

## Brasslite Stove Instructions - Brasslite Turbo II-D

**Before using your Brasslite stove please be sure to completely read and understand terms of use, disclaimer, warranty and instructions described below. By using the stove, you agree to the terms of use, the disclaimer and the warranty. If you have questions, please directly contact the manufacturer listed at the end of the instructions.**

### TERMS OF USE/CAUTIONS:

This stove is intended for cooking while backpacking or camping outdoors. It is NOT intended for use as a space heater. It is NOT intended for interior use such as inside a house, apartment, trailer or any other enclosed domicile. **NEVER** use this stove inside a tent or under a low-hanging vestibule or tarp, due to fire danger. Oxygen depletion and carbon monoxide poisoning may also be the result of using this stove in any confined space, causing injury or death. Use common sense. **BE SAFE, NOT SORRY.**

**WARNING:** This stove is intended for use with **alcohol ONLY**. **NEVER** use Coleman Fuel (white gas), gasoline, acetone, laquer thinner or a similarly volatile liquid inside this or any other alcohol stove. Using such fuels will almost certainly result in a large flare-up which may create a hazardous fire condition.

**DO NOT OVER-FILL THE STOVE.** The stove has a recommended maximum fuel capacity of 2 US fluid ounces (60 ml). Over-filling the stove will cause fuel to spill out of the side ports. If alcohol is seen spilling from the holes prior to lighting the preheat fuel, the stove is definitely overfilled. Do not light the stove. Pour the alcohol from the stove back into the fuel bottle and measure again.

**CAUTION:** In daylight the flame of an alcohol stove is virtually invisible. Unlike a white-gas or compressed-gas stove, there is no hissing sound to assure you it's running. When lighting the stove in daylight it helps to have the windscreen partially around the stove so that the flame can be seen more easily.

**NEVER** attempt to light this stove if the stove is in any position other than sitting upright on its base. **NEVER** add fuel to the stove while it's still lit. Make sure that all flame is extinguished before adding fuel. Adding fuel while the stove is lit may result in a hazardous fire.

### DISCLAIMER

Backpacking involves serious dangers such as (but not limited to) injury, death, impairment of one's self or others, damage or destruction of property, and emotional trauma. All backpacking stoves create a potentially hazardous condition for the user. Seller assumes no responsibility for the condition and operation of this stove by buyer. Buyer assumes all responsibility for the use of this stove. Buyer assumes all risk of loss and injury and warrants that he or she will defend, indemnify and hold seller harmless. Buyer represents that no reliance is made upon any act or conduct of the seller.

### WARRANTY

The stove has been tested to safely support a weight up to 20 lbs. (9 kg.) without deforming. If a full cook pot is placed forcefully or dropped onto the stove, a force many times the weight of the pot is created and this may result in deformity of the stove chamber. The stove may also deform if dropped, stepped on, or stored loosely in a backpack. It is intended that it be stored inside a cook pot or other container. This stove is constructed of thin sheet metal and it must be handled with care. With proper care this stove will last for many years. This stove was tested at the time of manufacture and was in good working order at the time of shipping. It is warranted to be free from structural defects for as long as the original buyer owns the stove. "Structural defects" refers specifically to voids or breaks in welds, solder seams and/or wall surfaces that rarely develop during normal use. In the rare case of a bona fide structural defect, seller agrees to pay the cost of return shipping charges and provide a new stove at no additional charge. Punctures, dents or other deformities that occur during use do not constitute structural defects. It is not recommended that the stove be operated in other than original condition and therefore seller makes no offer to repair any damages inflicted by buyer. No other warranty either express or implied is offered.

### STOVE RETURN POLICY

A stove may be used for up to 30 days and returned without explanation, provided that it is undamaged. Damage includes dents, deep scratches and other blemishes that cannot be removed with cleaning agents. Discoloration/oxidation of the metal during firing is normal and does not constitute damage. At Brasslite's discretion there may be a \$10 fee to cover the time and materials of cleaning a returned stove. Shipping charges are not refundable. An additional fee of \$2 is applied if the stove was purchased using PayPal, since those fees are not refunded to Brasslite. In the event that a stove is returned, cleaned, and damage is discovered, the customer is required to keep the stove and must pay for the cleaning fee and return postage. Decisions made by Brasslite are final. After 30 days, stoves are not returnable.

### Instructions for making the Brasslite Windscreen

**Important Note:** Your stove does not include a windscreen. This simple but time-consuming step has been omitted in order to keep stove labor costs down. Also, pots come in different sizes and accurate cutting according to your pot size saves more weight than a "fits all" windscreen. The instructions are easy to follow.

