

STOVE MAINTENANCE

TROUBLESHOOTING

| Problem: | Cause: | Solution: |
|------------------------------------|---|------------------------------|
| Leaking Fuel | | |
| At Pump and Fuel Bottle Connection | Damaged or Missing Pump Seal | Replace Pump Seal |
| At Pump and Fuel Line Connection | Damaged or Missing Fuel Tube O-ring | Replace Fuel Tube O-ring |
| 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 |

| Problem: | Cause: | Solution: |
|-----------------------------------|--------------------------|-------------------------------|
| Erratic Yellow Flames | Improper Preheating | Repeat Preheating Stove |
| Pump Not Pressurizing Fuel Bottle | Damaged Pump Cup | Replace Pump Cup |
| Plunger Hard to Pump | Dry Pump Cup | Lubricate Pump Cup |
| Diminished Flames | Low Fuel Bottle Pressure | Pump the Plunger |
| Slow Boil Times | Clogged Jet or Fuel Line | Clear Jet and Clean Fuel Line |
| Diminished Flames at Altitude | Insufficient Airflow | Open Windscreens Slightly |

FUEL INFORMATION

The XGK™ EX stove burns a variety of fuels by using two different Jets.

1. The GK Jet is used for white gas, kerosene, unleaded auto gas, and aviation gas. This Jet is preinstalled in your stove.

2. The X jet is for jet fuel, and diesel. This jet is included in the parts kit with your stove.

2. The X jet is for LPG fuel, and diesel. This jet is included in the parts kit with your stove.

Use MSR® SuperFuel™ white gas for optimal performance. It is the highest-quality fuel available for your stove. Fuels other than MSR SuperFuel white gas lead to rapid stove clogging, requiring more frequent Jet and Fuel Line cleanings. The fuels chart below is a guide to help you find white gas when traveling internationally. Do not use leaded fuels.

For more information on international fuel names go to www.MSRGEAR.com



CARBON MONOXIDE, FIRE & EXPLOSION HAZARD

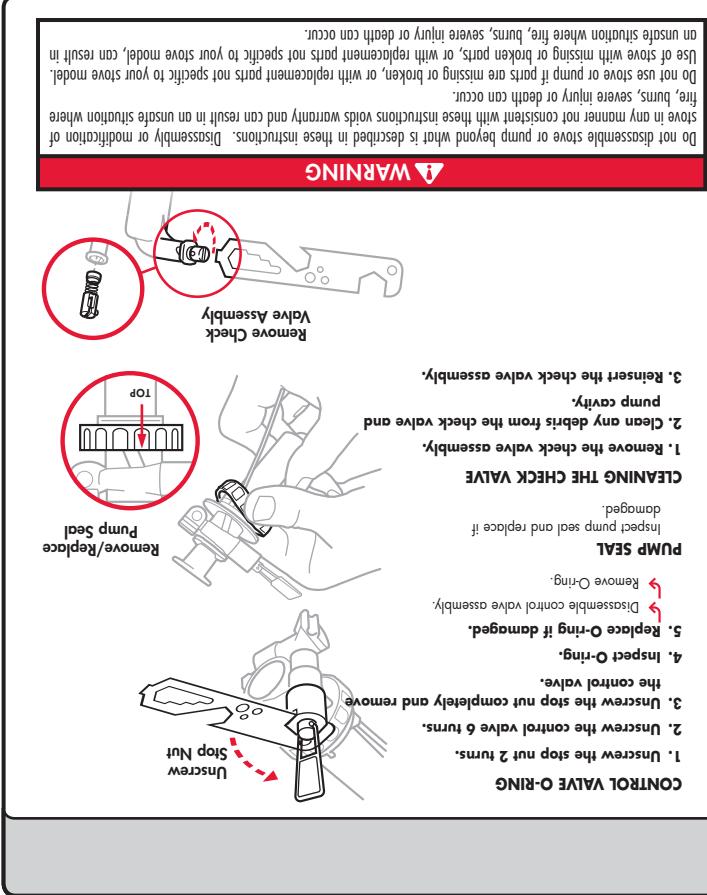
There are serious hazards associated with using this stove and fuel. Accidental fire, explosion, and misuse can cause death, serious burns, and property damage. You are responsible for your own safety and the safety of those in your group. Please use good judgment.

This stove is for OUTDOOR USE ONLY. Never use this stove in a tent, vestibule, car, house, or inside any enclosed area. This stove consumes oxygen and produces carbon monoxide gas, which is poisonous and has no odor. This stove can easily ignite nearby combustible materials and flammable liquids or vapors. If you use this stove in an enclosed area you can be killed or seriously burned.

