



PROPANE CONSTRUCTION HEATER

USER'S MANUAL AND OPERATING INSTRUCTIONS

THERMOHEAT
MODELS:

RMC-FA60/L/L-01
LPFA125/L/L-01

(30,000/60,000 BTU/HR, FORCED - AIR)
(70,000/125,000 BTU/HR, FORCED - AIR)



C US

CSA 2.14b-2009, ANSI Z83.7b-2009



GHP Group, Inc.

8280 Austin Ave.

GHP

Morton Grove, IL 60053-3207



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 THE 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 INSTRUCTION MANUAL, LABELS, ETCETERA, CONTACT THE MANUFACTURER.

CONSUMER: Retain this manual for future reference.

Questions, problems, missing parts? Before returning to your retailer, call our customer service department at 877-447-4768 8:30 a.m. – 4:30 pm CST, Monday – Friday

or email us at customerservice@ghpgroupinc.com

www.ghpgroupinc.com

PROPANE CONSTRUCTION HEATER



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 **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 THINNERS, DUST PARTICLES OR UNKNOWN CHEMICALS.

CALIFORNIA PROPOSITION 65 WARNING: Fuels used in gas or oil fired appliances and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. This product contains chemicals, including lead and lead compounds, known to the state of California to cause cancer, birth defects or other reproductive harm. ***Wash hands after handling.***

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



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PROPANE CONSTRUCTION HEATER

DYNA-GLO PROPANE FORCED AIR CONSTRUCTION HEATERS

The heater is designed and approved for use as a construction heater under CSA 2.14b-2009, ANS Z83.7b-2009. It is hard to anticipate every use which may be made of this heater. **CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE QUESTIONS ABOUT APPLICATIONS.**

Other standards govern the use of fuel gases and heat producing products in specific applications. Your local authority can advise you about these.

IMPORTANT: READ THIS USER'S MANUAL CAREFULLY AND COMPLETELY BEFORE TRYING TO OPERATE OR SERVICE THIS HEATER. IMPROPER USE OF THIS HEATER CAN CAUSE SERIOUS INJURY OR DEATH FROM FIRE, EXPLOSION AND CARBON MONOXIDE POISONING.

This is a direct-fired forced air construction heater for either indoor construction or outdoor use. Its intended use is primarily the temporary heating of buildings or structures under construction, alteration or repair. All the products of combustion generated by the heater are forced through the heater and released into the area being heated. This heater operates at approximately 98%+ combustion efficiency but still produces a small amount of carbon monoxide. Humans can tolerate small amounts of carbon monoxide for short periods. Carbon monoxide can build up in a heated space and failure to provide adequate ventilation could result in poisoning or death.

!WARNING: NOT FOR USE WITH DUCT WORK.

SPECIFICATIONS

Model No.		FA60 Series	LPFA125 Series
Input Rating		30,000 BTU/hr 60,000 BTU/hr	70,000 BTU/hr 125,000 BTU/hr
Type of Gas		Propane	Propane
Gas Supply Pressure to Regulator Maximum		Cylinder Pressure	Cylinder Pressure
Minimum (for purpose of Input Adjustment)		5psig	5psig
Manifold Pressure		11" W.C	11" W.C
Gas Consumption		1.4lbs/hr 2.8lbs/hr	3.3lbs/hr 5.8lbs/hr
Electrical Input		120V, 60Hz, 1Ø	120V, 60Hz, 1Ø
Amperage	Load	0.65amps	0.7amps
Fan	Unload Load	3570rpm 3300rpm	3580rpm 3300rpm
Ignition		Continuous Spark	Continuous Spark
Spark Gap		0.16" (4mm)	0.16" (4mm)
Size (LxWxH)		19.3"x8.3"x15.2" (490x211x386)mm	25.59"x11.81"x16.64" (650x300x410)mm
Weight		14.3lbs (6.48kg)	20.72lbs (9.4kg)

PROPANE CONSTRUCTION HEATER



GENERAL SAFETY INSTRUCTION

Accidents are always tragic especially because so many of them could have been prevented with little care and judgment. There are some basic good practices, we hope you will follow for safe use of your heater.