**Materials:** 12" wide heavy duty aluminum foil (purchase from any grocery store), paper clips (optional). Alternatively, aluminum oven liner can be used, which is thicker and more durable. If you use oven liner, use a single layer cut to the dimensions listed below (instead of folding it over itself to make it thicker, like you would do with the aluminum foil).

**Tools needed:** Yardstick or tape measure, permanent black marker (a sharpie works well for this), scissors, standard office paper hole punch.

1. Measure the pot you intend to use by wrapping a tape measure around the widest point, or alternatively, wrap a piece of string around the pot and measure the length of it. Add 6 inches to the measurement. Unroll twice this amount of foil from the container, plus a little extra. You can always trim later if needed.
2. With dull side facing up, fold the foil widthwise so that it's 12" high, and "X" number of inches long. Smooth foil flat.
3. Fold the foil lengthwise in half to obtain a strip that is 6" high, and "X" number of inches long. Smooth foil flat. The piece is now four layers thick.
4. Fold loose long side over ¼ inch to reinforce it, then fold again. With this fold facing up, wrap foil around pot under the handle while the pot is sitting on the stove, and check to see that there is 2 inch overlap of the ends, with the correct 0.5" gap between windscreen and pot. Trim foil as needed with scissors to get the correct overlap. Fold cut end over ¼ inch to reinforce it.
5. Using the paper punch, and starting 1inch from the end, cut holes at 1inch intervals ½ inch above the bottom of the windscreen to within 1inch of the other end. This allows proper airflow during cooking.

If you have a pot that uses a pot gripper, trimming angles at the corners opposite the holes is not necessary. If your pot has permanently attached handles it's necessary to adjust the ends so that the windscreen will sit closely enough to the pot with the handles protruding out. Fold the corners of the screen down at a 45 degree angle and gradually increase the size of the fold until the windscreen sits with the proper overlap, there is the recommended gap of 1/2" between cook pot and windscreen and it doesn't interfere with the handles. If there is a lot of extra material in the folds when done, trim the excess material as needed.

**To assure proper stove operation it's important to make sure that the windscreen is not wrapped too closely to the stove during firing. A minimum gap of 0.5 inches (1.25 cm) is critical for airflow and proper stove operation. Wrapping the windscreen too tightly may cause the stove to overheat, resulting in flaring and rapid consumption of the fuel. Use the largest possible opening according to the limitations of wind conditions.**

## Filling and Lighting Stove

**Acceptable fuels for Brasslite Stoves:** Pure methanol (such as HEET brand auto gas-line de-icer, or its generic equivalent), ethanol/methanol mixture (a.k.a. denatured alcohol sold in paint and hardware stores), pure ethanol (expensive). **Note:** Isopropanol (i.e. ISO-HEET, or rubbing alcohol) is **NOT** recommended because it burns with a very sooty flame. No other fuels are recommended. Use of other fuels voids warranty. See terms of use above for details.

### Filling Stove Using Custom 8 oz. and 16 oz. Dispenser Bottle: \*

Amount Of Water To Boil	Amount Of Alcohol Needed	Number of 8oz. Reservoir Measures	Number of 16oz. Reservoir Measures
16 oz. (500 ml)	0.75 oz. (22 ml) +	1 1/2	3/4
24 oz. (750 ml)	1 oz. (30 ml)	2	1
32 oz. (1 liter)	1.5 oz. (45 ml)	3	1 1/2
40 oz. (1250 ml)	2 oz. (60 ml)	4	2

\* **Maximum recommended fuel capacity for Turbo II-D: 2 US fluid ounces (60 ml).** Minimum fuel quantities for boiling are suggestions based on field-testing and owner reports. They may need to be adjusted to accommodate your specific pot, windscreen configuration, hiking environment. Longer cooking will require more alcohol. + Except in cold weather, the Turbo II-D may require less than 0.75 oz to bring 16 oz. of water to boil. Experiment with your pot and conditions.

**Normal Weather Ignition Instructions:** *Note: The preheat procedure for cold weather is recommended if the temperature is below freezing, or if a rapid firing of the stove is desired.*

- 1) Choose desired fireproof, level cooking surface. Unfold, smooth and place reflector. Make sure that the ports (air intakes) at the bottom of the stove are fully open and that the simmer sleeve is not partially covering them. Place stove in center of reflector.
- 2) Place windscreen partially around stove.
- 3) Loosen dispenser spout by rotating (twist top) or flipping up (flip top) tip of spout. Holding bottle with spout pointing up, squeeze the desired amount of fuel into the small reservoir. Invert bottle and insert tip of spout into the large top port of the stove. While holding the bottle upside down and straight up, squeeze the bottle to dispense the fuel into the stove. Tilting bottle during filling may result in too much fuel being dispensed. Repeat step 3 as necessary to dispense the desired amount of fuel for the amount of water you want to boil.
- 4) Squirt a small quantity of fuel on the top of the stove, near the top hole. Ignite the alcohol you just placed on the top of the stove using a match or piezo-electric type lighter. Place pot on the center of the stand and immediately enclose pot with foil windscreen. Remember to tighten spout and cap before storing.