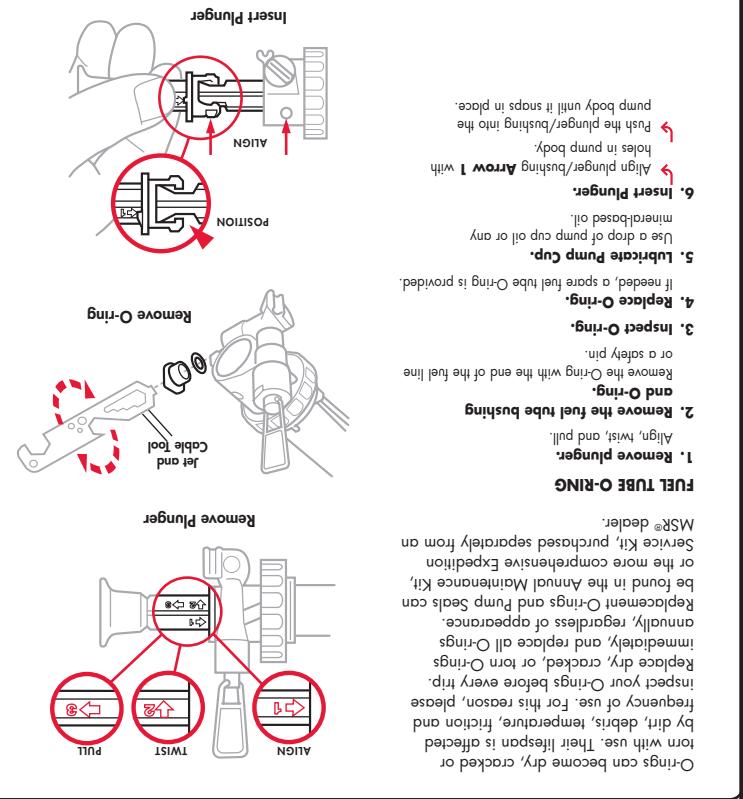
Keep stove and fuel bottle away from other heat sources. Never use cookware or an Outback Oven™ with a diameter larger than 10 inches (25 centimeters). Oversized cookware can overheat the fuel bottle. If you expose the fuel bottle to direct heat, it will heat up and could catch fire.

Never let children use this stove. Keep children at least 10 feet (3 m) away from the stove and cooking area, and supervise them at all times.

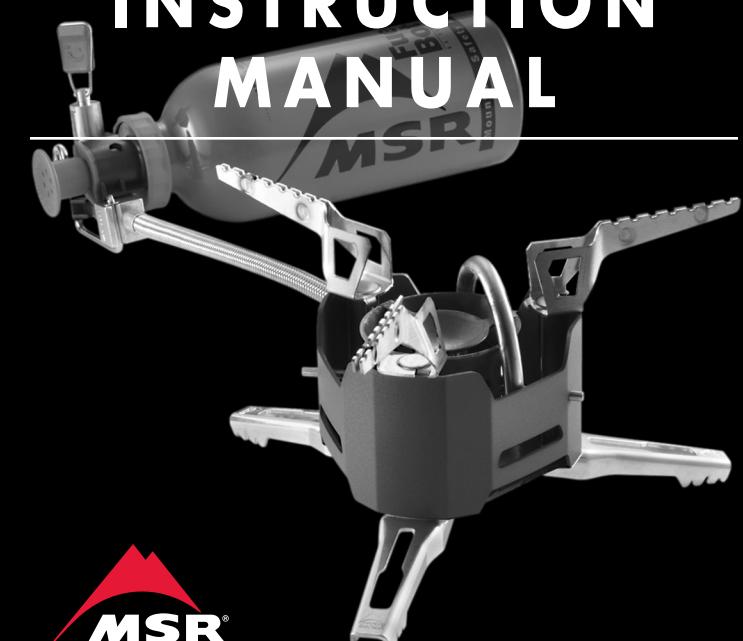
READ, UNDERSTAND, AND FOLLOW ALL instructions and warnings in this manual before using this stove. Failure to follow warnings and instructions can result in death, serious burns or other injury, and property damage.



