

StreetHeat Portable Jet Heater Operations Manual



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Safety Precautions

Please read the manual carefully as it will greatly enhance the operator's skill in using the tool. In addition, every operator should be particularly aware of all the safety requirements.

GENERAL SAFETY PRECAUTIONS:

- Never point the StreetHeat Jet Heater at anyone.
- Inspect hose before each use for breaks or weakened spots.
- Always shut off valve at tank when leaving the StreetHeat Jet Heater unattended for any length of time.

WARNING: DO NOT TOUCH PERFORATED METAL SHIELD AFTER PORTABLE JET HEATER HAS BEEN FIRED

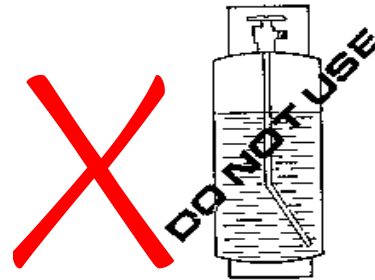
WARNING: DO NOT OPERATE STREETHEAT IN AREAS WITH FLAMABLE GASES OR WHERE SMOKING IS PROHIBITED

PROPANE TANK:

Two types of tanks are commonly available: liquid withdrawal and vapor withdrawal. It is crucial to use the vapor withdrawal type. Never try to run the Portable Jet Heater on a liquid withdrawal tank.



Vapor Withdrawal Tank commonly used for welding and cutting equipment, camping and trailer stoves.



Liquid Withdrawal Tank commonly used for lift trucks or other internal combustion engines.

The recommended tank size to use is about 30 LBS (15 KG). The pressure in the tank depends on the temperature of the tank. At room temperature (72°F; 22°C) the pressure is approximately 110 PSI (7.6 BAR) and drops to about 22 PSI (1.5 BAR) at 0°F (-18°C). When in use, the temperature of the tank drops due to the evaporation process of liquid propane to propane gas. After prolonged use, the temperature of the tank may drop to 0°F (-18°C), usually accompanied by icing on the outside and when the propane pressure drops below 22 PSI (1.5 BAR). **DO NOT RUN THE PORTABLE JET HEATER WITH THE PRESSURE BELOW 22 PSI (1.5 BAR).**

VENTILATION REQUIREMENTS:

In operation, the portable jet heater consumes propane and air and produces carbon dioxide, carbon monoxide, and water vapor. Prolonged exposure to carbon monoxide is lethal and adequate ventilation must be provided if the Portable Jet Heater is to be operated indoors.

