

## Limited Warranty

The WhisperLite Shaker Jet stove has a five year limited warranty. Should this product fail during the five year warranty period, return it to one of our authorized repair facilities. We will repair or replace it at our option, free of charge. Repairs required due to improper use or care, negligence, product modification, or accident are not covered under this warranty agreement, but will be performed at a nominal charge upon request. This warranty applies only to the original purchaser. Proof of purchase is required. Products purchased from an independent dealer should be returned to the dealer for forwarding to MSR. Shipping cost to MSR is the responsibility of the purchaser. Return postage will be paid by MSR. EXCEPT AS PROVIDED HEREIN, MSR MAKES NO WARRANTIES, EXPRESS OR IMPLIED INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. MSR SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER. This warranty gives you specific legal rights. You may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations or exclusions of implied warranties, so the above exclusion and limitation may not apply to you.

For more product information or to answer your safety questions, contact MSR Customer Service. MSR will also service your stove or provide replacement instructions on request.  
**Mountain Safety Research**  
Customer Service: (206) 624-7048  
P.O. Box 24547  
Seattle, WA 98124 USA  
USA Toll Free: 1-800-877-9677  
FAX: (206) 224-6492

# MSR WhisperLite™ Shaker Jet Stove

Model #311450



**TO AVOID INJURY, read, understand, and follow all instructions and warnings in this manual before using the stove. (Version 1.1)**

## **⚠ WARNING: TO AVOID INJURY, read, understand and follow all instructions and warnings in this manual before using the stove.**

Use **ONLY** MSR Fuel Bottles with this stove. Non-MSR Fuel Bottles may result in fuel leakage and/ or separation from the Pump. Fuel may ignite possibly resulting in injury or death.



**DO NOT** light or use indoors, in a tent, vehicle or other enclosed areas. A fire or carbon monoxide poisoning could cause injury or death.



**ALWAYS** check for spilled fuel and fuel leaks before lighting stove. If leaks are found, **DO NOT USE STOVE**. Repair it or send it to MSR retailer or MSR Product Service Center for repairs.

**NEVER** put your head or body above stove when priming, lighting or burning. Keep clothing and other materials that may catch fire away from stove.



**NEVER** unlock the Catch Arm or disconnect the stove, Pump or Fuel Bottle when the stove is lit, warm from recent use or near any flame or heat source. Leaking fuel can cause a serious fire hazard.



**DO NOT** relight a warm stove. Warm stove parts may vaporize liquid fuel and cause a dangerous "fireball" when relighting.

**DO NOT** shake a stove in operation.

Below about -24° C (-10° F) O-Rings may become stiff and can leak or break causing a fire.



**DO NOT** place heavy or large capacity cookware on the stove (Maximum weight: 8 lbs, maximum pot diameter: 9").

Before taking the stove on a trip, check for fuel leaks and practice using and maintaining it.



**NEVER** leave a burning or hot stove unattended. **NEVER** allow children to use stoves. **ALWAYS SUPERVISE CHILDREN IN THE VICINITY OF THE STOVE.**

**DO NOT** use the stove in any way other than as described in these instructions. **DO NOT** alter the stove or use non-MSR parts. **DO NOT** disassemble beyond what is described in these instructions.

**FAILURE TO FOLLOW THESE WARNINGS AND INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH!**

## White Gas Information

White gas is also called "pressure appliance fuel," common brands include MSR® White Gas, Coleman® Fuel and CampLite®. The fuels chart below is a guide to help you find white gas when travelling internationally. If you have difficulty finding this fuel in backpacking or sporting goods stores, try gas stations, hardware stores, or general merchandise/ drug stores.

Germany/Switzerland	USA/UK/Japan/Canada	Australia	France	Italy	Spain
reimbenzin	white gas	shellite	essence c	benzina bianca	benzina blanca

## Assembling the Stove

1. Unscrew the Fuel Bottle Cap from the Fuel Bottle. Fill the MSR Fuel Bottle to the FILL LINE.
2. Screw the Pump snugly into the Fuel Bottle.
3. Pump the Plunger 15-20 strokes. If the Fuel Bottle is half full, pump the Plunger 40-55 strokes, or until firm resistance is felt when pushing down Plunger. *The less fuel in the Fuel Bottle, the more Pump strokes needed to pressurize it for proper stove operation.*
4. Insert the stove's Fuel Line through the hole in the Heat Reflector (Figure 1).
5. Rotate two Legs into the slots in the Flame Reflector (Figure 1).
6. Lubricate the end of the Fuel Line lightly with MSR Pump Cup Oil (saliva or other mineral-based lubricant), then insert it into the Fuel Tube Bushing on the Pump (Figure 2a).
7. Snap the Catch Arm securely into the slot on the Pump Body (Figure 2b).

