The NOMAD™

PORTABLE WATER PURIFICATION UNIT

OPERATING MANUAL

Noah WATER SYSTEMS™

Congratulations! You have purchased the finest, most technologically advanced Ultraviolet Water Treatment System available anywhere in the world. It has been designed with you, the consumer, in mind. Noah products are portable, durable, simple to use and maintain, and most important, they will provide you with safe, clean drinking water for years to come.

WHAT IS ULTRAVIOLET?

Ultraviolet from the sun has long been known for its ability to destroy microorganisms. However, it has only been in recent years that ultraviolet equipment has been manufactured for the consumer.

The UV lamp is similar to a fluorescent lamp in appearance only. The UV lamp operates using a low-pressure mercury vapor to produce the UV energy necessary to kill the microorganisms that can live in water. There is a 3-4 minute start-up period in order for our lamp to achieve full intensity.

There are five major categories of contaminants that are destroyed with Noah products: viruses, bacteria, fungi, algae and protozoa. When these microbes are exposed to the UV energy, their nucleic acid absorbs the energy, which scrambles the DNA structure and prohibits reproduction. Since the cell is now sterile or dead, it is no longer a threat. The U.S. Dept of Health has established that proper UV exposure should be 16,000 microwatts seconds per centimeter squared to achieve potable standards. All Noah products meet or exceed this standard.

It is recommended to use filtration prior to UV exposure to remove any sediment that may inhibit the transmission of UV light in the UV process. The comprehensive filtration process that Noah has incorporated in your system serves a dual purpose. The first task is to remove the suspended solids from the water that may provide a shield for the microbes to hide behind, making it difficult to receive sufficient UV exposure. Second, Noah uses carbon block filtration to remove harmful chemicals and unpleasant taste/odor problems, assuring safe, good tasting water.

WHAT IS ACTIVATED CARBON?

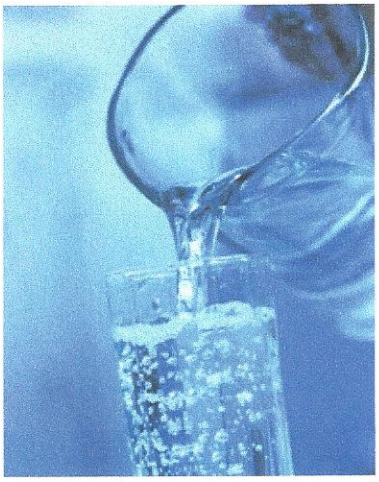
Activated carbons are created from wood, coal or coconut shells that have been ground up and activated by heating at a controlled temperature and pressure to promote the active sites where pollutants can be adsorbed.

Adsorption is the physical process where certain water pollutants are attracted to the surfaces of the carbon rather than to the water. The pollutants are locked into the carbon and are removed from the water. Activated carbons are also able to filter out sediment through mechanical filtration by trapping particles in the spaces between the carbon granules.

Activated carbon has been used for hundreds of years to treat taste, odor and color problems. Major water utilities and water treatment manufactures have found activated carbon to be an excellent media to produce better tasting water and remove harmful water contaminants at a reasonable cost.

USE OF YOUR NOAH WATER PURIFICATION SYSTEM

The Nomad™ water purification system is designed to provide complete water treatment in portable, easy-to-use packaging. Noah Portable Water Purification Systems provide 99.9999% disinfection of bacteria and viruses including Cholera, Dysentery, E-coli and Legionaries Disease. In addition to disinfection, your system utilizes a comprehensive treatment of sediment and carbon filtration. The 5-micron sediment filter will remove particulate matter ensuring proper disinfection and will lengthen the life of the carbon filter. The 0.5-micron carbon block filter will remove chlorine, organic chemicals, herbicides, and pesticides and will eliminate bad taste and odors. This filter combination will also effectively strain out waterborne cysts such as ***cryptosporidium*** and ***giardia***. In addition, the Nomad™ water purification unit has been outfitted with a lamp-out-circuit (LOC). In the event that a UV light is not operating (lamp burned out or broken, or inadvertently not plugged in) the circuit sends a signal to a solenoid valve that immediately shuts off the flow of water, thus preventing the flow of untreated water. Your Nomad™ water purifier is designed to provide years of trouble-free service with proper maintenance.