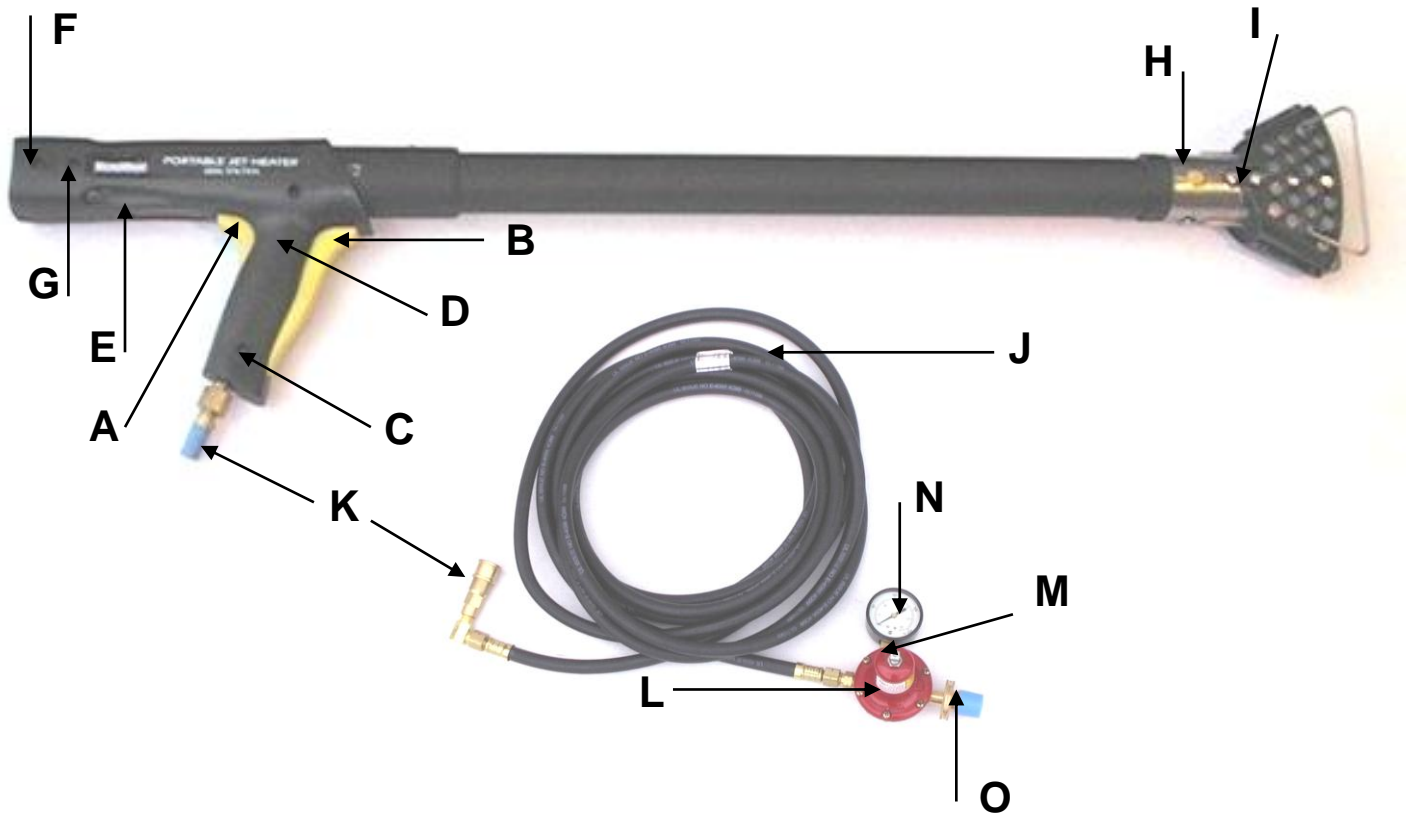
Technical Specifications

OUTPUT CHARACTERISTICS

	Standard	Metric
Heat Capacity	172,000 BTU/Hr	50 kW/Hr
Propane Consumption	8.0 LBS/Hr	3.6 KG/Hr
Operating Pressure	28 PSI	193 kPa
Weight	3.4 LBS	1.5 KG
Air Consumption	30 CFM	0,85 M³/Min
Emission	015 CO/CO₂	015 CO/CO₂

Distance of Jet Heater from Surface	Temperature at Surface	Velocity at Surface
6 Inches (15 cm)	1,120°F (600°C)	2,100 Ft/Min (640 m/Min)
1 Foot (30 cm)	650°F (340°C)	1,200 Ft/Min (365 m/Min)
2 Feet (60 cm)	390°F (200°C)	660 Ft/Min (200 m/Min)

Parts List



- | | | | |
|----------|-----------------------|----------|-------------------------|
| A | Safety Trigger | I | Flame holder |
| B | Gas Trigger | J | Hose |
| C | Gas Valve | K | Quick Connect |
| D | Igniter | L | Regulator |
| E | Fuel Line | M | Adjustment screw |
| F | Filter | N | Pressure Gauge |
| G | Orifice | O | POL Fitting |
| H | Sparkplug | | |

Operation

The StreetHeat Portable Jet Heater is basically a simple jet engine. The high-energy exhaust is used to pump and heat the surrounding air to deliver a hot air blast.



JET PUMP:

The propane jet fed in through the pistol grip to (A) draws the correct amount of combustion air through the air inlet (B). They mix together in the straight section (C).

COMPRESSION:

The conical section (D) turns speed into pressure.

COMBUSTION:

The combustion process is carried out inside the combustor (E). The flame holder and gauze (F) prevents flashback (where the flame travels back into the jet pump) and flame out (where the flame is blown out of the combustor).

CONNECTIONS:

Connect the hose and regulator end to the propane tank and the hose end to the Jet Heater (Note: keep the blue plastic cap for the quick connect plug and replace after each use to protect plug from getting damaged and leaking). To check for leaks, open the tank valve without actuating the Portable Jet Heater handle to pressure the hose. The pressure gauge should read approximately 28 PSI (193 kPa).

START-UP:

After all connections and checks for leaks have been made the StreetHeat Portable Jet Heater is ready for use. Open the tank valve. Wait approximately 5 seconds to fully pressurize the hose or until the excess flow valve opens with an audible click. To start the Heater first press the safety trigger which prevents the gas handle from being accidentally opened. Squeeze the gas slowly all the way until the igniter fires with an audible click. CAUTION: HEATER WILL IGNITE.