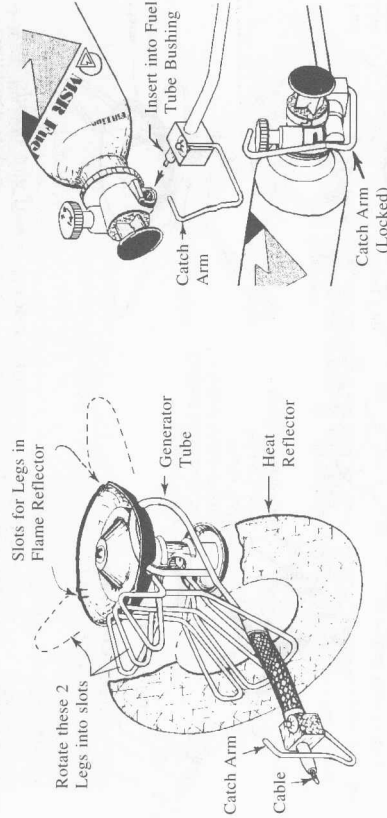


Figure 1

Figure 2a & 2b

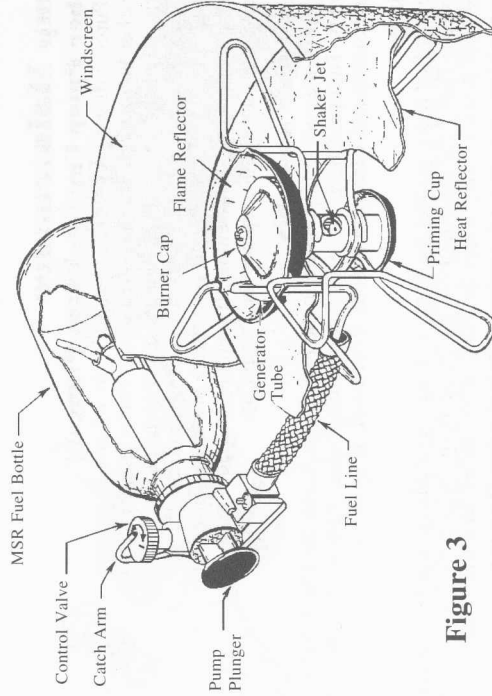


Figure 3

## Operating the Stove

### Before lighting the stove check that:

- Stove assembly has no fuel leaks.
- Catch Arm is locked and stove is properly assembled.
- Area is clear of flammable material and spilled fuel.

### Priming

“Priming” pre-heats the stove to turn the liquid fuel into a vapor. To pre-heat properly, the priming flame must contact the Generator Tube. Insufficient priming may result in flare-up.

1. Open the Control Valve (☺) until fuel flows through the Jet and fills the Priming Cup 1/2 full.
  2. Turn the Control Valve off (☹).
  3. Check for leaks at the Control Valve, Pump, Jet and Fuel Line. **If leaks are found, DO NOT USE STOVE** (See “Troubleshooting”).
  4. Light the priming fuel.
  5. Place the Windscreen around the stove, then fold the ends together to keep it securely in place.
- Turning the Stove On**
1. When the priming flame is down to a small flame (about 30 - 60 seconds), slowly open the Control Valve (☺).
  2. If the stove:
    - Goes out, turn the Control Valve off (☹). After the stove cools, return to “Priming.”
    - Burns with erratic yellow flames, but the Priming Cup flame is still burning, turn the Control Valve off (☹) and pre-heat longer.
    - Burns with a blue flame, wait 1 minute then adjust to ☺ desired setting. *There is a delay between turning the Control Valve and changes in the flame.*
  3. To maintain stove performance, pump the Plunger 3 - 5 strokes as needed to keep enough pressure in the Fuel Bottle. You should feel firm resistance when you pump down on the Plunger. The less fuel in the Fuel Bottle, the more Pump strokes needed to pressurize it for proper stove operation. Do not over-pressurize. Fuel Bottle pressure that is too high causes erratic flames. Fuel Bottle pressure that is too low causes low flames and very slow burn times.
  4. To simmer, operate the stove at low Fuel Bottle pressure. Turn the Control Valve down until the flame becomes unsteady, then open Control Valve until the flame stabilizes.

