES

WARNING: Never leave the propane heater unattended while operating. Disconnect the heater from its power source when not in use.

SPECIFIC SAFETY INSTRUCTIONS FOR PROPANE HEATERS

⚠WARNING: RISK OF CARBON MONOXIDE POISONING
- Only use this propane heater in a well ventilated area! Provide at least a three sq. ft. opening of outside air for every 45,000 BTU/H of propane heater rating.
- People with breathing problems should consult a physician before using the propane heater.
- Early signs of carbon monoxide poisoning resemble flu-like symptoms such as headaches, dizziness, and/or nausea. If you have these symptoms, your propane heater may not be working properly.
- Get fresh air at once! Have the propane heater serviced.
- Some people are more affected by carbon monoxide than others. These include pregnant women, those with heart or lung problems, anemia, those under the influence of alcohol, or at high altitudes.
- Never use this propane heater in living or sleeping areas.

DANGER:
THIS PROPANE HEATER IS DESIGNED AND INTENDED FOR SPACE-HEATING OF BUILDINGS UNDER CONSTRUCTION AND FOR SPOT HEATING WHEN THE PRODUCTS OF COMBUSTION ARE DISCHARGED OUTDOORS.

Air Quality Hazard
WARNING: RISK OF CARBON MONOXIDE POISONING
- Do not use this propane heater for heating human living quarters.
- Use of forced air propane heaters in the construction environment can result in exposure to levels of CO, CO_2, and NO_2 considered to be hazardous to health and potentially life threatening.
- Do not use in unventilated areas.
- Know the signs of CO and CO_2 poisoning:

- Headaches, stinging eyes
- Dizziness, disorientation
- Difficulty breathing, feelings of being suffocated.

- Proper ventilation air exchange (OSHA 29 CFR 1926.57) to support combustion 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_2, and NO_2 existing at the construction site - at the minimum at the start of the shift and after 4 hours.
- Provide ventilation, either natural or mechanical, as required to maintain acceptable indoor air quality.

	USA 8-Hr Time weighted average (OSHA 29 CFR 1926.55 App A)	Canada 8-hr time weighted average WorkSafe BC OHS Guidelines Part 5.1 and Ontario Workplaces Reg 833
CO	50 ppm	25 ppm
CO_2	5000 ppm	5000 ppm
NO_2		3 ppm (Reg 833)
	USA – Ceiling Limit (Short Term Exposure Limit = 15 minutes)	Canada STEL (15 minutes Reg 833/1 hour WSBC) WorkSafe BC OHS Guidelines Part 5.1 and Ontario Workplaces Reg 833
CO		100 ppm
CO_2		15000 ppm (WSBC) 30000 ppm (Reg 833)
NO_2	5.0 ppm	1.0 ppm (WorkSafeBC) 5.0 ppm (Reg 833)

- Ensure that the flow of combustion and ventilation cannot become obstructed.
- As the building “tightens up” during the construction phases, ventilation may need to be increased.

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

SPECIFIC SAFETY RULES

WARNING: Never leave the propane heater unattended while operating. Disconnect the heater from its power source when not in use.

SPECIFIC SAFETY INSTRUCTIONS FOR PROPANE HEATERS

OPERATING PRECAUTIONS

This is a forced air, propane heater. This propane heater was designed and certified as a construction propane heater in accordance with ANSI Z83.7-2017 / CSA 2.14-2017. The intended use of this propane heater is the temporary heating of buildings under construction, alteration or repair or for spot heating when the products of combustion are discharged outdoors. Check with your local fire safety authority if you have any questions about the application of this propane heater. Other standards govern the use of fuel gases and heat producing products in specific applications. Your local authority can advise you about these.

This propane heater produces carbon monoxide (CO), a deadly gas. Carbon monoxide can build up and failure to provide adequate ventilation could result in poisoning and death. Know the signs of CO and CO_2 poisoning:
- Headaches, stinging eyes
- Dizziness, disorientation
- Difficulty breathing, feeling of being suffocated

Monitor levels of CO when operating this propane heater. DO NOT USE IN UNVENTILATED AREAS.

