



# ***USER MANUAL / INSTRUCTIONS***

***Rapid 829/500CP Multi Fuel Lantern***

REV 4.3 0801\_13



## ***Rapid 829/500CP Multi-Fuel Lantern***

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***For a video tutorial on how to use your lantern  
or troubleshooting suggestions visit:  
[www.BriteLyt.com/howto](http://www.BriteLyt.com/howto)***

# ***Welcome to the BriteLyt Family!***

***Congratulations, on your choice of the new BriteLyt, Multi-Fuel Lantern! Many years of passion and lantern know-how have gone into creating the most functional pressurized liquid-fuel lantern ever! On behalf of all of us at BriteLyt congratulations and we hope you enjoy your new lantern for many years to come!***

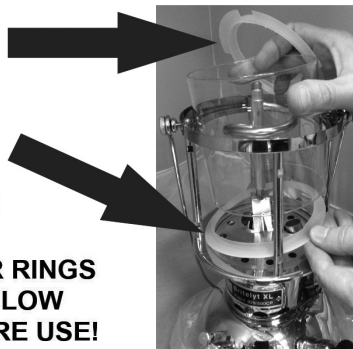
## **IMPORTANT:**

Read this manual in its entirety. BriteLyt assumes no responsibility for the use of your lantern outside of normal operating conditions. It is very important that you understand all topics covered in this manual before attempting operation or fuel use of any kind.

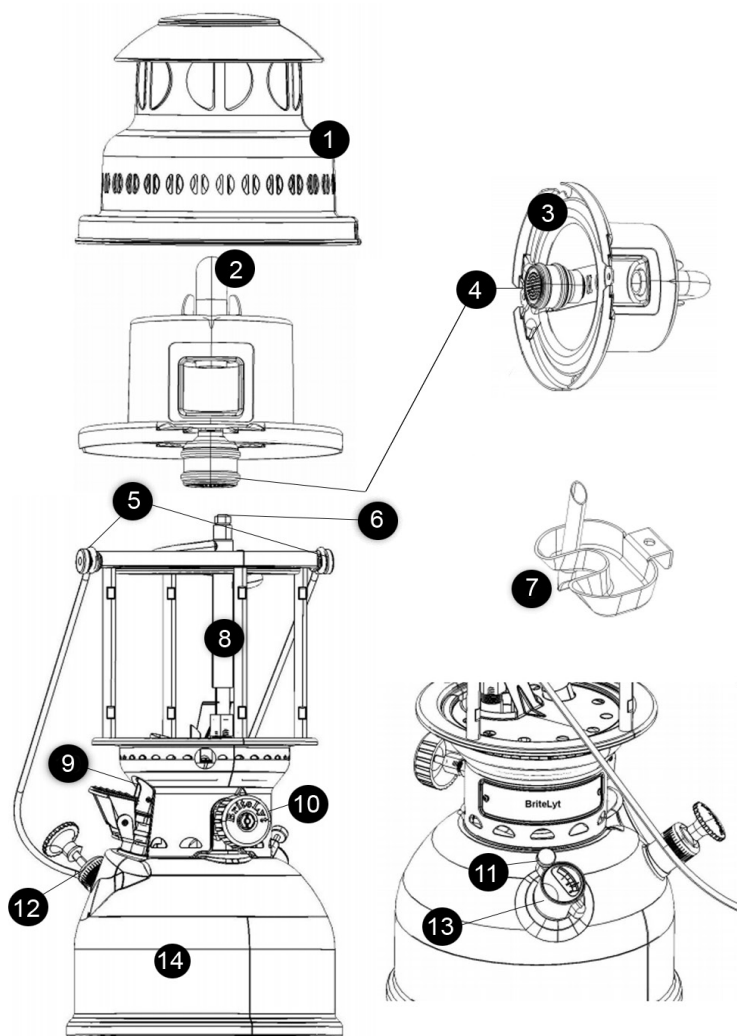
Some sections of this manual reflect optional accessories that are not shipped standard with every lantern. To purchase accessories, visit your local retailer or [www.britelyt.com](http://www.britelyt.com).