Important: squeeze the gas handle slowly. If the gas handle is squeezed too quickly the igniter will fire the spark plug before the gas mixture gets to the combustor. Should the heater fail to fire fully, release both safety trigger and gas handle fully to assure that the igniter is reset. Repeat the starting procedure.

REHEATING ASPHALT:

Hold the end of the Portable Jet Heater at least 6"-10" off the surface of the asphalt keeping the end in motion to avoid burning the asphalt.

Troubleshooting

PROBLEM	CAUSES	REMEDIES
Jet heater will not fire	Gas not on	Check that the valve on the propane tank is opened
	Handle not fully depressed	Depress handle all the way until igniter fires with a "click"
	Handle activated too quickly	Squeeze handle slowly to make sure mixture has entered combustor before firing
	Quick connect not coupled properly	Check for dirt and reconnect
	Pressure too low	Check regulator pressure (set to 28 PSI or 193 kPa) or propane tank for freezing
	Handle not released fully	Release both triggers to make sure igniter is reset
	Spark plug gap too small	Open gap to 1/8" (3.5 mm)
	Defective igniter or connections	Check all connections and check for spark. If none, igniter may be faulty
Flame is large (too much propane flow)	Leak in orifice assembly	Tighten orifice in holder and check
	Wrong pressure	Reset to 28 PSI (193 kPa)
More than 1" (25 mm) of combustor turns red (insufficient propane flow)	Propane tank has iced up and pressure is below 28 PSI (193 kPa)	Change to new propane tank
	Clogged orifice and/or filter	Remove and clean with compressed air
	Clogged hose	Clean or replace
	Clogged fuel line	Clean or replace
Flashback (when heater trigger is released flame is "sucked" up the tube)	Flame holder gauze is unseated	Remove combustor and reseal gauze up against the flame holder

Assembly/Disassembly

Filter Cleaning:



Unscrew filter holder



Pull out filter screen/spring assembly and clean with compressed air or replace.

Spark plug replacement:



Depress button and remove the combustor assembly.



Pull spark plug, flame holder and gauze out using a pair of pliers.



Unscrew spark plug. Note: when reinstalling gauze make sure it is snug up against the flame holder to prevent flashback.

*****Spark plug gap should be should be set 3-5 mm**

Igniter replacement:



Depress button and remove tube extension and undo the 5 assembly screws.



Remove the right housing



Undo contact screw which retains the cable and the contact spring (continued...)

Igniter replacement (continued):



Pull out cable.



Untie and remove the ground strap.



Now the trigger assembly can be removed

Orifice cleaning or replacement:

IMPORTANT NOTE: The orifice consists of 6 slender, thin walled tubes which can easily be bent or damaged if dropped or mishandled. Once bent the performance of the gun is seriously impaired. For this reason the following operation should be performed with utmost care.



Undo the 3 mounting screws holding the pump and remove the pump first by sliding it away from the orifice and then lifting it out. This sequence is important because the orifice reaches inside the pump. Lifting the pump before sliding it away will damage the orifice tubes.