DANGER:
An odorant has been added to LPG (propane) to give it a distinctive smell. That smell makes it easier to detect a leak. Some people cannot smell the odorant and must rely on electronic leak sensors.
If you detect a leak,
• DO NOT enter the premises if you notice a strong gas odor.
• EXTINGUISH all flames and heat sources.
• DO NOT smoke, or create a spark or a flame.
• DO NOT turn on any electrical switches, appliances or lights as an electrical charge could create a spark.
• DO NOT operate your garage door.
• DO NOT use your telephone.
• CLOSE all propane (LP) gas tanks.
• VACATE the area until declared safe by firefighters.
• KEEP OUT of low areas; Propane is lighter than air and settles in low lying areas.

WARNING: RISK OF ELECTRIC SHOCK
• EQUIPMENT MUST BE GROUNDED.
• Use only the power supply (120V) specified for this propane heater.
• Use only a three-prong grounded outlet and extension cord (if needed).
• ALWAYS position propane heater so that it is not directly exposed to water spray, rain, dripping water, or wind.
• ALWAYS disconnect the propane heater from its power source when not in use.

GENERAL PROPANE HEATER WARNINGS
1. Inspect the propane heater before each use and at least annually by a qualified service person. DO NOT operate a damaged propane heater.
2. Inspect the propane hose assembly prior to each use. If there is evidence there is excessive abrasion or wear, or the hose is cut, replace the hose prior to operating. Use only identical replacement hose.
3. Protect the propane hose from traffic, building materials and contact with hot surfaces both during use and while in storage.
4. DO NOT operate a modified propane heater.
5. Only use propane gas.
6. Position propane tanks at least 6 ft. to 10 ft. from any propane heater.
7. DO NOT direct the propane heater outlet discharge toward any propane tank located within 20 ft.
8. KEEP propane heater clear and free of combustible materials, gasoline and other flammable vapors and liquids.
9. KEEP CHILDREN, CLOTHING, PETS AND COMBUSTIBLES AWAY FROM PROPANE HEATER.
10. Operate only on a stable, level surface.
11. Do not use with duct work. Do not restrict inlet (air intake) or outlet (discharge opening).
12. Do not move, handle or service this propane heater while hot or burning.
13. Store the propane heater indoors when not in use.
14. Disconnect the hose assembly from the propane tank when the heater is not in use.

ELECTRICAL INFORMATION

WARNING: Never leave the propane heater unattended while operating. Disconnect the heater from its power source when not in use.

WARNING

ALL ELECTRICAL CONNECTIONS MUST BE DONE BY A QUALIFIED ELECTRICIAN. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY! ALL ADJUSTMENTS OR REPAIRS MUST BE DONE WITH THE PROPANE HEATER DISCONNECTED FROM THE POWER SOURCE. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY!

GENERAL INFORMATION- 120V single phase operation

This propane heater comes with a 120V single phase motor wired for 110V-120V operation.

WARNING: YOUR PROPANE HEATER MUST BE CONNECTED TO A 120V, WITH A MINIMUM 15-AMP. BRANCH CIRCUIT. FAILURE TO CONNECT IN THIS WAY CAN RESULT IN INJURY FROM SHOCK OR FIRE.

GROUNDING

Your propane heater must be properly grounded. Not all outlets are properly grounded. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician.

WARNING: IF NOT PROPERLY GROUNDED, THIS PROPANE HEATER CAN CAUSE ELECTRICAL SHOCK, PARTICULARLY WHEN USED IN DAMP LOCATIONS. TO AVOID SHOCK OR FIRE, IF THE POWER CORD IS WORN OR DAMAGED IN ANY WAY, HAVE IT REPLACED IMMEDIATELY.