IMPORTANT SAFETY INSTRUCTION

- Children should be carefully supervised, when they are in the area.
- Always maintain proper clearance from combustible materials. Minimum clearance from combustibles: Side - 24" (61cm); Top - 36" (91cm); Front - 72" (1.8M). Floor - combustible. Not for use on finished floors.
- Heater must be placed on level and stable surface.
- Never place anything including clothes or other flammable items on the heater.
- The appliance area shall be kept clear and free from combustible materials, gasoline and other flammable vapours and liquids.
- Do not modify or operate a heater which has been modified.
- Adequate clearance for accessibility and for combustion & ventilation air supply must be maintained at all times when the heater is operating.
- Service and repair should be done 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 while hot or operating.
- Never connect heater to an unregulated gas supply.
- The heater is shipped from the factory for LP(Propane) gas. This heater is for use with propane gas only, do not convert heater to any other gas. Installation must conform to local codes or, in the absence, with the standard for the Storage and Handling of Liquefied Petroleum Gases ANSI/NFPA NFPA 58 and the Natural Gas and Propane Installation Code CSA B149.1
- The minimum and maximum inlet pressures to the regulator from the gas tank are 5 psi and bottle pressure, respectively. Use only the regulator & hose assembly provided with the heater. Inspect the regulator/hose assembly prior to each use of the heater. If there is excessive abrasion or wear, or hose is cut, replace with regulator/hose assembly listed on the parts list prior to using this heater.
- Gas supply connections should be checked using a 50/50 solution of liquid dish soap and never use a flame to check for gas leaks.
- The electrical connection & grounding must comply with National Electrical Code. ANSI/NFPA 70 or in Canada CSA C22.1, Canadian Electrical Code, Part 1. Use only a properly grounded three (3) prong receptacle.
- Do not restrict inlet or outlet by any means. The flow of combustion and ventilation air is not to be obstructed.
- Forced air heaters should not be directed toward any propane or gas container within 20 feet (6M) of the exit nozzle. The heater should also be located at least 6 (1.8M) feet away from any propane gas container (regulations in Canada are 10 feet (3M)).
- The propane cylinder supply system must be arranged to provide for vapour withdrawal from the operating cylinder.

⚠ WARNING: Motor and fan must be running before lighting, during operation and at shutdown, in order to prevent a flame-out condition which could result in personal injury or property damage.

PRODUCT FEATURES

- Portable & Stable
- Wind Resistant & Rain Protected
- Continuous Spark Ignition
- 100% Safety Shutoff System
- Continuous Adjustable Input Ratings



PROPANE CONSTRUCTION HEATER

UNPACKING HEATER

1. Remove heater from carton.
2. Remove all protective packing applied to heater for shipment.
3. Retain cartons and packaging material until unit is operated and found in good condition.
4. Check heater for any shipping damage. If heater shows any external or internal damage, promptly inform dealer/distributor where you purchased heater.

Assembly Components and Instructions:

Tools required for assembly:

All Models: Adjustable Wrench
LPFA125 Series: Phillips Head
Screw Driver

Contents:

All Models: Unit, Manual, Hose and Regulator
Assembly

Assembly Time:

5 Minutes

LPFA125 Series Includes:

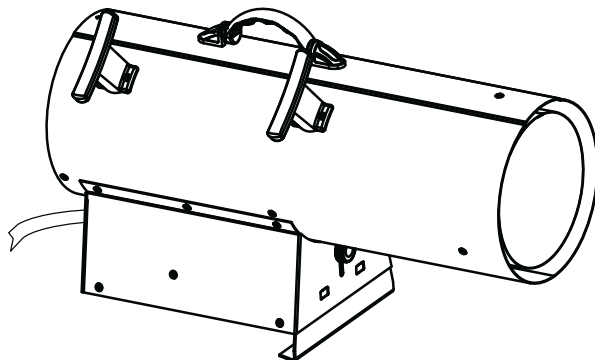
2 Cord Wrap Attachments, 4 Screws (ST3.5x10)

1. Assembling the Cord Wrap Attachments: (LPFA125 Series Only)

Parts Required:

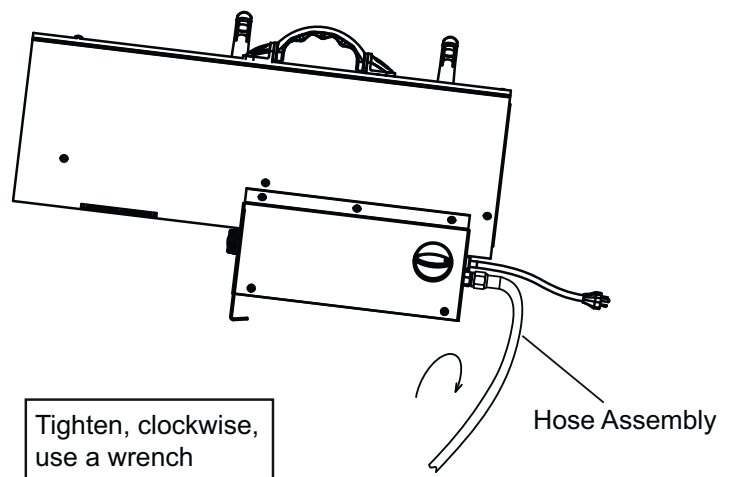
4 Screws (ST3.5x10),
and 2 Cord Wrap Attachments

Place the cord wrap attachment
as shown, then use Phillips
screwdriver to tighten the
screws and secure the
cord wrap attachments.



2. Regulator and Hose Connection: (All Models)

See figure on right.
Connect the hose tightly to
the heater using a wrench.
Please also refer to
page 8 in the manual.



PROPANE CONSTRUCTION HEATER



INFORMATION ON SIZE * CAPACITY OF PROPANE GAS CYLINDERS:

The chart below shows the number and size of propane tanks needed to run this heater.

*Less gas is vaporized at lower temperatures.

You may need two or more 100 pound tanks or one larger tank in colder weather.

(See the parts list for your model of heater to get the specified regulator assembly.)

Temperature (°F) At tank	Number of Tanks	
	50,000-60,000 BTU/h	100,000 - 125,000 BTU/h
Above 32°F	1 - 20lb	2 - 100lb
32°F	1 - 20lb	2 - 100lb
20°F	1 - 20lb	2 - 100lb
10°F	1 - 20lb	3 - 100lb
-10°F	2 - 20lb	Use Larger Tank
-20°F	1 - 100lb	Use Larger Tank

The propane (LP) gas tank must also be equipped with the following:

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

The propane (LP) gas pressure regulator and hose assembly supplied with this heater must be used without alteration.

The hose assembly shall be visually inspected prior to each use of the heater. If it is evident that there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the heater being put into operation. The replacement hose assembly shall be that specified by the manufacturer.



PROPANE CONSTRUCTION HEATER

INSTALLATION TO THE PROPANE GAS TANK

IMPORTANT: You must use a propane/LP gas supply cylinder that is compatible with the connection device provided with the hose and regulator.