PUMP MAINTENANCE



INSTRUCTION MANUAL



MSR
MOUNTAIN SAFETY RESEARCH

XGK™ EX

FOR OUTDOOR USE ONLY

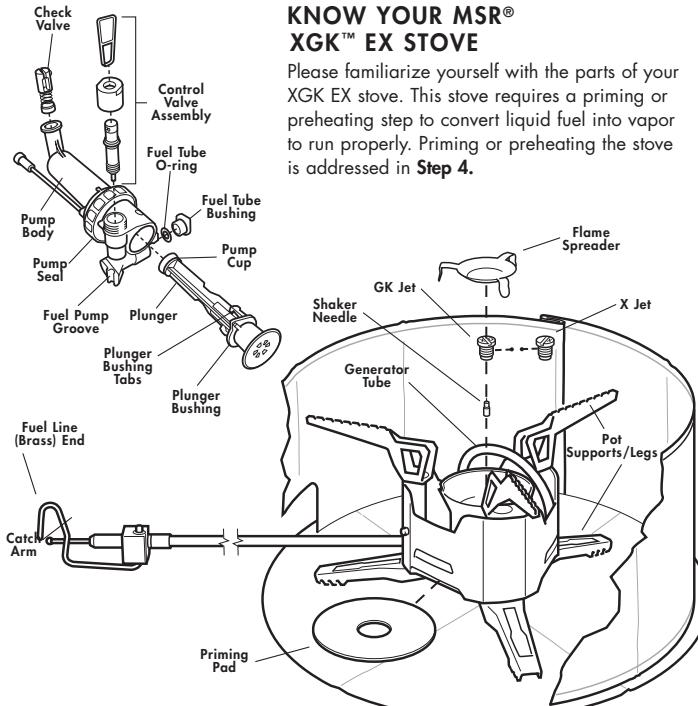


For product service and information contact:

Cascade Designs, Inc.

Avenue South, Seattle, WA 98134 U.S.A.
206-561-6561 206-565-6566

e: 800.531.9531 or 206.505.9500



KNOW YOUR MSR® XGK™ EX STOVE

Please familiarize yourself with the parts of your XGK EX stove. This stove requires a priming or preheating step to convert liquid fuel into vapor to run properly. Priming or preheating the stove is addressed in **Step 4**.

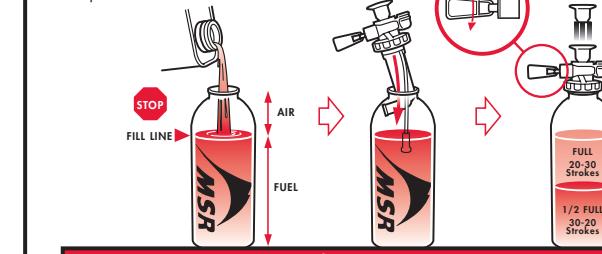
XGK™ EX STOVE OPERATING INSTRUCTIONS

To avoid being killed or seriously injured, READ, UNDERSTAND, AND FOLLOW ALL instructions and warnings in this manual before using this stove.

1 PREPARE FUEL BOTTLE

The XGK EX stove is sold with two interchangeable Jets so it can burn a variety of fuels. To ensure the correct Jet is installed for the type of fuel to be used, see *Fuel Information*.

1. Fill Fuel Bottle to fill line only.
Air space is necessary for fuel expansion.
2. Insert Pump into Fuel Bottle and firmly tighten.
3. Close the Pump Control Valve, then stroke Plunger (20-30 strokes).
Less fuel requires more strokes or pressure.
Pump until firm resistance is felt.



⚠️ 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.

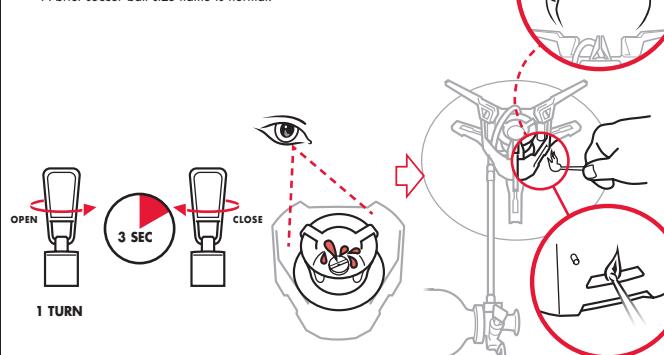
4 PREHEAT STOVE

1. Release only 1/2 tablespoon of fuel.

- Open control valve 1 turn and let fuel flow for 3 seconds.
- Close control valve.
- Look for fuel in burner cup and on priming pad.

2. Light fuel

A brief soccer ball size flame is normal.

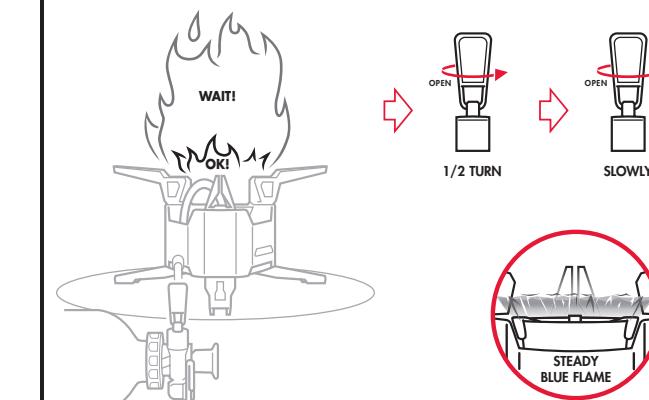


⚠️ WARNING

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.