If this propane heater should malfunction or breakdown, grounding provides a path of least resistance for electric current, to reduce the risk of electric shock. This propane heater is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING: TO MAINTAIN PROPER GROUNDING, DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER.

120V OPERATION

As received from the factory, your propane heater is ready to run for 120V operation. This propane heater is intended for use on a electrical circuit that has an outlet and a plug which looks like the one illustrated in Fig.1.

WARNING: DO NOT USE A TWO-PRONG ADAPTOR FOR THEY ARE NOT IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES. NEVER USE IN CANADA.

EXTENSION CORDS

The use of any extension cord will cause some loss of power. If you do not have a choice, use the chart in Fig.2 to determine the minimum wire size (A.W.G-American Wire Gauge) extension cord needed. Use only 3-wire extension cords which have 3-prong grounding type plugs and 3-hole receptacles which accept the tool's plug.

For circuits that are further away from the electrical circuit box, the wire size must be increased proportionately in order to deliver ample voltage to the propane heater motor. Refer to Fig.2 for wire length and size.

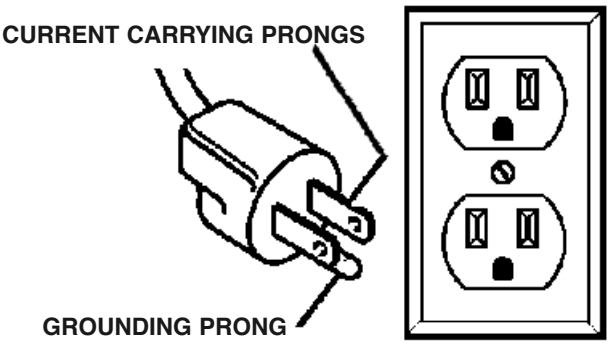


FIGURE 1

Tool's Amperage Rating	Cord Size in A.W.G.			
	Cord Length in Feet			
	25	50	100	150
3-6	18	16	16	14
6-8	18	16	14	12
8-10	18	16	14	12
10-12	18	16	14	12
12-16	14	12	-	-

FIGURE 2

GETTING TO KNOW & SPECIFICATIONS

WARNING: Never leave the propane heater unattended while operating. Disconnect the heater from its power source when not in use.

1. **Outlet.**
2. **Propane heater outer shell.**
3. **Transport handle.**
4. **Air inlet.** Do not obstruct the air inlet.
5. **Main On/Off switch- (Fan & Electronic Ignition).** Once you turn the propane knob, turn on this switch to turn on fan and electronic ignition.
6. **Propane hose connection.** Only use the provided propane cable.
7. **Continuous electronic ignition.**
8. **Propane tank connection hose with regulator.**
9. **Propane control knob.** Turn this propane control knob to control the BTU/H setting. (KPH-60 = 40,000-60,000 BTU/H, KPH-125 = 95,000-125,000 BTU/H).
10. **Angle adjustment plate and lock knob.** If the propane heater needs to be angled upwards, a small adjustment is possible by lowering the angle adjustment plate to raise the propane heater, tighten lock knob to fix setting.

MODEL	KPH-60	KPH-125
BTU/H	40K, 50K, 60K	95K, 110K, 125K
Fuel consumption (lbs/h)	1.9 / 2.3 / 2.8	4.4 / 5.1 / 5.8
Max. operating hours (20 lbs)	10.5	4.6
Fuel type	Propane	Propane
Heating area (sq. feet)	1,500	3,125
Air flow (CFM)	300	400
Max. outlet temperature	255°C	260°C
Motor	0.6 Amp.	0.8 Amp.
Voltage	120V, 1 phase, 60 Hz	120V, 1 phase, 60 Hz
Assembled dim. (LxWxH)/weight	18-1/4" x 7-3/4" x 15" / 14 lbs	25" x 9-1/4" x 18-1/2" / 20 lbs
Package dim. (LxWxH)/weight	24-5/8" x 9-5/8" x 14-1/2" / 19 lbs	32-1/4" x 11-1/4" x 19-7/8" / 25 lbs

OPERATION

PREPARING FOR OPERATION

1. Check the propane heater for possible shipping damage or damage that may have occurred during storage. If any damage is found, have the propane heater serviced before putting it into operation.