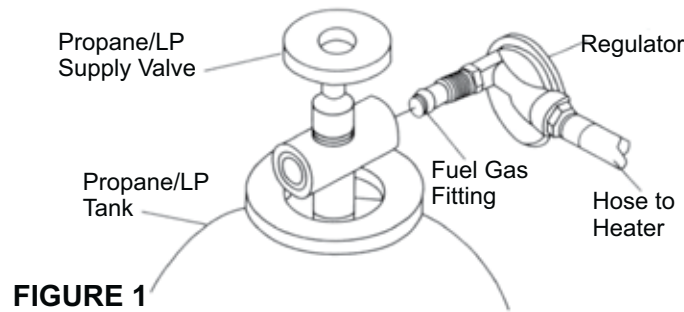


FIGURE 1

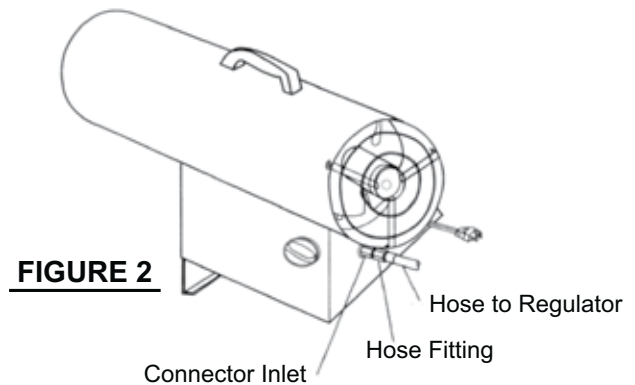


FIGURE 2

1. Provide propane/LP supply system (see size/capacity, page 6).
2. Connect fuel gas fitting hose/regulator assembly to propane LP tank(s). Turn fuel fitting counterclockwise into threads on tank. Tighten firmly using a wrench. Some models have a hand wheel that can be used to tighten the fitting. This hand wheel can be slid off of the nut so that a wrench can also be used to tighten the fitting. **IMPORTANT:** Position regulator so that hose leaving the regulator is in a horizontal position (see Figure 1)
3. Connect hose to heater inlet. Tighten firmly using a wrench. You must use the regulator supplied with heater.
4. Open propane/LP supply valve on propane/LP tank(s) slowly. NOTE: If not opened slowly, excess flow device in regulator may stop gas flow. If this happens, close propane/LP supply valve, wait one minute (or until you hear a click) and open again slowly.
5. Check all connections for leaks. Apply a 50/50 solution of liquid dish soap and water to gas joints. Bubbles forming show a leak that must be corrected.
6. Close propane / LP supply valve before attempting to repair connection.



WARNING: Purging and filling of LP gas tanks must be performed by personnel who has been thoroughly trained in accepted LP gas industry procedures. Failure to follow these instructions may result in explosion, fire, severe personal injury, or death.

REFILLING THE PROPANE GAS TANK

ALL NEW CYLINDERS MUST BE PURGED BEFORE THE FIRST FILLING.

- Turn heater gas valve knob and gas tank valve to OFF position.
- Propane tank valve equipped with the old style fitting has LEFT HANDED THREADS. Turn POL fitting CLOCKWISE to loosen. Protect POL fitting when disconnected from tank.
- Have tank filled by your local Propane gas supplier.
- Fasten full Propane tank and connect POL fitting to tank valve by turning COUNTERCLOCKWISE.
- With heater gas valve knob still in the OFF position, turn ON tank valve and check for leaks with soap solution.

PROPANE CONSTRUCTION HEATER



PROPANE SAFETY

Propane is safe to use when properly handled. Careless handling of the Propane gas tank could result in fire and/or an explosion. Therefore:

- Always keep tank/cylinder securely fastened in an upright position.
- Avoid tipping tank on its side when connected to a regulator since this may cause damage to diaphragm in regulator.
- Handle valves with care.
- Never connect an unregulated Propane tank to construction heater.
- Do not subject Propane tank to excessive heat.
- Tightly close the gas shutoff valve on the Propane tank after each use.
- The POL fitting must be protected when disconnected from the propane tank.
- Never store a Propane gas tank inside a building or in the vicinity of any gas burning appliance.

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

LEAK CHECKING

Check all gas connections with a soap solution to be sure they are tight and leak proof.

- The installation of your heater must meet all local codes and/or gas utility requirements or, in the absence of local codes, with the Storage and Handling of Liquefied Petroleum Gases, ANSI/ NFPA 58 and the Natural and Propane Installation Code, CSA B149.1.
- The minimum clearances to combustible construction: Side - 24" (61cm); Top - 36" (91cm); Front - 72" (1.8M); Floor - combustible, must be maintained at all times.
- The hose assembly should be visually inspected prior to each use of the heater. If it is evident that there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the heater being put into operation.
- The replacement hose assembly shall be that specified by the manufacturer (Refer to parts list).

LIGHTING INSTRUCTIONS

⚠ WARNING: Motor and fan must be running before lighting, during operation and shutdown, in order to prevent a flame-out condition which could result in personal injury or property damage.

NOTE: This heater uses a continuous spark ignition system. This unit will continue to make a clicking/ticking sound at all times before ignition, after ignition and during operation, regardless of valve knob positioning.