**DISCARD SHIPPING SPACER RINGS  
LOCATED ABOVE AND BELOW  
THE GLASS CHIMNEY BEFORE USE!**



# Lantern Master Diagram

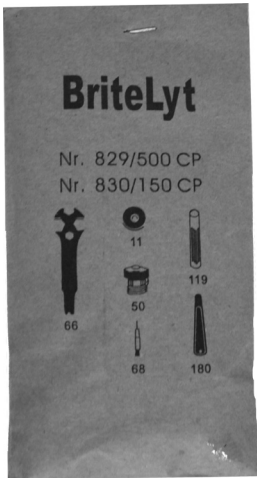


- 1) Hood/Cover
- 2) Regulator Screw
- 3) Hood Inner Casing
- 4) Non-Ceramic Burner Assembly
- 5) Handle/Reflector Screws
- 6) Needle and Spray Nozzle
- 7) Preheat Cup

- 8) Carburetor
- 9) Rapid Pre-Heater
- 10) Fuel Dial
- 11) Bleeder Screw
- 12) Hand Pump
- 13) Pressure Gauge
- 14) Fuel Tank

## Parts Kits

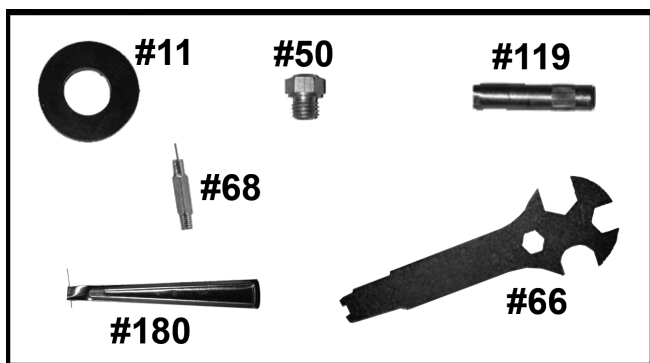
Your BriteLyt lantern is shipped with a parts/tools kit packet. Be sure to refer to the lantern parts listing on page 5 for parts descriptions. These tools and parts will need to be accessible as you begin to set up your new lantern for its first use. Should you have any questions please call us at (727) 451-7020 or visit [www.BriteLyt.com](http://www.BriteLyt.com).



