

WHISPERLITE™ UNIVERSAL STOVE

Retain these instructions for future reference.



MOUNTAIN SAFETY RESEARCH®

INSTRUCTION MANUAL



		0051
Nominal Heat Input Rate: 2.4 kW, 18.5 g/h	Stove Orifice Size (LPG): 0.31 mm	
NOTE: Nominal Heat Input Rate varies depending on test procedures of the particular standards agency.		

FOR OUTDOOR USE ONLY

WARNING
Improper installation, use, adjustment, alteration, service, or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult Cascade Designs.

Limited Warranty details at msrgear.com/warranty



MOUNTAIN SAFETY RESEARCH®

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#336021 EN

Printed on recycled paper containing 30% post-consumer waste.

RECYCLABLE

PUMP AND FUEL ADAPTER MAINTENANCE

O-rings can become dry, cracked or torn with use. Their lifespan is affected by dirt, debris, temperature, friction and frequency of use. For this reason, please inspect your O-rings before every trip. Replace dry, cracked or torn O-rings immediately, and replace all O-rings annually, regardless of appearance. Replacement O-rings and Pump Seals can be found in the Annual Maintenance Kit or the more comprehensive Expedition Service Kit, purchased separately from an MSR® dealer.

REPLACING FUEL TUBE O-RING

1. Remove Plunger.

Align, twist, and pull

Remove Fuel Tube and O-ring with Jet and Cable tool.

Remove the O-ring with the end of the Fuel Adapter

or Safety Pin.

If needed, use a spare red fuel

O-ring provided.

4. Lubricate Pump Cup.

Use a drop of Pump Cup Oil or any mineral-based oil.

5. Insert Plunger.

Hold thumb and forefinger firmly around **Arrow 1**.

Push Plunger Bushing into hole in Pump Body until it stops in place.

6. Align Plunger.

Push the Pump Body until it stops in place.

7. Remove Plunger.

8. Align Plunger.

Push the Pump Body until it stops in place.

9. Align Plunger.

Push the Pump Body until it stops in place.

10. Align Plunger.

Push the Pump Body until it stops in place.

REPLACING PUMP SEAL

Inspect Pump Seal and replace if damaged.

1. Turn Check Valve Assembly to remove.

2. Wipe any debris from Check Valve

3. Reinert Check Valve Assembly.

4. Remove O-ring with Safety Pin.

5. Lubricate Pump Cup.

Use a drop of Pump Cup Oil or any mineral-based oil.

6. Insert Plunger.

Hold thumb and forefinger firmly around **Arrow 1**.

Push Plunger Bushing into hole in Pump Body until it stops in place.

7. Remove Plunger.

8. Align Plunger.

Push the Pump Body until it stops in place.

REPLACING THE CHECK VALVE

1. Turn Check Valve Assembly to remove.

2. Wipe any debris from Check Valve

3. Reinert Check Valve Assembly.

4. Remove O-ring with Safety Pin.

5. Lubricate Pump Cup.

Use a drop of Pump Cup Oil or any mineral-based oil.

6. Insert Plunger.

Hold thumb and forefinger firmly around **Arrow 1**.

Push Plunger Bushing into hole in Pump Body until it stops in place.

7. Remove Plunger.

8. Align Plunger.

Push the Pump Body until it stops in place.

STOVE MAINTENANCE

Deposits in the Jet and Fuel Line reduce fuel flow and impair stove performance. Minor deposits in the Jet can be cleared with the Shaker Needle. Major deposits may require more extensive cleaning of the Jet and Fuel Line. At a minimum, perform the following maintenance annually or every time you perform the Pump Maintenance.

CLEARING THE JET WITH THE SHAKER NEEDLE

1. Turn Control Valve and wait 5 minutes for stove to cool.

2. Shake stove up and down.

Shaker Needle inside Jet should rattle.

3. Preheat and run stove.

If performance does not improve, perform Cleaning the Jet and Fuel Line steps.

CLEANING THE JET AND FUEL LINE

1. Fold Pot Supports/Legs to packed position.

2. Unscrew Priming Cup and remove Wick.

3. Hold folded Pot Supports/Legs together.

4. Remove Fuel Line from Miser Tube.

IMPORTANT: Do not bend Generator Tube while loosening Jet.

5. Remove Shaker Needle and use it to clear Jet Orifice from top or bottom.

6. Scour Jet line.

7. Unscrew Fuel Adapter from Fuel Line.

8. Remove Cable from Fuel Line with Jet and Cable Tool. Stubborn cables can be loosened with a common lubricant (WD-40™, Pump Cup Oil, etc.).

