

ANNUAL MAINTENANCE KIT INSTRUCTIONS

MSR® GUARDIAN™ PURIFIER



MOUNTAIN SAFETY RESEARCH®

INCLUDED IN THIS KIT:

1. Pressure Relief Assembly
2. Relief Valve O-ring
3. Piston O-ring
4. End Nut O-ring
5. Piston Cup Seal
6. Umbrella Valve
7. Clean-Side Cover Seal
8. MSR Food-Grade Silicone Lubricant

INCLUS DANS CE KIT :

1. Soupape de décharge
2. Joint torique de la soupape de décharge
3. Joint torique du piston
4. Joint torique de l'écrou d'attache de la tête du piston
5. Joint à lèvres du piston
6. Valve parapluie
7. Joint du capuchon de la sortie d'eau propre
8. Lubrifiant au silicone MSR de qualité alimentaire

SETIHAAT:

1. Drukbebegrenzingsbouwgroep
2. O-Ring für Druckbebegrenzungswentil
3. O-Ring für Kolbenabdichtung
4. O-Ring für Bundmutter
5. Kolben-Dichtmanschette
6. Schirmventil
7. Dichtung für Deckel des Trinkwasserbehälters
8. Lebensmittelverträgliches Schmiermittel von MSR

キット内容:

1. 圧力リリーフアセンブリー
2. リリーフバルブアセンブリー
3. ピストン用Oリング
4. エンドナット用Oリング
5. ピストンカップシール
6. アンブレラバルブ
7. 浄水側カバーシール
8. 食品対応シリコングリース

TROUBLESHOOTING

Problem	Cause	Solution
Decreased/no water flow, or hard to pump	Clogged Pre-filter	Rinse/Clean Pre-filter
	Clogged Filter	Replace Filter Cartridge (See Replacing Filter)
	Hose kinked	Straighten hose
Ump Handle (PULL stroke)	Damaged Cup Seal	Inspect and lube Cup Seal; replace if necessary. (See Pump Head Maintenance)
Ump Handle (PUSH stroke)	Piston End Nut leaks	Clean Piston End Nut, End Nut O-ring and Piston O-ring. (See Pump Head Maintenance)
	Damaged or loose Umbrella Valve	Clean Umbrella Valve; replace if necessary. (See Pump Head Maintenance)
Lots of water soiling Dirty Water Outlet Hose with little water soiling Clean Water Part	Pressure Relief Valve (PRV) is contaminated	Clean Relief Valve Assembly; replace O-ring if necessary. (See Relief Valve Area Maintenance)
	Clogged Filter	Replace Filter Cartridge