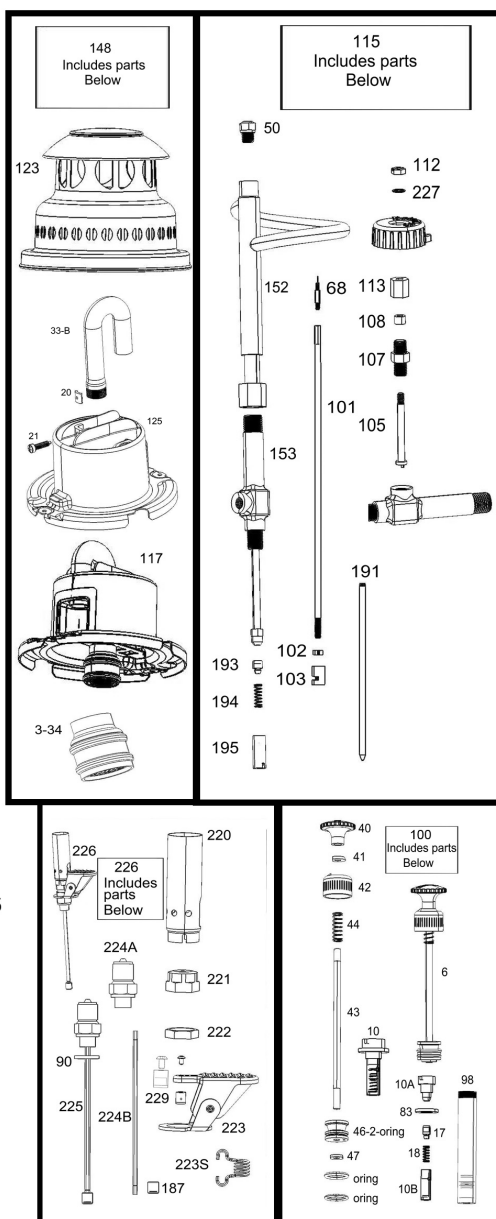
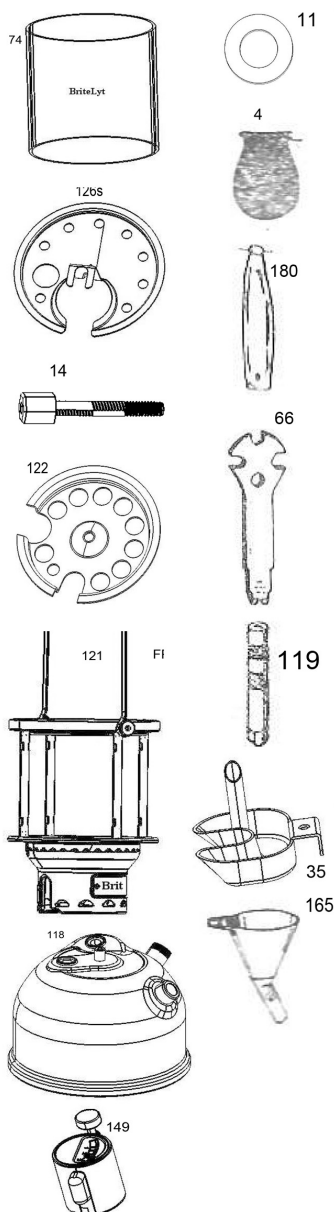
### **Parts / Tools Packet**

- #66 Spanner with Gauge**
- #11 Washer for Filling**
- #50 Nipple**
- #68 Needle**
- #180 Cleaning Needle for Pre-Heater**
- #119 Key for Needle**

**Also included in your lantern box will be an Alcohol Filling Bottle #67, Fuel Filling Funnel #165 and (12) Mantles.**



## Lantern Parts Diagram



# Lantern Parts Listing

3-34	Stainless Nozzle System	119	Key for Needle
4	Soft Mantle 1 tie hole	121	Frame with Name Tag
6-2-O-Ring	Pump Piston Complete	122	Center Bottom Plate
10	Pump Valve Complete	123	Hood with Top
11	Washer for Filling	125	Inner Casing
13	Bleeder Screw for 149	148	Complete Upper System
14	Screw for 122	149	Filling Screw Gauge
17	Check Valve Cone w/ rubber	152	Vaporizer Upper Part
18	Spring for Check Valve	153	Vaporizer Lower Part
20	Clip	165	Plastic Filling Funnel
21	Screw	180	Cleaning Needle for Rapid Pre-Heater Device
33-B	Mixing Tube (HP)		Sieve for Rapid Pre-Heater Device
35	Alcohol Heater Cup	187	Valve Bar
40	Pump Knob		Valve Washer (Check Valve)
41	Fixing Disc	191	Valve Spring
42	Cap for Pump Barrel	193	Vaporizer Valve Complete
43	Pump Piston-Rod	194	Flame Protecting Tube
44	Spring for Pump Piston	196	Nipple for Rapid Pre-Heater
46-2-O-Ring	O-Ring Pump System	220	Nut for Nipple
47	Pump Piston Nut	221	Tip Complete
50	Nipple	222	Connecting Piece for Rapid Pre-Heater
66	Spanner with Gauge	223	Connecting Piece for Complete Pre-Heater (224, 90, 187)
67	Alcohol cup filling bottle	224	Rapid Pre-Heating Device Complete
68	Needle		Disc for Wheel Part 111 (On & Off Knob)
74	Glass Chimney/Globe	225	Check Packing with Screw for Rapid Pre-Heater
83	Valve Washer for 10		
90	Lead Washer for Vaporizer and preheating device	226	
98	Pump Barrel		
100	Complete Sys Pump	227	
101	Conducting Rod		
126s	Heat Shield	229	
102	Counter Nut for Connecting Rod		
103	Conducting Piece		
104	Conducting Rod Complete		
105	Excentre		
107	Nipple for Wheel		
108	Graphite Packing		
111	Hand Wheel / On & Off Knob		
112	Nut for Wheel		
113	Sleeve Nut for Excentre		
114	Excentre Complete		
115	Vaporize Complete		
117	Inner Casing Complete		
118	Fuel Tank		