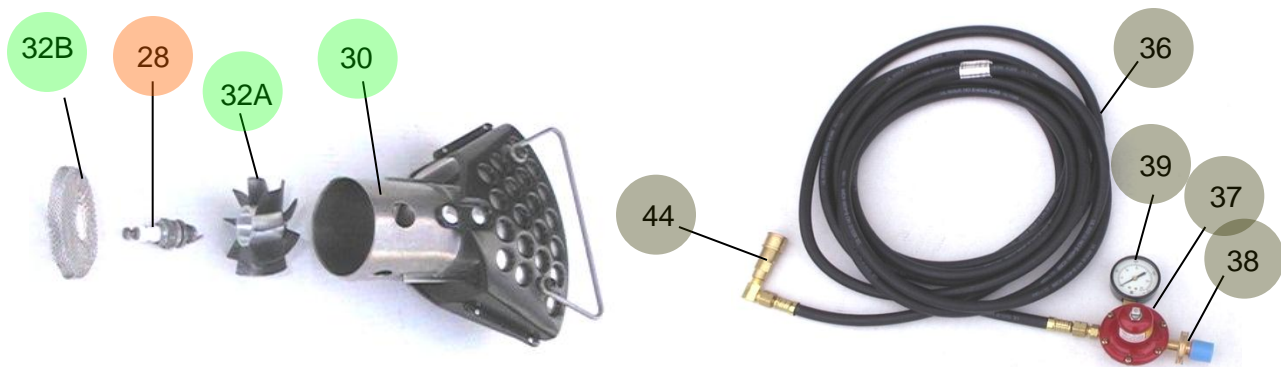
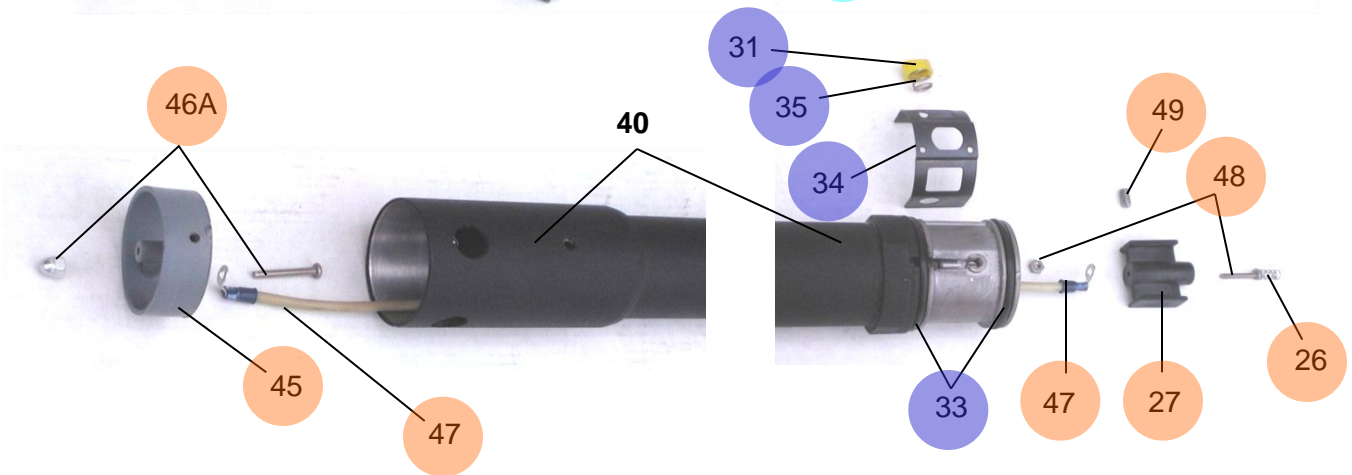
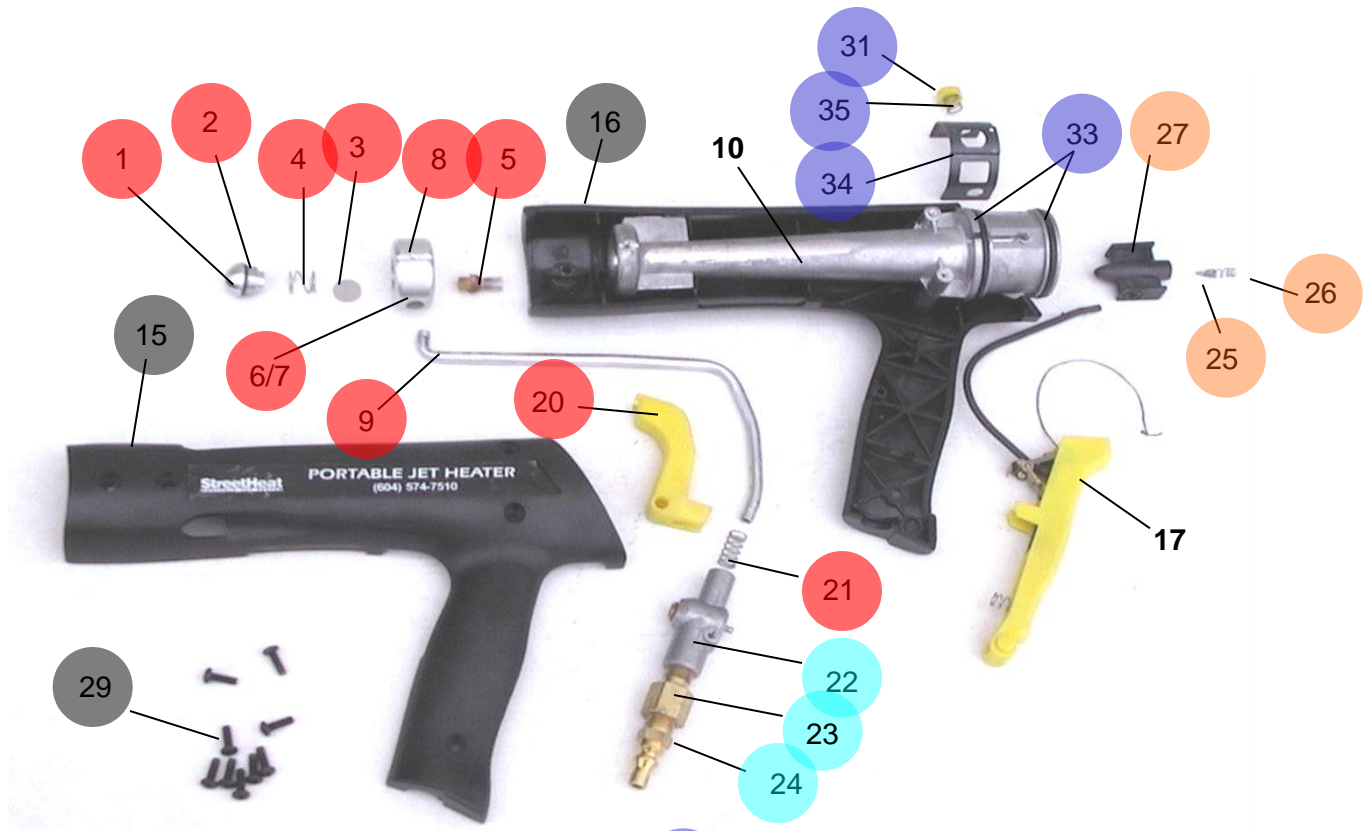