### Turning the Stove Off

1. Turn the Control Valve off (☹). The flame will take 1 - 2 minutes to die out. **WAIT** for the stove to cool before disassembling.
2. To depressurize the Fuel Bottle: unlock the Catch Arm and pull the Fuel Line out of the Pump/ Fuel Bottle assembly. **Away from heat, sparks or flame**, hold the Fuel Bottle upright, turn the Pump/ Fuel Bottle away from you, and unscrew the Pump to release pressure.
3. For transporting or storing: leave the Pump assembled in the Fuel Bottle or, to be sure the Control Valve does not open by mistake, unscrew the Pump and replace it with the Fuel Bottle Cap.

## Troubleshooting

### Problem Solution

#### Fuel Leaks

- Control Valve**
- Replace torn or damaged Control Valve O-Ring.<sup>(1)</sup>
  - Damaged or stripped Pump threads from over tightening the Control Valve or forcing the Control Valve past the Stop-Nut. Send Pump to MSR retailer or MSR Product Service Center for repairs.

- Pump / Fuel Bottle Connection**
- Replace torn or damaged Fuel Bottle O-Ring.<sup>(1)</sup>
  - Dented or damaged Fuel Bottle threads or use of a non-MSR Fuel Bottle. Replace Fuel Bottle. **USE ONLY MSR Fuel Bottles.**

- Fuel Line / Pump Connection**
- Replace torn or damaged Fuel Tube O-Ring.<sup>(1)</sup>
  - Replace damaged or missing Fuel Tube Bushing.<sup>(1)</sup>

- Fuel Line**
- Damaged Fuel Line. Send stove to MSR retailer or MSR Product Service Center for repairs.

- Shaker Jet**
- Make sure the Shaker Jet is installed tightly and Control Valve is off.<sup>(1)</sup>
  - If fuel leaks through Shaker Jet when Control Valve is off, the Pump is damaged from over tightening the Control Valve. Send Pump to MSR retailer or MSR Product Service Center for repairs.

- Pump Bushing**
- Clean the Check Valve Assembly (See "Pump Maintenance").

#### Erratic Performance

- Erratic Yellow Flames**
- Insufficient priming. (See "Priming").
  - Over pressurized Fuel Bottle. If stove burns with erratic, yellow flames, Fuel Bottle pressure may be too high. Turn Control Valve down.
  - Using improper fuel. Use white gas only.
  - Poor quality or old fuel. Filter fuel that looks cloudy or has sediment at bottom of container. Use fresh, clean fuel and store in airtight containers.
  - Incorrect Flame Ring installation under Burner Cap. Correct Flame Ring order is: Wavy, Flat, Wavy, Flat, Wavy, Flat, Wavy.
  - Weather conditions cooling Generator Tube. Always use Windscreens and Heat Reflector to keep Generator Tube hot enough to vaporize fuel and to protect stove from wind and weather conditions. Prevent stove and Windscreens from melting into snow or ice.
  - Lack of oxygen at high altitudes. Reduce Fuel Bottle pressure and open the Windscreens.

#### Reduced Performance

- Diminishing Flame or Slow Boil Times**
- Insufficient Pressure in the Fuel Bottle. Pump the Plunger until firm resistance is felt when pumping down on plunger. The less fuel in Fuel Bottle, the more Pump strokes needed to pressurize.
  - Clogged Shaker Jet and/ or Fuel Line (See "Burner Maintenance"). *Persistent/frequent clogging is most often caused by poor quality or old fuel. Change your fuel and thoroughly clean the Jet & Fuel Line.*
  - If the Burner Cap becomes bright red and a dull roar is heard, the flame is "burning back" under the Burner Cap rather than through the Flame Rings. Pump the Plunger to keep enough pressure in the Fuel Bottle. If clogged, clean the Shaker Jet. Ensure Flame Rings are installed correctly.