# ***BriteLyt Limited Lifetime Warranty***

BriteLyt products are fully warranted to the original owner against defects in materials and workmanship for the lifetime of the product. If a product ever fails due to a manufacturing defect, even after extended use, we will repair the product, without charge, or replace it, at our discretion. This warranty does not cover damage caused by accident, improper care, negligence, normal wear and tear, improper use, maintenance, storage, or the natural breakdown of colors and materials over extended time and use. Damage not covered under warranty will be repaired for a reasonable rate and a fee will be charged for return shipping.

For warranty evaluation, your product must be returned directly to the BriteLyt Warranty Department. All shipping to Warranty must be pre-paid and insured. BriteLyt cannot be liable for lost in-bound packages. Products accepted for repair must be clean. Charges will be assessed if cleaning is necessary. You must obtain authorization in order to have your lantern processed for warranty repairs. Unauthorized returns to our facility will be returned to sender.

**BriteLyt's limited lifetime warranty excludes mantles, glass chimney/globe and if equipped, ceramic nozzles. Springs and attachments are covered for a period of 12 months from the date of purchase.**

Your BriteLyt warranty requires you to register your lantern. Warranties begin from the date of purchase, proof of purchase may be required in addition to the serial number on the base of your fuel tank. Should you have any questions regarding your lantern warranty call Monday - Friday 9am-5pm (EDT) (727) 451-7020.

## **WARRANTY RETURN FORM**

For regular online returns

Please visit [www.britelyt.com/returns](http://www.britelyt.com/returns) to get started.

## ***BriteLyt Technical Support***

Should you require assistance or have question about your lantern or it's operation please feel free to reach out to us!

You can contact our lantern experts by email: [customerservice@britelyt.com](mailto:customerservice@britelyt.com) or by calling us at (727) 451-7020.



## **Prior to Starting Your BriteLyt**

- *Be sure to set the control knob to the “off” position (12 O’clock) before operating.*
- *Look lantern over for loose parts that may have shifted during transport.*
- *Ensure your mantles are not damaged. Damaged mantles must be replaced prior to starting.*
- *Make sure that burner and other burning accessories are tightened.*
- ***DO NOT USE INDOORS.** Light your lantern in a well ventilated area away from combustible or heat sensitive material.*
- *Your lantern has been designed to use multiple fuels. Burning of any fuel other than kerosene may cause your lantern to burn and/or act differently. Refer to page 15 for multi-fuel operation.*
- *Do not tip or turn lantern on its side or any other direction other than vertical.*
- *Be sure not to place your lantern on delicate or flammable surfaces.*
- *Do not let your lantern burn unattended.*
- *Keep lantern away from children and never let children play with lantern.*
- *Do not place anything on top of or over your lantern.*
- *While lantern is in operation touch only the fuel tank. You risk severely burning and injuring yourself by touching anywhere above the tank.*
- *Allow lantern to cool for at least 30 minutes after use before attempting to touch, store or repair.*
- *Use the bleeder screw to release tank pressure after every use.*
- *Do not open pressure gauge assembly, add or remove fuel while lantern is in operation.*
- *Do not look directly into the burning mantle.*
- *Do not inhale any exhaust being given off during lantern burning.*
- *Do not leave lantern in the “on” position when not in use.*
- *Always empty the fuel tank before storing your lantern.*
- *Keep Pre-Heater tube clean and clear at all times*
- *Never burn old or dirty fuel in your lantern.*