2. Follow all of the "Warnings and Specific Safety Rules" indicated in this manual.

OPERATING INSTRUCTIONS

1. Connect power cord to a properly grounded, 3 prong, 120V receptacle.

2. Make sure the propane control knob (A) Fig.3 on the propane heater is turned clockwise to the OFF position.

3. Connect the supplied propane cable (A) Fig 4, thread the propane fitting (B) to the inner thread of your propane tank, as shown. Turn the propane fitting (B) in a counterclockwise rotation (left hand thread) to secure. Make sure to tighten appropriately to avoid any propane gas leaks. Using Teflon tape is recommended.

4. Turn the propane tank valve (C) Fig.4 counterclockwise to allow propane to reach the propane heater.

5. Activate the On/Off switch (B) Fig.5 to the On position. Push in, and slightly turn the propane control knob (A) on the propane heater counterclockwise, then, the fan will start and continuous ignition spark will ignite the propane gas.

6. Adjust the propane control knob (A) Fig.5 to set the burn rate to the desired level.

STOPPING INSTRUCTIONS

1. Turn the propane tank valve (C) Fig.4 clockwise to stop the supply of propane gas.

2. Push in, and turn propane control knob (A) Fig.5 clockwise on the propane heater to the OFF position.

3. Put the On/Off switch (B) Fig.5 to the Off position, the fan will stop and continuous ignition will turn off.

4. Unplug the power cord.

RESTART AFTER HIGH TEMPERATURE SHUT-OFF

1. Securely close propane tank valve (C) Fig.4. Unplug the power cord. Wait 5 minutes.

2. Restart following the above "Operating Instructions" procedure.

MINIMUM CLEARANCE

It is important to maintain adequate minimum clearance from normal combustible material, such as paper. Refer to Fig.6 for minimum clearances.