9. Fully tighten Cable into Fuel Line.

10. Move Cable in and out with 5inch (13-centimeter) strokes approximately 20 times.

11. Wipe Cable clean.

12. Hold folded Pot Supports/Legs together.

13. Reinsert Fuel Line from Miser Tube.

14. Unscrew Jet with Jet and Cable Tool.

15. Fully open Control Valve to flush 4 spoonfuls of fuel through Fuel Line into an appropriate container. (Jet unthreaded.)

16. Close Control Valve and remove Fuel Line.

17. Safely dispose fuel when flushing is complete.

18. Reassemble stove.

If stove performance is still impaired, repeat Cleaning the Jet and Fuel Line steps.

19. Connect Liquid Fuel Adapter to Fuel line and install into Pump and Fuel Bottle.

20. Pressurize Fuel Bottle with 15 strokes.

21. Open Control Valve to flush 4 spoonfuls of fuel through Fuel Line into an appropriate container. (Jet unthreaded.)

22. Close Control Valve and remove Fuel Line.

23. Safely dispose fuel when flushing is complete.

24. If stove performance is still impaired, repeat Cleaning the Jet and Fuel Line steps.

TROUBLESHOOTING

PROBLEM

LEAKING FUEL

CAUSE

SOLUTION

At Pump and Fuel Bottle Connection or Fuel Line

Damaged or missing Pump Seal

Replace Pump Seal

At Control Valve Stem

Damaged or missing Control Valve O-ring

Replace Control Valve O-ring

In Pump Plunger Chamber

Obstructed Check Valve

Clean Check Valve/Cavity

Pump not pressurizing Fuel

Loose or poorly seated Pump

Tighten or reseat Pump

Damaged Pump Cup

Replace Pump Cup

Plunger hard to pump

Dry Pump Cup

Diminished flames

Low fuel

Replace canister

Wind conditions

Replace canister

Windy conditions

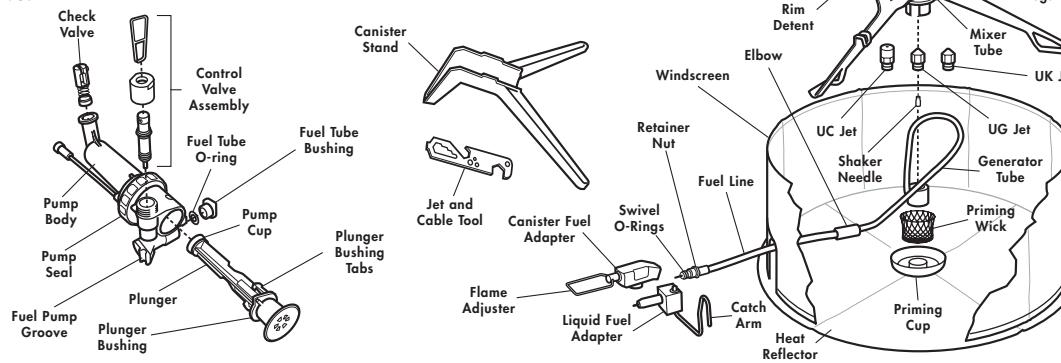
Use Wind Screen

Wind canister

Replace canister

KNOW YOUR MSR® WHISPERLITE™ UNIVERSAL STOVE

Please familiarize yourself with the parts of your WhisperLite Universal stove and the following instructions before its use. Because this stove can accommodate different fuels, you may need to exchange the preinstalled UC Jet and the Canister Fuel Adapter before using this stove.



⚠️ WARNING

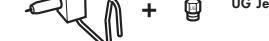
Do not use this stove: (1) before reading and fully understanding this Instruction Manual; (2) if you are not prepared or comfortable attending to a burning and/or hot stove at all times; (3) if you observe leaking fuel; or (4) if you observe any condition with the stove system or in the surrounding environment that would make operation of an open flamed device dangerous. Failure to follow these directions can cause an unsafe situation leading to fire, burns, severe injury or death.

STOVE PREPARATION

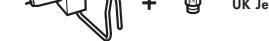
The WhisperLite™ Universal stove can be easily configured to burn white gas and unleaded gas, kerosene, and canister fuels. Before stove use, select the fuel and install the appropriate Jet and Fuel Adapter. (See Fuel Information.)



WHITE GAS AND UNLEADED AUTO GAS



KEROSENE



CONFIGURING STOVE FOR DIFFERENT FUELS

CHANGING THE JET

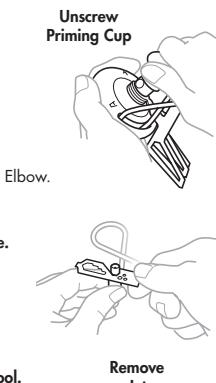
1. Fold Pot Supports/Legs.
2. Unscrew Priming Cup and remove Wick.
3. Remove Fuel Line from stove.
4. Loosen current Jet with Jet and Cable Tool.