ILLUSTRATION 1

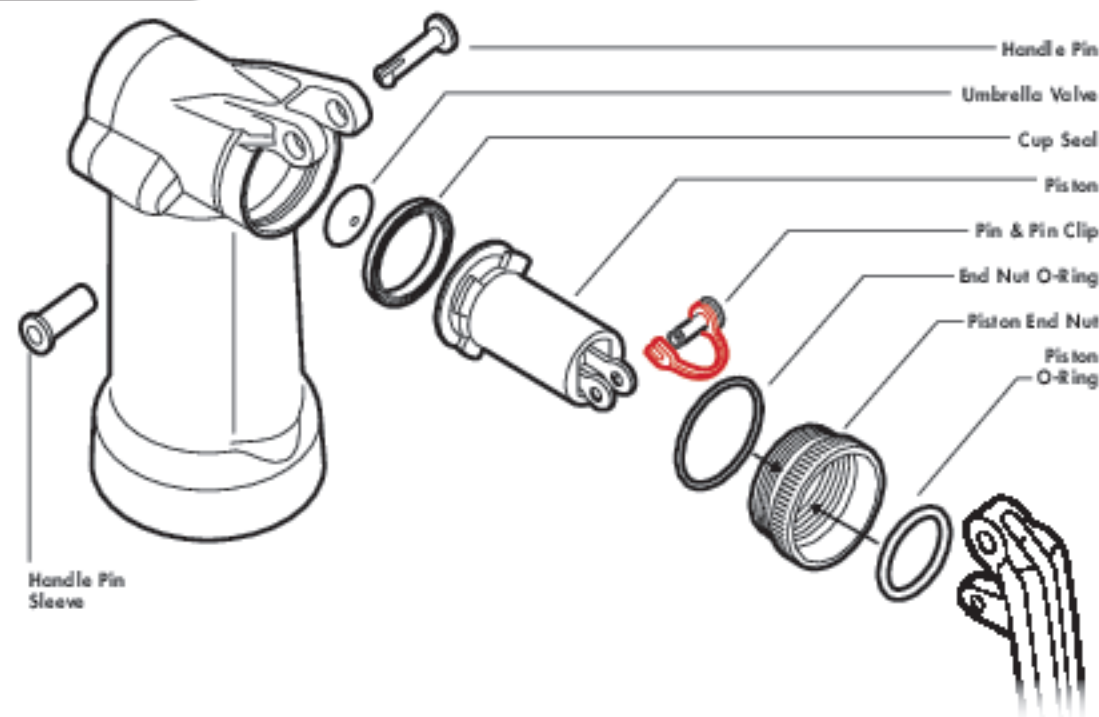


ILLUSTRATION 2

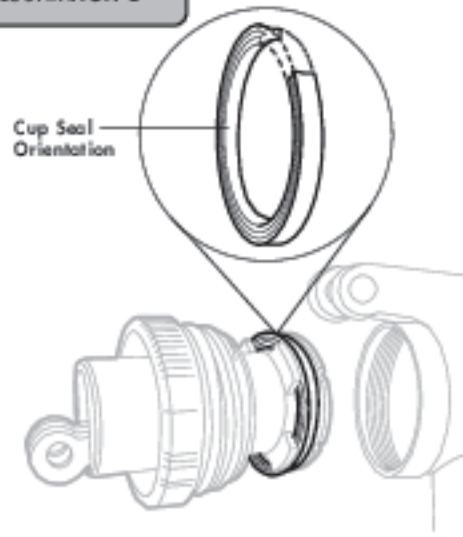


ILLUSTRATION 3



ENG

WARNING

There are hazards associated with backcountry or international travel and the use of water purifiers. Drinking untreated water can result in exposure to harmful microorganisms and an increased risk of gastrointestinal illness. Using this purifier improperly increases your risk of exposure to harmful microorganisms and increases your risk of gastrointestinal illness. Reduce your chances of becoming sick by following the warnings and instructions in this manual and educating yourself on backcountry and international water safety.

YOU ARE RESPONSIBLE FOR YOUR OWN SAFETY AND THE SAFETY OF THOSE IN YOUR GROUP. PLEASE USE GOOD JUDGMENT.

Never use the Guardian purifier to filter seawater or chemically contaminated water, such as water from mining tailing ponds or near agricultural operations. The Guardian purifier does not make potable water from these sources and does not remove chemicals and radioactive materials, or particles smaller than 0.02 microns.

Keep the Intake Hose and other potentially contaminated parts away from purified water to prevent cross contamination.

READ, UNDERSTAND, AND FOLLOW ALL instructions and warnings in this manual before using this purifier. Failure to follow warnings and instructions may result in gastrointestinal illness.

PARTS

The parts included in this maintenance kit are designed only for the MSR Guardian purifier.

PUMP HEAD MAINTENANCE (Illustration 1)

Disassembly:

1. Remove Handle Pin (pinch, then push) and Handle Pin Sleeve.
2. Remove Pin & Pin Clip. Set Handle aside.
3. Unthread Piston End Nut and remove Piston assembly.
4. Separate Piston from Piston End Nut.
5. Remove Umbrella Valve by lifting it out with your finger.
6. Note orientation of Cup Seal (Illustration 2). Remove all seals (Cup Seal, Piston O-ring, End Nut O-ring).
7. Rinse all parts with clean water.

Assembly:

1. Using finger, firmly insert stub end of Umbrella Valve into center hole of Piston Cavity.
2. Install new End Nut O-ring and Piston O-ring. Apply a thin layer of MSR Silicone Lubricant to each.
3. Install new Cup Seal onto Piston in the same orientation as old Cup Seal. Apply a thin layer of Lubricant to Cup Seal and the inside walls of Piston Cavity.
4. Slide Piston End Nut onto Piston.
5. Thread Piston End Nut into Piston Cavity until rotation stops completely.
6. Reattach Handle with Handle Pin Sleeve and Handle Pin.
7. Align Piston to Handle and reinstall Pin & Pin Clip. Confirm that end of Pin Clip is dipped onto Pin.

PRESSURE RELIEF VALVE AREA MAINTENANCE (Illustration 3)

Disassembly:

1. By hand or using a coin, push and rotate Relief Valve Assembly 1/3 rotation.
2. Carefully slide Relief Valve Assembly from cavity.
3. Flush Relief Valve Cavity with clean water. DO NOT place objects in the Relief Valve Cavity.

Assembly:

1. Apply a thin layer of Lubricant to the Relief Valve O-ring.
2. Reinstall Relief Valve Assembly by pushing while rotating it until its arrow aligns with the arrow and lock symbol on the Pump Housing.

REPLACING THE CLEAN-SIDE COVER SEAL

1. Using the tip of a pen or paper clip, pry out the old seal.
2. Apply a thin layer of lubricant to the sides of the new seal. Then, press it into position.

STERILIZING THE PURIFIER

1. Mix a solution of 2 mL (~1/2 tsp) of household bleach (free of dyes or perfumes) with 2 L of water, or dissolve 12 MSR Aquatabs® tablets in 2 L of water.
2. Pump most of this solution through the purifier, stopping before air can enter the pump.
3. Wait 30 minutes.
4. Pump 12 liters of clean water to clear any remaining solution from pump.
5. Pump the Handle to purge excess water from the Purifier.

REPLACING THE FILTER CARTRIDGE

When to replace: The Filter Cartridge should be replaced when the flow rate drops to less than 1L/min. when pumping 70 strokes per minute. Please purchase a replacement filter, with instructions, at www.margear.com.

WARNING

Disassembling the Purifier can expose you to contaminated parts, resulting in sickness. MSR recommends sterilizing the Purifier before any disassembly. If you cannot sterilize the Purifier, wash your hands thoroughly after disassembly.



MOUNTAIN SAFETY RESEARCH

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