***BriteLyt assumes no responsibility or liability due to improper use.***

***Using anything other than BriteLyt brand replacement parts will result in the expiration and cancellation of your lantern’s factory warranty.***

# Lighting your BriteLyt Lantern

***Before lighting your BriteLyt lantern read this manual through in its entirety. Note all warnings and safety cautions. Ensure you comprehend all instructions before beginning. Do not inhale smoke or use lantern indoors. Refer to diagram on page 2 for parts labels.***

## Step 1

Unscrew the pressure gauge and pour fuel in using the provided funnel. Fill until fuel reaches the lower edge of the filler neck.

**Do not overfill the fuel tank!**



## Step 2

Loosen the handle/reflector screws and remove the hood/cover.

To remove the hood and hood inner casing remove the two screws holding it to the lamp.



## Step 3

Place mantle over spray nozzle and tie on using a double knot.

Trim loose threads as short as possible.



## Step 4

Re-Install the hood inner casing and the hood/cover.

Ensure that the regulator screw is visible and tightened.

Re-install the two mounting screws and re-tighten the handle/reflector screws by hand once hood is replaced.



## Step 5

Ensure that the pointer on the fuel dial is pointing upright to 12 O'clock (This is the off position).

Screw the pressure gauge back onto the tank by hand.



## Step 6

Rotate the hand pump knob to unlock it.

Plunge the pump in and out until your pressure gauge reads between the red line and 3 on the indicator.

When finished re-lock the hand pump knob in it's down position.



***If you are using the EZ-Pump attachment with pressurized air see page 12 and disregard step 6.***

## Step 7

Open the rapid pre-heater by pushing the lever down opening the flow of fuel.

Immediately light the now flowing fuel just above the open lever using a lighter or match. Lighters are the recommended ignition source.

If needed, unlock hand pump and again plunge repeatedly to maintain pressure in tank.



## Step 8

Allow pre-heater to run for approximately 30 seconds for Kerosene and Gasoline (time will differ by fuel and ambient temperature).

\* See “Multi Fuel Operation on page 15 for additional information.

## Step 9

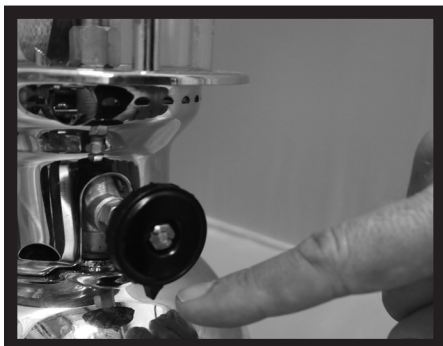
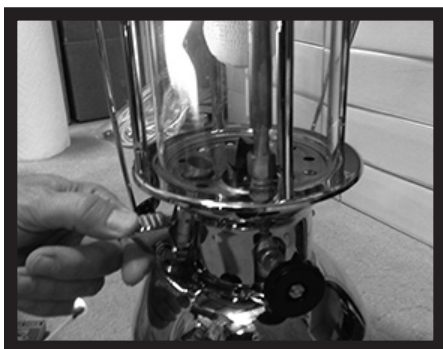
After you have pre-heated the carburetor turn the fuel dial nose down (6 O'clock).

The mantle should light and glow.

Once the mantle is lit, flip the pre-heater lever back up to close it.

Bring the lantern to operating pressure, between 2 and 3 on the pressure gauge.

While pumping, do not shake or rock the lantern as you will break the mantle and need to start over.