→ Carefully unscrew Jet to avoid losing Shaker Needle inside the Elbow.

IMPORTANT: Do not bend Generator Tube while removing Jet.

5. Set new Jet carefully over the Shaker Needle and screw into place.
6. Hold folded Pot Supports/Legs together and reinstall Fuel Line.

→ Gently tighten Jet and Cable Tool.



Remove Jet

CHANGING THE FUEL ADAPTER

1. Loosen Retainer Nut on current Fuel Adapter with Jet and Cable Tool.
2. Unthread Retainer Nut and disconnect Fuel Adapter from Fuel Line.
3. Insert end of Fuel Line into new Fuel Adapter.
4. Gently tighten Retainer Nut with Jet and Cable Tool.

→ Loosen Retainer Nut

→ Insert Fuel Line

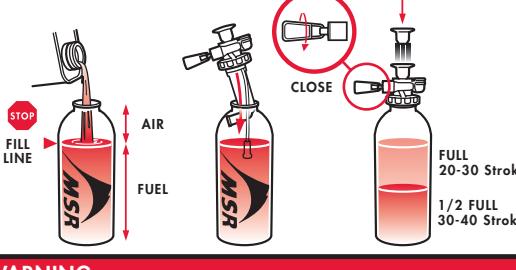
→ Tighten Retainer Nut

FUEL BOTTLE PREPARATION

Ensure that the WhisperLite™ Universal stove is configured with the correct Jet and Fuel Adapter. (See Stove Preparation.) If using a liquid fuel, prepare the Fuel Bottle before using the stove. If using a canister fuel, skip this panel and go now to Step 1, Set Up Stove.

PREPARING FUEL BOTTLE FOR LIQUID FUELS

1. Fill Fuel Bottle to fill line only.
2. Insert Pump into Fuel Bottle and firmly tighten.
3. Check Fuel Bottle for leaks before pressurizing the bottle.
4. Close the Control Valve, then stroke Plunger (20-30 strokes).



⚠️ WARNING

Use MSR® fuel bottles only. Non-MSR fuel bottles may leak fuel creating an unsafe situation leading to fire, burns, severe injury or death. Keep children far away from stove and fuel—Cascade Designs, Inc. recommends no less than 10 feet (3 meters). Never leave a burning or hot stove unattended. An unattended stove can lead to fire and/or a situation where children, pets, or the unwary can be burned, injured, or killed. Use extreme caution when using stove in temperatures below freezing. In freezing temperatures O-rings can stiffen and leak fuel. Always check for fuel leaks before and after pressurizing bottle, priming, and during and after lighting stove. Use of a leaking stove can cause fire, burns, severe injury or death.

2 CONNECT STOVE

Use UG Jet and Liquid Fuel Adapter for white gas and unleaded auto gas. Use UK Jet and Liquid Fuel Adapter for kerosene. (See Stove Preparation.)

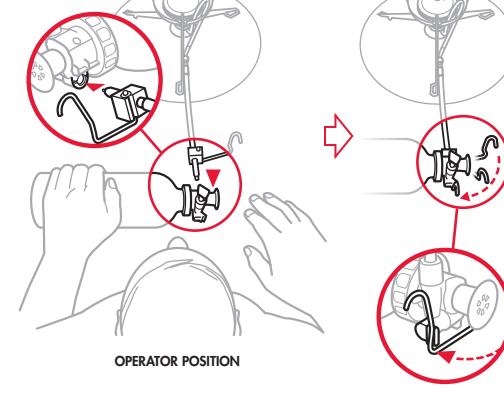
1. Lubricate the entire brass end of Liquid Fuel Adapter with saliva or oil.
2. Completely insert brass end of Liquid Fuel Adapter into Pump.

→ Place Fuel Bottle on its side so Control Valve points up.

3. Secure Catch Arm on Fuel Pump Groove.

Keep Fuel Line straight for safety.

Keep Fuel Bottle as far away from stove as possible.