1. Connect power cord to a properly grounded three (3) prong 120V, 60Hz, single phase receptacle.
2. Turn gas valve knob clockwise  to OFF  position.
3. Wait five (5) minutes to clear any gas. Then smell for gas, if you don't smell gas, go to next step.
4. Turn gas supply ON by turning Propane tank valve counterclockwise .
5. Push in and turn gas control knob counterclockwise  to "LOW/IGN". This will light the burner. If needed, keep pressing control knob until the burner lights and keep depressing and turning from OFF  to LOW/IGN.
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 the lighting procedure.
8. When burner is lit, turn gas valve knob counterclockwise  to desired setting.



PROPANE CONSTRUCTION HEATER

SHUTDOWN INSTRUCTIONS

⚠ WARNING: Motor and fan must be running before lighting, during operation and at shutdown, in order to prevent a flame-out condition which could result in personal injury or property damage. Turn gas valve knob clockwise ↷ to OFF ○ position. Turn gas supply OFF by turning Propane tank valve fully clockwise ↷ to close. Disconnect the power cord once the heater has cooled to ambient temperature.

TEST FIRING HEATER

Test fire your construction heater, following the lighting instructions applicable to the gas control system employed. Leak test all gas connections with soap solution. Soap bubbles indicate gas leakage. DO NOT use a match or flame to test for gas leaks.

STORAGE

Never store a Propane gas tank inside a building or in the vicinity of any gas or oil burning appliance. When the Propane tank is not disconnected from the construction heater, the gas tank and heater must be stored outdoors in a well ventilated area, out of the reach of children. If for any reason the heater is to be stored indoors, the tank must be disconnected and stored outdoors in a well ventilated area out of reach of children, in accordance with the standard for the the Storage and Handling of Liquefied Petroleum Gases, ANSI / NFPA 58 and CSA B149.1, Natural Gas and Propane Installation Code. The plastic tank valve plug supplied with your tank must be tightly installed when the tank is disconnected from the heater.

MAINTENANCE INSTRUCTIONS

1. Turn unit off, allow heater to fully cool and disconnect propane hose before performing any Maintenance functions. Unplug the unit from the 120V receptacle.
2. Keep unit clean and keep the inside of the torpedo housing debris free.
3. Have unit checked by a qualified technician at least once a year, preferably prior to the heating season.

REPLACEMENT PARTS

Warning: Use only original replacement parts. This Heater must use design-specific parts. Do not substitute or use generic parts. Improper replacement parts could cause serious or fatal injuries.

This will also protect your warranty coverage for parts replaced under warranty.

Parts warranty and non-warranty: Contact authorized dealers of this product. If they can not supply original replacement part(s), either contact your nearest Parts Central or GHP Group Inc., Technical Service Department at 1-877-447-4768.

When calling GHP Group Inc., have ready:

- your name
- your address
- how heater was malfunctioning
- serial number of heater
- model number of heater
- replacement part number

PROPANE CONSTRUCTION HEATER



TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Gas valve knob is off and unit is clicking/ticking.	1. This heater uses a continuous spark ignition system. This unit will continue to make a clicking/ticking sound at all times before ignition, after ignition and during operation, regardless of valve knob positioning.	1. No corrective action is needed.
2. The unit is ticking/clicking while the heater is lit.	1. This heater uses a continuous spark ignition system. This unit will continue to make a clicking/ticking sound at all times before ignition, after ignition and during operation, regardless of valve knob positioning.	1. No corrective action is needed.
3. Fan does not turn when electrical connection is made.	1. No electric power to heater. 2. Fan blade contacts inside of heater housing. 3. Fan blade(s) bent 4. Fan motor defective.	1. Check current to electric outlet. If voltage is correct, check power cord and extension cord for 2. Be sure that housing is not damaged. Make sure there are no obstructions to the fan. 3. Straighten blade(s) to match others. 4. Replace motor.
4. Heater will not fire.	1. No spark at ignitor. 2. Improper spark gap. 3. Bad electrode.	1. Check ignitor wire. Re-attach or tighten if loose. Check Spark module. Replace if necessary. 2. Set gap (See specifications for gap). 3. Replace Spark Plug.
5. Heater quits while running.	1. Internal temperature too high causing limit switch to shut down operation. 2. Damaged Control Valve. 3. Dust or debris build-up inside of heater.	1. If the heaters output is restricted, internal temperature becomes too high. Move heater away from any obstructions. 2. Replace Control Valve. 3. Clean inside of heater.