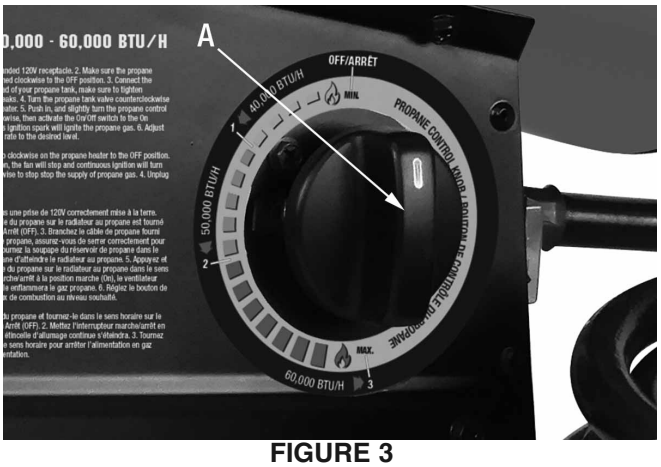


FIGURE 3

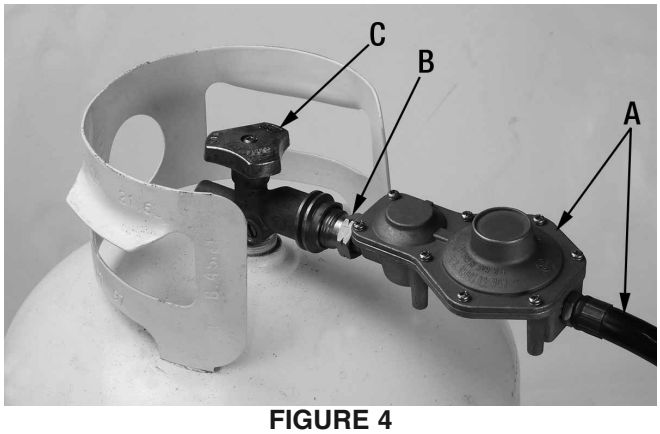


FIGURE 4

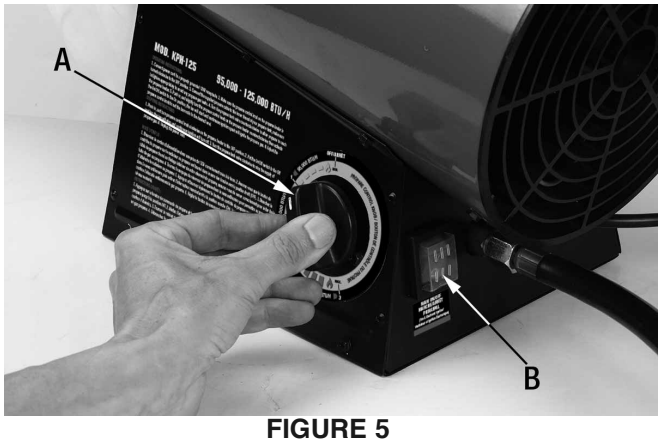


FIGURE 5

FIGURE 6

MAINTENANCE, STORAGE & PROPANE TANKS INFORMATION

MAINTENANCE & STORAGE

1. The propane heater should be inspected before each use, and at least inspected annually by a qualified person.

2. Before each use, check the soft o-ring seal at the tip of the propane cable fitting. If the o-ring is cut, scuffed, or otherwise damaged, replace it.

3. Make sure to turn off the propane gas supply by turning the propane valve clockwise when the propane heater is not in use.

4. When storing propane heater indoors, the connection between the propane tank and the propane heater must be disconnected.

PROPER OPERATION CONDITIONS- SERVICING

A hazardous condition may result if a propane heater is used that has been modified or is not functioning properly. When the propane heater is working properly:

- The flame is contained within the propane heater.
- The flame is essentially blue with perhaps some yellow tipping.
- There is no strong disagreeable odor, eye burning or other physical discomfort.
- There is no smoke or soot internal or external to the propane heater.
- There are no unplanned or unexplained shut downs of the propane heater.

The parts lists and wiring diagram show the propane heater as it was constructed. Do not use a propane heater which is different from what is shown. In this regard, use only the hose, regulator and propane cable fitting supplied with the propane heater.

A propane heater which is not working right must be repaired, but only by a trained, experienced service person.

SIZE AND CAPACITY OF PROPANE TANKS REQUIRED

The charts in Fig.7 & 8 show the approximate size of the propane tank required for KPH-60 (60,000 BTU/H) and KPH-125 (125,000 BTU/H).

To use the chart:
1. Select the lowest air temperature expected (at the bottom of the chart).
2. Move straight up to time of operation desired (left side of chart).
3. Read the propane tank size required.

PROPANE HEATER PROPANE TANK SELECTION CHART

Refer to Fig.9 for propane heater propane tank selection chart.