⚠️ WARNING

Before every use, look for fuel on the fuel bottle, pump, fuel line, burner, and on the area beneath and around stove. Do not light stove if you see or smell fuel. (See Troubleshooting.) Use of stove where fuel has leaked or is leaking can cause fuel to ignite causing fire, burns, severe injury or death. Never disconnect the fuel line, pump, or fuel bottle when stove is burning, hot, or near any open flame. Never disconnect fuel line, pump, or fuel bottle when control valve is in an open (i.e., fuel flowing) position. Disconnecting fuel line, pump, or fuel bottle when stove is burning, hot, or near any open flame, or disconnecting fuel line, pump, or fuel bottle when control valve is in an open (i.e., fuel flowing) position can lead to spilled fuel that can ignite and cause fire, burns, severe injury or death.

3 TURN STOVE ON

1. Release only 1/2 spoonful of fuel.

→ Open Control Valve (3/4 turn) and let fuel flow through the Jet.

→ Close Control Valve.

Look for fuel in Priming Cup and on Wick.



⚠️ WARNING

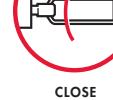
Never place your head or body above the stove while priming, lighting, or cooking. Because stove maintains an open flame, placement of head or body above stove is an unsafe practice that can cause fire, burns, severe injury or death. Never use excess fuel to preheat stove. Use of excess fuel for priming can lead to leaking or spilled fuel that can cause fire, burns, severe injury or death. Never relight a heated stove. Always let an extinguished stove cool for at least 5 minutes before relighting. Relighting a heated stove can cause large flames that can cause fire, burns, severe injury or death. Never move a burning or hot stove. Always extinguish stove and cool for at least 5 minutes before moving. Moving a burning or hot stove can cause fire, burns, severe injury or death.

1 SET UP STOVE

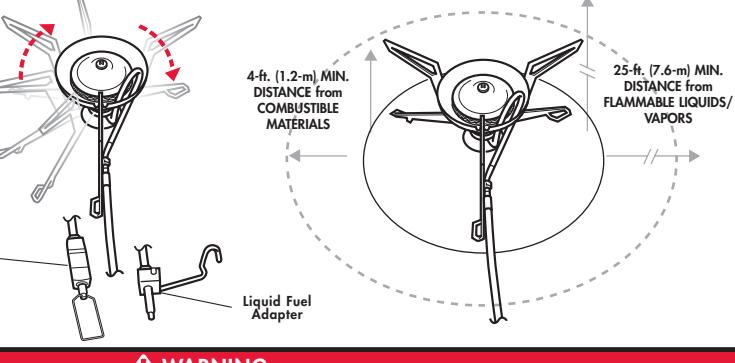
1. Close Control Valve/Flame Adjuster Valve.
2. Unfold the 3 Pot Supports/Legs.

→ Rotate Pot Supports/Legs fully open.

3. Place stove on the center of the Heat Reflector.



CLOSE



⚠️ WARNING

Keep combustibles at least 4 feet (1.2 meters) away from the top and sides of a burning stove or a stove that you are in the process of lighting. Keep flammable liquids and vapors at least 25 feet (7.6 meters) away from the top and sides of a burning stove or a stove that you are in the process of lighting. This stove can ignite combustible materials, flammable liquids and vapors creating a situation where fire, burns, severe injury or death can result. This stove is designed for the outside (i.e., not within enclosure spaces of any kind, e.g., tents) and for the boiling of water or cooking of food only—never use it for any other purpose. Use of stove within any enclosure or for a purpose other than boiling water or cooking food can cause fire, burns, severe injury or death.

4 USE STOVE TO COOK

LIGHT

1. Set up Windscreen.

→ Fold the ends of Windscreen together.

Leave a 1-inch (2.5-cm) gap between Windscreen and pot for optimal performance.

Ensure that combustion flow and ventilation air are free of any obstruction. Use Windscreen to improve performance in all conditions.

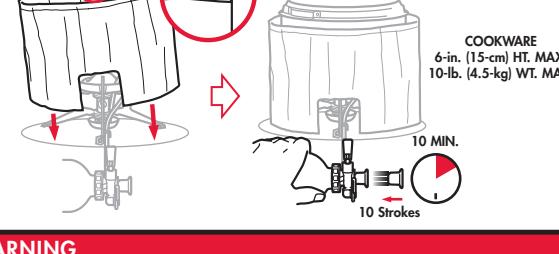
2. Add appropriate food or liquid to cookware.

3. Place cookware onto center of stove.

4. Maintain Fuel Bottle pressure.

→ Add approximately 10 strokes every 10 minutes to maintain performance.

→ Hold Fuel Bottle firmly while pumping.