Always be sure to follow proper maintenance procedures, by cleaning the heater once per month during regular usage, and check spark gap at least once per season.

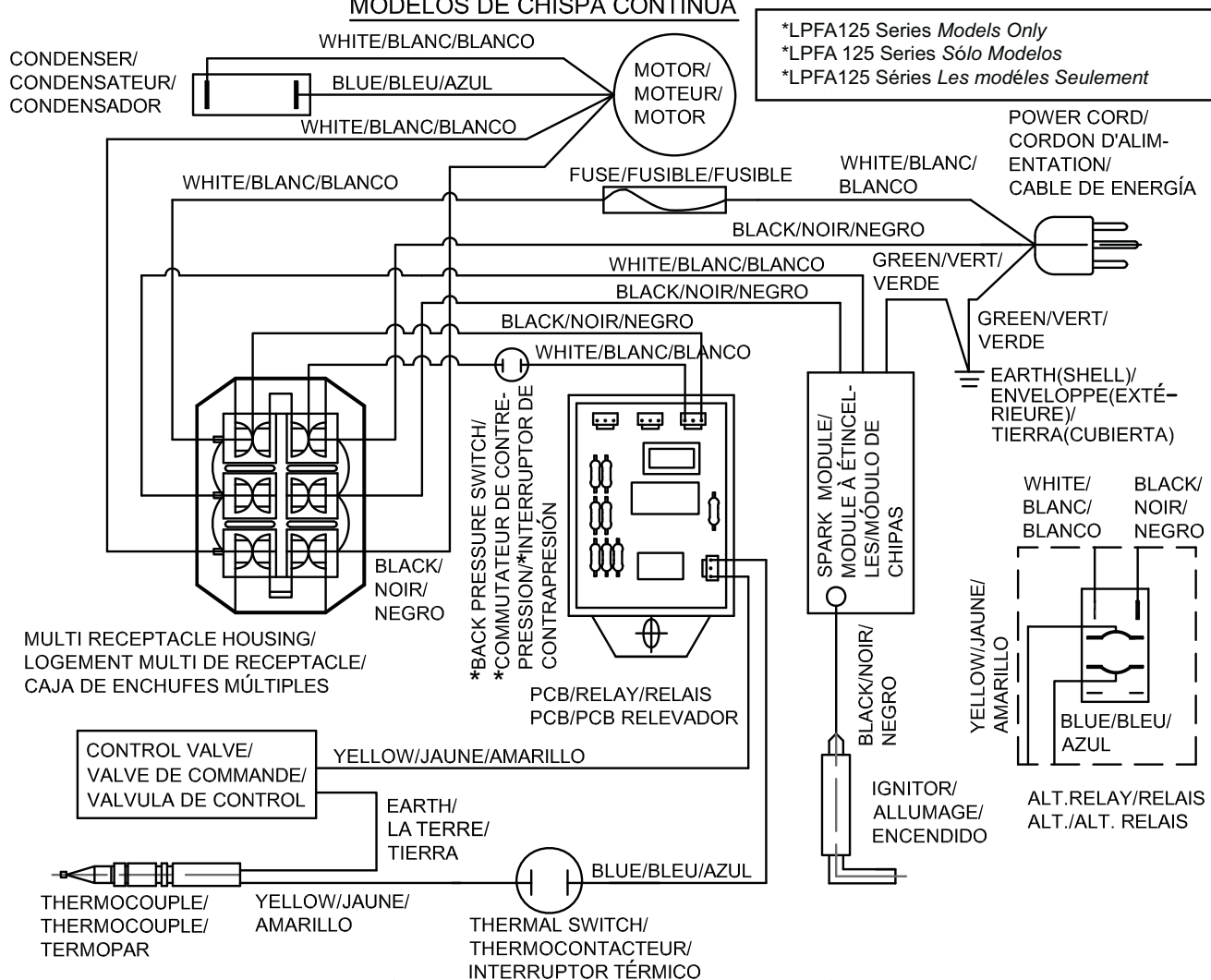


PROPANE CONSTRUCTION HEATER

WIRING DIAGRAMS

CONTINUOUS SPARK MODELS/MODÈLES À ÉTINCELLE CONTINUE

MODELOS DE CHISPA CONTINUA



If any original wiring supplied with the heater must be replaced, it must be type AWG 105°C wire or its equivalent, except as indicated.

Si vous devez faire remplacer les fils d'origine du radiateur, procurez-vous du fil AWG 105 Celsius ou l'équivalent, sauf indication contraire.

Si se proporciona cualquier cableado con el calentador se debe reemplazar, debe ser cable tipo AWG 105°C o su equivalente, excepto como se indica.

PROPANE CONSTRUCTION HEATER



REPLACEMENT PARTS LIST

ITEM No.	DESCRIPTION	QTY	PART NUMBER	
			FA60 SERIES	LPFA125 SERIES
1	INNER SHELL ASS'Y	1	2304818	2304929
2	NOZZLE	1	2325121	5030077*
3	FLAME HOLDER CAP	1	2325120	2325122
4	THERMAL SWITCH BRKT.	1	2304826	2315515
5	THERMAL SWITCH	1	2201599	2201373
6	NOZZLE NUT	1	2304578	2304945
7	SPARK PLUG ASSY	1	2206033	2206034
8	THERMOCOUPLE ASSY (1130/1474-425L)	1	2304885	2304885
9	GAS TUBING ASS'Y	1	2304830	2325138
10	OUTER SHELL - ORANGE	1	2305403	2325360
11	CORD WRAP	2	N/A	2101423