**Cooking in cold weather:** Alcohol stoves need special care to operate properly in cold weather conditions. The stove won't operate well if heat isn't maintained in the stove body after ignition. In cold weather it's helpful to carry a 6" square of 1/2" thick fiberglass insulation and same-size piece of heavy-duty aluminum foil to put under the stove to prevent heat loss in the stove body. To conserve fuel and make stove performance more consistent, please also observe the following procedure: At night store your fuel and water bottles inside your sleeping bag at the foot end. While hiking during the day, keep the fuel and water bottles buried inside your pack rather than storing them in an outside pocket.

### Cold Weather Ignition Instructions:

- 1) Follow steps #1, #2, and #3 above
- 2) Squeeze alcohol into priming pan at base of stove until pan is close to full (2 ml, 1/2tsp). Place pot on the center of the stand, and ignite alcohol in pan using match or piezo-electric type lighter. Immediately enclose pot with foil windscreen.

**Using the Simmer Sleeve:** The stove is too lightweight to adjust the simmer sleeve without a pot sitting on the stove. After your water has boiled, if simmering is desired, hold the handle of your cook pot while the pot is sitting on the stove and apply gentle pressure to keep the stove in place. Use a metal utensil (not plastic) or a stick to push the handle, rotating the simmer sleeve until the ports are covered. **DON'T TOUCH THE SLEEVE, THE STOVE WILL BURN YOU!** The flame will gradually reduce to a simmer level. It takes a little time to increase or decrease the flame. If you expect the Turbo II-D to be as responsive as a gas canister stove, you will be disappointed. With a little practice, a wide range of flame levels can be achieved by varying the degree of port closure. Be patient and learn what your stove can do. **Note:** The simmering function performs best if the stove is heated first. Adjusting the sleeve to its fully closed position before the stove is heated may cause the flame to extinguish. **Important:** If cooking finishes before fuel is gone, allow remaining fuel to burn off before cooling stove and storing. It's recommended that you store your stove inside your cook pot to protect it. Wrap it in a bandana or pack towel to prevent it from rattling around. This cloth can double as a potholder.

### Stove Tips:

**Maintaining Stove:** Brasslite stoves require very little maintenance. If sooty deposits form on the surfaces, gentle scrubbing with an old toothbrush, abrasive cleanser, and hot water will usually remove them. If soot is really stubborn, boil the stove in a pot of soapy water for 5 minutes then scrub the stove gently with a steel wool soap pad. Follow up with the brushing described above. Be careful and gentle. Remember that the metal is thin and if you press too hard you can dent or deform the stove chamber. Rinse the stove to remove any soap residue, drain out the water, and allow the stove to dry before storing.

**Choice of Cook Pot:** Pot choice is important to maximize fuel efficiency and cooking performance. All backpacking stoves heat the pot only from the bottom. When comparing two pots of the same capacity, a wider, shallower pot is always preferable over a higher, narrower pot. A tight-fitting lid and properly used windscreen will dramatically improve performance and efficiency. The Turbo II-D is intended for use with a pot having a minimum base diameter of 5" (12.5 cm) and a maximum base diameter of 7" (17.5 cm) and 2 liters capacity. Larger pots are not recommended because of possible stability problems. Narrower pots may have a problem with flame spilling out the sides and into the air, wasting heat and lengthening boil times. Flame spillage may be controlled with the simmer sleeve.

**Adjusting Simmer Sleeve:** If the simmer sleeve doesn't rotate easily, it may be loosened by one or both of the following methods:

- 1) Insert the blade of a butter knife in-between the leaves of the handle from the bottom side of the stove, and twist gently, separating the leaves slightly.
- 2) Grasp the handle in one hand while holding the stove body firmly in the other hand, and pull gently on the handle, separating the leaves. Excessive twisting and pulling on the handle may result in stress breakage. Be careful.

Your questions, suggestions and comments are always welcome. Feel free to email and your communication will be answered as quickly as possible. If you enjoy your Brasslite stove and think it's a good product please be sure to recommend it to your hiking comrades.

Thanks for your purchase, and happy trails!

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