⚠️ WARNING

Keep fuel bottle away from the stove burner and other heat sources. Position connected fuel bottle so that it is as far away from the burner as possible. Use of bottle near burner or other heat sources can result in the fuel bottle exploding and causing fire, burns, severe injury or death. Never place Windscreen around fuel bottle. Never use cookware with a diameter greater than 10 inches (25 centimeters). Never place and operate two or more stoves together. Never operate stove with empty or dry cookware. Never use non-MSR® reflectors or diffusers. Use of stove in any of the preceding manners can result in the fuel bottle exploding and causing fire, burns, severe injury or death. Never use cookware of any size that is ill-suited or inappropriate for use with stove or stove pot supports (e.g., cookware with a convex or concave bottom, some enameled cookware, etc.). Use of stove with ill-suited and/or inappropriate cookware can result in cookware and/or stove instability and a situation where hot cookware and/or cookware contents can spill and cause fire, burns, severe injury or death. Cascade Designs, Inc. warrants the use of appropriately sized MSR® brand cookware only—use of cookware other than MSR® brand cookware will be at user's own risk and discretion.

5 TURN STOVE OFF

LIGHT

1. Close the Control Valve.

Residual flame will continue to burn with a small flame.

2. After flames are out, wait 5 minutes for stove to cool.

3. Unlock Catch Arm and remove Fuel Line from Pump.

4. Depressurize Fuel Bottle and repack stove.

→ Hold Fuel Bottle upright, away from your face and any sources of heat or ignition.

→ Slowly unscrew pump to depressurize Fuel Bottle.

NOTICE: To transport the Fuel Bottle, the Pump may be left inside a depressurized Fuel Bottle. The Pump can also be removed and replaced with the Fuel Bottle Cap.

⚠️ WARNING

Always store fuel bottle with cap securely tightened where it cannot be accessed by children. Storage of fuel bottle with loose cap and easy accessibility by children can result in a child opening the fuel bottle and accessing bottle contents. Exposure to or ingestion of bottle contents can cause poisoning, severe injury, or death. Always store fuel bottle in a well-ventilated location away from any possible heat or ignition source, such as water heaters, stoves, pilot lights, or furnaces. Storing bottle near any heat or ignition source can result in the fuel bottle exploding and causing fire, burns, severe injury or death.

4 USE STOVE TO COOK

CANISTER

1. Set up Windscreen.

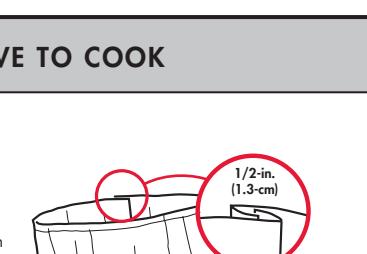
→ Fold the ends of Windscreen together.

Leave a 1-inch (2.5-cm) gap between Windscreen and pot for optimal performance.

Ensure that combustion flow and ventilation air are free of any obstruction. Use Windscreen to improve performance in all conditions.

2. Add appropriate food or liquid to cookware.

3. Place cookware onto the center of stove.



⚠️ WARNING

Never use cookware with a diameter greater than 10 inches (25 centimeters). Never place and operate two or more stoves together. Never operate stove with empty or dry cookware. Never use non-MSR® reflectors or diffusers. Use of stove in any of the preceding manners can result in the fuel canister exploding and causing fire, burns, severe injury or death. Never use cookware of any size that is ill-suited and/or inappropriate for use with stove or stove pot supports (e.g., cookware with a convex or concave bottom, some enameled cookware, etc.). Use of stove with ill-suited and/or inappropriate cookware can result in cookware and/or stove instability and a situation where hot cookware and/or cookware contents can spill and cause fire, burns, severe injury or death. Cascade Designs, Inc. warrants the use of appropriately sized MSR® brand cookware only—use of cookware other than MSR® brand cookware will be at user's own risk and discretion.

5 TURN STOVE OFF

CANISTER

1. Place the Fuel Canister in the upright position if inverted.

2. Close the Flame Adjuster Valve.

Residual flame will continue to burn with a small flame.

3. After flames are out, wait 5 minutes for stove to cool.

→ Remove Canister Stand if attached.

4. Fold Flame Adjuster Valve.

5. Move stove assembly away from any ignition sources and unscrew Fuel Canister.

A small amount of gas may escape when unscrewing canister.

If canister is completely empty of fuel, follow proper disposal requirements in your local area.

⚠️ WARNING

Always disconnect stove from canister before storing it. Failure to disconnect stove from canister before storing may allow fuel to leak and cause fire, burns, severe injury or death. Always store fuel canisters in a well-ventilated location away from any possible heat or ignition source, such as water heaters, stoves, pilot lights, or furnaces, or where temperatures exceed 120 F (49 C). Storing fuel canisters near any heat or ignition source or where temperatures exceed 120 F (49 C) can result in the canister exploding and causing fire, burns, severe injury or death.