12	HANDLE ASSY - BLACK	1	2101447	2101447
12.1	SCREW - HANDLE FRONT	1	2001355	2001355
12.2	SCREW - HANDLE FRONT	1	2001077	2001077
12.3	NUT - HANDLE REAR	1	2000384	2000384
13	MOTOR SUPPORT	1	2304823	2304823
13.1	BOLT-MOTOR MOUNTING	2	2001332	2001332
13.2	SLEEVE	1	2304949	2304949
14	MOTOR ASS'Y	1	2304547	2304548
14.1	MOTOR - FAN	1	2304821	2304936
15	GUARD FAN - BLACK	1	2304828	2304939
16	MOTOR BRKT	1	2304937	2304938
17	VALVE - GAS	1	5051233	5051235
18	PRESSURE SWITCH	1	N/A	2305976
19	VALVE BRKT	1	2304624	2304624
20	BASE ASSY - BLACK	1	2304923	2304924
21	POWER CORD ASS'Y	1	2101670	2101673
22	GAS CONNECTOR INLET	1	2304831	2304831
23	CAPACITOR	1	2201372	2301390
24	BASE LOWER - BLACK	1	2304925	2304926
25	KNOB GAS VALVE - BLACK	1	2101451	2101451
26	HEIGHT CONTROLLER - BLACK	1	2304927	2304928
27	HEIGHT CONTROL SCREW - BLACK	1	2304510	2304510
28	LEAD WIRE ASSY	1	2201371	2201371
29	SPARK MODULE	1	2201391	2201391
30	PCB ASSEMBLY	1	2201369	2201369
31	REG & HOSE ASSY - 10FT (3M)	1	5002614	5055549
	REG & HOSE ASSY - 10FT (3M) w/HANDWHEEL	1	5055533	5055551
	REG & HOSE ASSY -15FT (4.6M)	1	5055298	5055550
	REG & HOSE ASSY -15FT (4.6M) w/HAND WHEEL	1	5055415	5055552

*Not shown in exploded view.



PROPANE CONSTRUCTION HEATER

REPLACEMENT PARTS LIST

MODELS: RMC-FA60 Series/LPFA125 Series