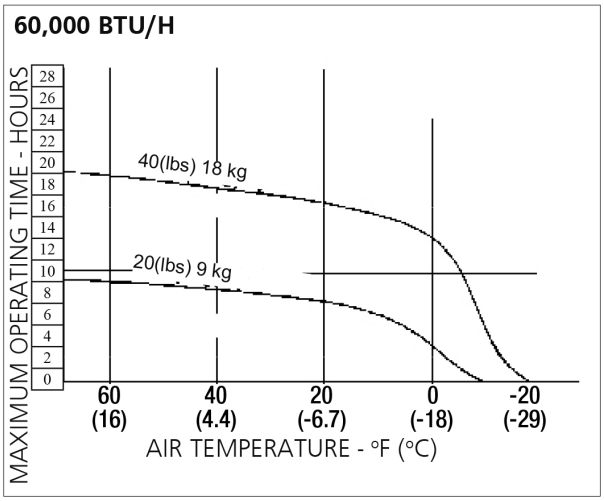


FIGURE 7

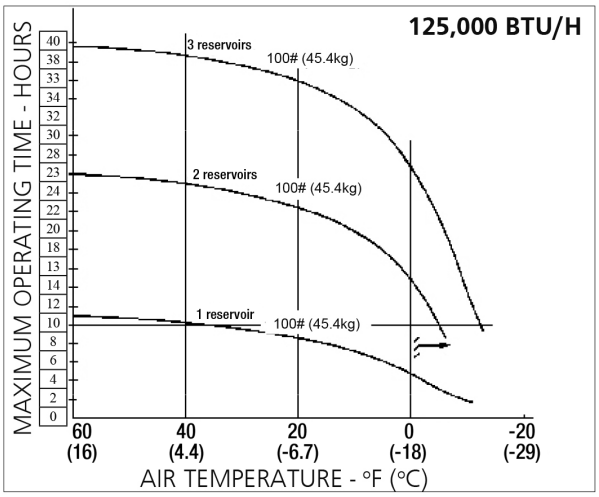


FIGURE 8

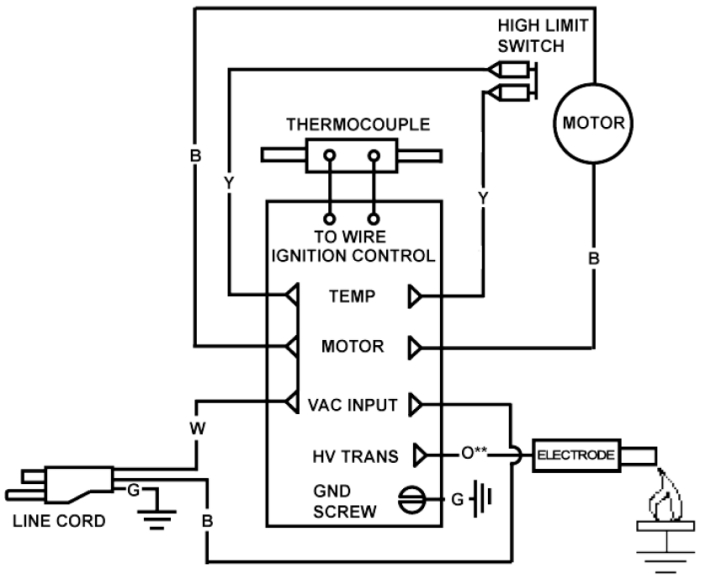
Pounds of Propane	Maximum continuous BTU Output per Hour at Various Temperature		
	0°	20°	40°
100	113,000	167,000	214,000
90	104,000	152,000	200,000
80	94,00	137,000	180,000
70	83,000	122,000	160,000
60	75,00	109,000	140,000
50	64,00	94,000	125,000
40	55,000	79,000	105,000
30	45,000	66,000	85,000
20	36,000	51,000	69,000
10	28,000	38,000	49,000