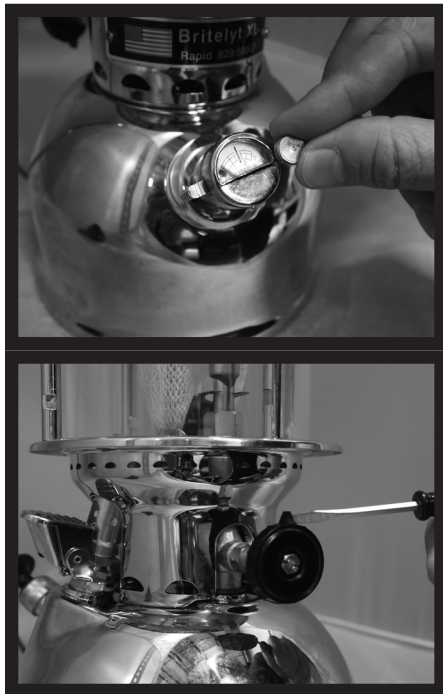
***If your lantern begins to dim, use the hand pump to increase the tank pressure. Use the fuel dial to control the level of light output.***

# ***Shutdown of your BriteLyt Lantern***

## **Step 1**

To extinguish the lantern open up the bleeder valve on the pressure gauge.

Turn the fuel dial to point vertically (12 O'clock) to cut off the flow of fuel.



## ***Storage of your BriteLyt Lantern***

- Allow lantern to cool for at least 30 minutes before touching, moving or repairing.
- Do not allow fuel to sit in tank for prolonged periods of time.
- Empty and clean tank before storing your lantern.
- To avoid scratching and damage keep you lantern and reflector stored in the optional tote bags.
- After 10 uses, use a cap full of carburetor cleaner into your tank with fuel to clean your burning system and tank.
- After storage ensure that all parts are properly tightened and cleaned before lighting lantern.

## **Tips and Troubleshooting**

- *If you notice the lantern flickering or darkening, use your hand pump or EZ-Pump accessory to increase the tank pressure to approximately 2.5 atmosphere bars.*
- *If the hand pump plunger does not work properly grease the O-Ring and re-install.*
- *If the pre-heater is not igniting or burning improperly, ensure you have proper pressure in the fuel tank. You should be just below the red line. If pressure is correct clean the nozzle of the pre heater with the cleaning needle which came with your lantern.*
- *Do not remove the heat shield (Part #126s) when burning lantern.*
- *To keep bugs away add citronella oil in a 50/50 ratio with your fuel and burn normally.*
- *If using biodiesel when preheating with the Alcohol cup it may take 6-10 burns before the mantle will light.*
- *Remove broken mantles as they will break the glass in your lantern.*
- *Routinely flush and clean your fuel tank with water or gasoline.*
- *If you are in an extremely cold area or above 5,000 feet in elevation you may need to add 10% mineral spirits to your fuel tank to have lantern light faster.*
- *If the hand pump plunger does not work properly grease the O-Ring (lightly) and re-install.*
- *If using biodiesel, when preheating with Alcohol cup, it may take 6-10 burns before the mantle will light (you also need to use the preheater after the Alcohol cup use). Preheat using the cup first, and then, use the preheater, after the alcohol as burned off. This will help to preheat faster.*

## **Warranty Registration**

***BriteLyt's limited lifetime warranty requires the lantern be registered to you. In order to register your warranty, visit us online at [www.britelyt.com/reg](http://www.britelyt.com/reg) to digitally register your lantern.***

***Be sure you have your original purchase receipt available to complete the form. You will also need the serial number which is stamped on the bottom of your lantern.***

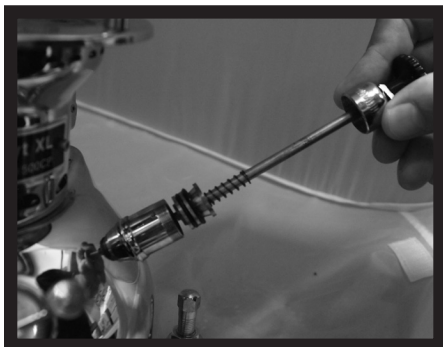


# ***EZ-Pump Accessory Instructions***

*(Optional Accessory)*

## **Step 1**

Unscrew hand pump assembly from the fuel tank. Expect the plunger to be a little difficult to remove.