#### Pump Not Pressurizing

- Dry Leather Pump Cup (See "Pump Maintenance").<sup>(1)</sup>
- Dirt in Check Valve Assembly (See "Pump Maintenance").

## Burner Maintenance

### Clearing the Jet

1. Turn the Control Valve off . Wait for the stove to cool, then shake it to clear the Jet.

### Cleaning the Jet & Fuel Line

1. If the Shaker Jet Needle does not move freely inside the Jet, clean the Jet. Unscrew the Priming Cup. Pull the Generator Tube out of the Mixer Tube. Unscrew the Shaker Jet using the Jet & Cable Tool. Remove the Needle and clean inside the Jet. If the stove is still clogged, go to step 2.
2. **Scour the Fuel Line:** Pull the Cable out of the Fuel Line using the Jet & Cable Tool. Wipe the Cable. Push the Cable in and out of the Fuel Line 20 - 30 times to scour the Generator Tube. Repeat scouring and wiping until clean. Reinstall Cable.
3. **Flush the Fuel Line:** With the Jet and Needle out, insert the Fuel Line into the Pump's Fuel Tube Bushing. Pump the Plunger to pressurize the Fuel Bottle. Open the Control Valve and run a 1/2 cup of fuel through the Fuel Line and into a fuel container. Repeat flushing until clean. **Warning: When flushing keep away from heat, sparks and flame. Do not spill fuel.** Reassemble.

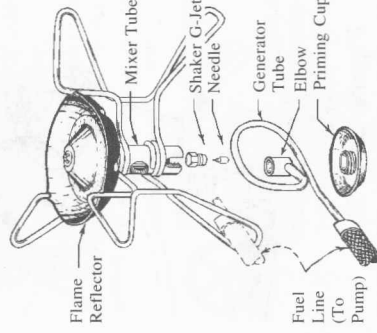
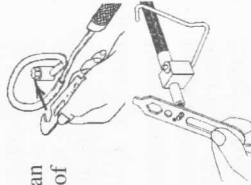


Figure 4

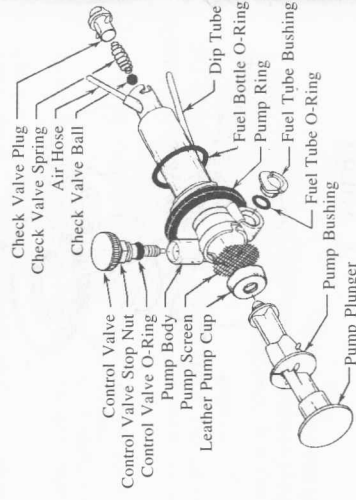


Figure 5

## Pump Maintenance

### Leather Pump Cup (on Pump Plunger)

If the Pump will not pressurize the Fuel Bottle, oil and stretch out the Leather Pump Cup. Turn the shaft of the Pump Plunger below the swiveling head and pull the Plunger out (Figure 5). Rub MSR Pump Cup Oil (saliva or other mineral-based oil) into the Pump Cup until soft and pliable. Rotate your finger inside the Pump Cup to expand its diameter. Reassemble. If pumping still does not pressurize the Fuel Bottle, replace the Pump Cup.



### Check Valve Assembly

If the Pump does not hold pressure in the Fuel Bottle, clean the Check Valve Assembly. Turn the Check Valve Plug counterclockwise. Remove the Check Valve Ball and Spring and wipe with a cloth. Reassemble (Figure 5).

### O-Rings

To prevent fuel leaks, inspect the Pump O-Rings regularly for cracks or damage. Remove the Fuel Tube Bushing from the Pump Body. Inspect the Fuel Tube O-Ring and the Fuel Bottle O-Ring under the Pump Ring. **To avoid a fire, if the O-Ring is cracked, pitted, or damaged, replace it before using the stove.**<sup>(1)</sup>

<sup>(1)</sup> Stove and Pump replacement parts are available in the WhisperLite/ WhisperLite Shaker Jet Maintenance Kit. If you need help diagnosing a problem or maintaining your stove, call MSR Customer Service or contact your nearest MSR retail dealer.