Unscrew the orifice.



Use a 0.6mm drill to clean out each orifice stem.

Spare Parts List



Spare Parts List

Key	Gas/Air Inlet Assembly Kit	70-0-35190
1	Filter Holder	1
2	“O” Ring	1
3	Filter (disc)	1
4	Filter Spring	1
5	Orifice Assembly	1
6	“O” Ring	2
7	“O” Ring Retainer	2
8	Inlet	1
9	Fuel Line	1
20	Safety	1
21	Spring	1

Key	Gas Valve Kit	70-0-35191
22	Valve Assembly	1
24	Quick Connect Plug	1

Key	Pump Body	NOT AVAILABLE
10	Pump Body	1

Key	Handle Housing Assembly Kit	70-0-35192
15	Housing RH	1
16	Housing LH	1
29	Assembly Screws	10

Key	Trigger/ Igniter Assembly Kit	70-0-35193
17	Trigger/ Igniter Assembly	1

Key	Spark Wire Extension Asbly Kit	70-0-35194
25	Contact Screw (upper)	1
26	Contact Spring	2
27	Socket	2
28	Spark Plug	1
45	Spark Bridge	1
46A	Spark Bridge Bolt/Cap Nut	1
47	Spark Wire Extension	1
48	Contact Screw & Nut (Lower)	1
49	Set Screw	1

Key	Combustor Assembly Kit	70-0-35195
30	Combustor	1
32A	Flame Holder	1
32B	Flame Holder Gauze	1

Key	Button Assembly Kit	70-0-35196
31	Button	2
33	“O” Ring	4
34	Strap	2
35	Button Spring	2

Key	Hose Assembly Kit	70-0-3519D
36	Hose	1
37	Regulator	1
38	POL Fitting	1
39	Gauge	1
44	Quick Connect Assembly	1

Key	24" Extension	70-0-35153
40	24" Extension	1

Equipment Warranty

Each new piece of IPC equipment comes with a one year warranty emphasizing our confidence in the quality and reliability of equipment sold by IPC.

Warranty conditions:

There are no warranties, express or implied, made by IPC on products manufactured, sold or distributed by it except the warranty against defects in materials and workmanship on new products to the original purchaser. IPC warrants its manufactured products to be free from defects in material and workmanship under normal and proper use for the periods specified below. Our warranty covers all of our equipment except consumable items such as templates and finishing tools. The warranty period is 12 months from the date of sale to customer.

Obtaining warranty:

Please call IPC's emergency technical support line, at 800.688.5652, to report any problems with your IPC equipment. Our technical support team will work with you to resolve any problem. IPC's sole obligation under this warranty is to repair or replace, at the discretion of IPC, any part found to be defective in material or workmanship. Replacement parts will be shipped free of charge.

Upon request, defective parts must be returned to IPC within 30 days of the date the replacement parts were shipped. In this situation, replacement parts will be invoiced and shipped at the owners expense and will be credited upon the return, inspection and confirmation that parts are defective. Only parts accompanied by a Return Material Authorization form (RMA) will be received by IPC.

What's not covered?

Warranty does not apply to parts that have been subject to abuse, misuse and/or unauthorized repairs. Refer to Operating and Trouble Shooting manuals for clarity of proper use and maintenance of your equipment. IPC shall not in any event be liable for any special indirect or consequential damages resulting from the use of IPC equipment.

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