## **Step 2**

Screw on the EZ-Pump accessory.

Fill the tank with compressed air via a tire pump or hand held CO2 filler. Be sure that incoming pressure does not exceed 30psi. Do not use a CO2 system over 12G.



***For a video tutorial on how to use your lantern  
or troubleshooting suggestions visit:  
[www.BriteLyt.com/howto](http://www.BriteLyt.com/howto)***



# ***EZ-Cook Accessory Instructions***

*(Optional Accessory)*

## **Step 1**

Loosen the handle/reflector screws to remove the hood/cover from the lantern.

Replace the hood/cover with the EZ-Cook adapter using the set grooves as guides.



# *Multiple Fuel Operation Guidelines*

## **IMPORTANT:**

The preheat times listed are approximate. Variables such as altitude, humidity and temperature will have an impact.

## **DO NOT BURN HOMEMADE/CUSTOM FUELS!**

Burning fuels that are not listed in this manual should be done at your own risk. BriteLyt assumes no responsibility for the burning of non listed fuels.

Burning fuels not listed in this manual can cause permanent and irreversible damage to your lantern.

**Alcohol based fuels (ethanol or methanol), or pure oil (vegetable, motor, industrial), should not be burned on their own.**

If using any of the fuels listed above you must mix with another fuel, in a 50/50 ratio for your lantern to run properly.

BriteLyt assumes no responsibility for burning these fuels unmixed.

If you have questions or concerns in regards to burning particular fuels please contact us at (727) 451-7020 or by email at [\*\*customerservice@britelyt.com\*\*](mailto:customerservice@britelyt.com)

### **Gasoline Type Fuels**

*Pre-Heat Time approximately: 10 to 35 seconds*

*Examples: Coleman Fuel, Gasoline, White Gas, Paint Thinner, Lighter Fluid, Mineral Spirits without Oil.*

### **Oil Based Fuels**

*Pre-Heat Time approximately: 15 to 45 sec*

*Examples: Kerosene, Lamp Oil, JP Fuels, Citronella Oil, Mineral Spirits with Oil.*

### **Heavy Oil Base Fuels (50/50 Mixture Recommended)**

*Pre-Heat Time approximately: 45 sec to 2 min.*

*Examples: Diesel Fuel or Bio-Diesel.*

**Below are recommendations for mixing fuels in order to improve efficiency and safety. The recommended mixture is 50/50 but can be adjusted to match your conditions.**

#### **Kerosene and Gasoline Type Fuel**

*Pre-Heat Time approximately: 15 to 30 sec*

*Total Run Time Approximately: 10 to 12 hours*

*Examples: Kerosene mixed with any of the following fuels: Coleman, Paint Thinner and All Alcohol Fuels.*

#### **Diesel and Gasoline Type Fuel**

*Pre-Heat Time approximately: 20 to 40 sec.*

*Total Run Time Approximately: 10 to 15 hours.*

*Examples: Diesel mixed with any of the following fuels: Coleman, Paint Thinner and All Alcohol Fuels.*

#### **Biodiesel and Gasoline Type Fuel**

*Pre-Heat Time approximately: 45 sec to 2 min*

*Total Run Time Approximately: 10 to 25 hours.*

*Examples: Diesel mixed with any of the following fuels: Coleman, Paint Thinner and All Alcohol Fuels.*

#### **Motor Oil and Gasoline Type Fuel**

*Pre-Heat Time approximately: 1 1/2 to 3 min and may have to use Alcohol cup and not preheater (part 35). (Must test pre-heater if it does not work use heat cup part 35)*



**4500 140th Ave N, Ste 101 - Clearwater, FL 33762**

**(727) 451-7020 Fax: (727) 451-7198**

**[www.BriteLyt.com](http://www.BriteLyt.com)**

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