FIGURE 9

ELECTRICAL DIAGRAMS
MODEL: KPH-60 & KPH-125

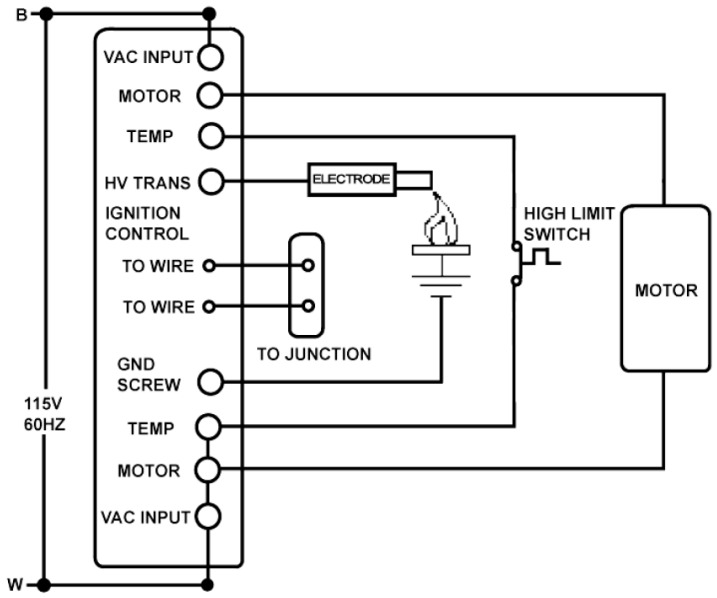
KPH-60 ELECTRICAL DIAGRAM

CONNECTION DIAGRAM



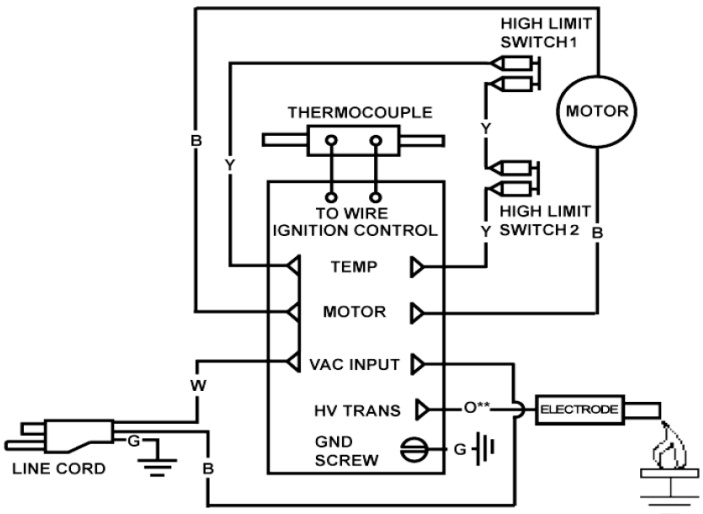
COLOR CODE				LEGEND	
B	BLACK	R	RED		FEMALE CONN.
		Y	YEL		RING CONN.
W	WHITE	O	ORG		
G	GREEN				

SCHEMATIC DIAGRAM



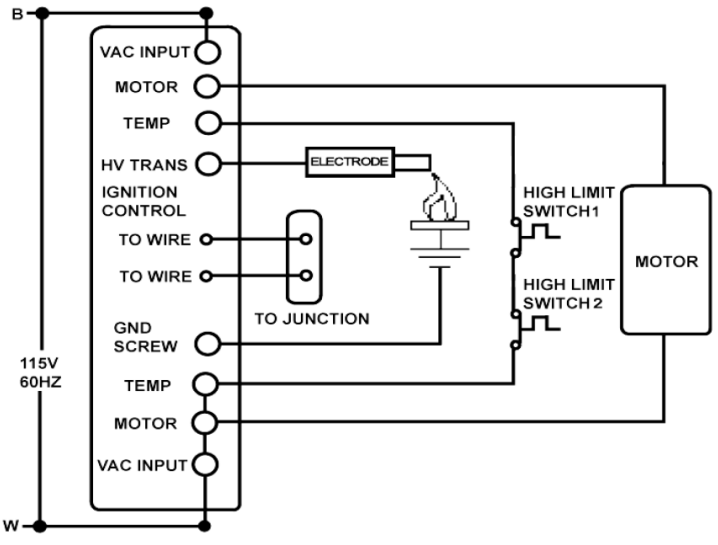
KPH-125 ELECTRICAL DIAGRAM

CONNECTION DIAGRAM



COLOR CODE				LEGEND	
B	BLACK	R	RED		FEMALE CONN.
		Y	YEL		RING CONN.
W	WHITE	O	ORG		
G	GREEN				

SCHEMATIC DIAGRAM



PARTS DIAGRAM & PARTS LISTS

Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.