5 TURN STOVE ON

1. Wait for preheat flame to reduce in size.
2. Open 1/2 turn and wait for steady blue flame.
3. Slowly open control valve.

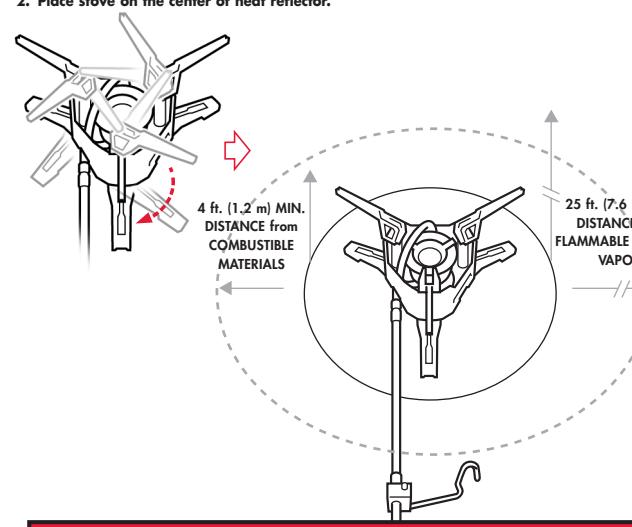


⚠️ WARNING

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.

2 SET UP STOVE

1. Rotate the stove legs and pot supports.
2. Place stove on the center of heat reflector.



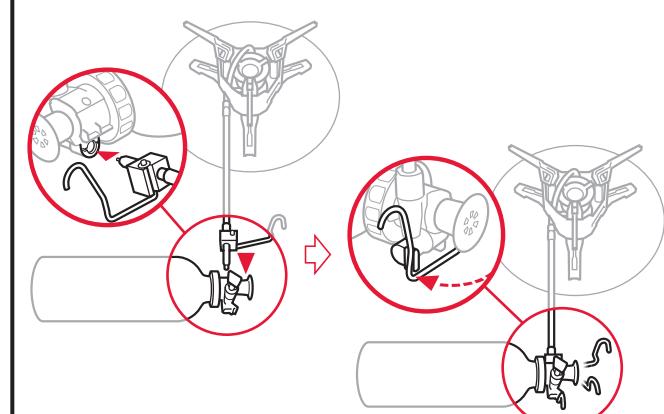
⚠️ WARNING

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 enclosed spaces of any kind; e.g., tents) 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.

3 CONNECT STOVE AND PUMP

1. Insert the fuel line into pump.
With fuel bottle on its side, control valve points up.
2. Secure the catch arm on fuel pump groove.
Keep fuel line straight for safety.



⚠️ 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 and/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.

6 USE STOVE TO COOK

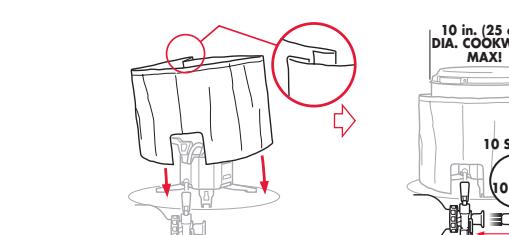
1. Set up Windscreen.

- Fold the ends of Windscreen together.
- Leave a 1-inch (2.5 cm) gap between Windscreen and pot for optimal performance.
- Use Windscreen to improve performance in all conditions.

2. Place pot on stove.

3. 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 or 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 proceeding 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 and/or inappropriate for use with stove, particularly stove pot supports (e.g., cookware with a convex or concave bottom, some enameled cookware, etc.). Use of stove in any of the proceeding manners 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.

7 TURN STOVE OFF

1. Close Pump Control Valve on Fuel Bottle.

Residual fuel will continue to burn with a small flame for several minutes.

2. Close Flame Adjuster Valve on stove.

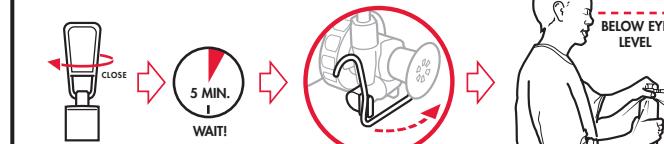
After flames are out, wait 5 minutes for stove to cool.

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

4. Depressurize Fuel Bottle and repack stove.

- Hold the Fuel Bottle upright, away from your face and any sources of heat or ignition.
- Slowly unscrew Pump to depressurize Fuel Bottle.

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/or where accessible by children can result in a child obtaining possession of fuel bottle and accessing bottle contents. Exposure to bottle contents topically and/or by ingestion 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.