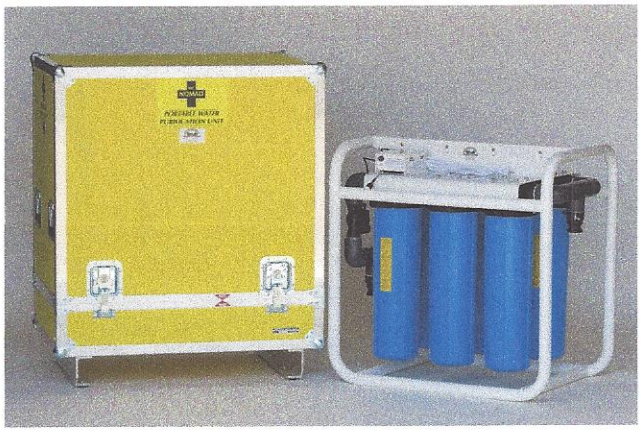


PLEASE READ ENTIRE INSTRUCTIONS BEFORE USE

COMPONENT INVENTORY

CONTAINER #1

- NOMAD ™ Purification Unit
- Operating Manual



CONTAINER #2

- Portable Generator
- Gasoline Pump Assembly
- Floating Pre-Filter Assembly with Check Valve
- 2" Suction Hose Assembly with Quick-Connects – **Green / 25 Feet Long**
- 1 ½ " Hose Assembly with Quick-Connects - **Black / 7 Feet Long**
- Bag Pre-Filter and Hose
- Exit Hose Assembly with Quick-Connect – **Clear Spiral / 10 Feet Long** (Length and Style will vary based on individual customer needs)
- Maintenance Tool Kit

**** System components may vary from above photos**

ASSEMBLY & OPERATION OF YOUR UNIT

1. Unload your 2 Nomad carrying cases within 25 feet of your fresh water source. Open and unload the contents.
2. Connect the yellow floating point-of-suction (with strainer pre-filter and check valve assembly) to the 2-inch diameter green suction hose using the quick-connect fitting. This is the longest (25' long) and thickest of the hoses in this unit. **(See Figure 1)**
3. Connect the other end of this hose to the 2" inlet port on the pump assembly.
4. Position the floating strainer into the source water. Note that the strainer floats on the surface and that the suction point is suspended below the surface. You can adjust the depth of the suction by adjusting the black strap, allowing full depth suction for deeper water sources or a more shallow suction point for shallow water sources.
5. Locate the longer black hose (1½" diameter, 7' long) and connect either quick-connect fitting end to the 1½" outlet port on the pump assembly. **(See Figure 2)**
6. Connect the other end of this black hose to the "INPUT" of the pre-filter assembly. Use the shorter black hose to connect the "OUTPUT" of the pre-filter to the "INPUT" **(See Figure 3)** of the purification unit. See **Pre-Filter Connections** for details.
7. Connect the output hose (Clear spiral hose) to the output port using the 90° quick connect fitting. You can now adapt this outflow to whatever plumbing configuration and fittings meet your needs (adding additional hose, filling a storage tank, creating an emergency distribution center, etc). **(See Figure 4)**

Figure 1

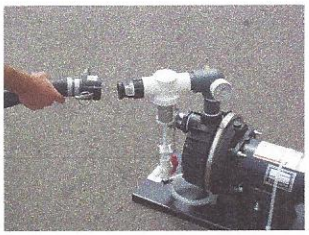


Figure 2

Figure 3

Figure 4

Figure 5

8. For initial use, fill the pump with water to prime (see pump Owners Manual).
9. Disconnect the 2" water inlet hose from the pump. Using a hose, bucket, or other method, completely back-fill the 25' yellow suction hose with water and re-connect the hose to the pump (this will allow the pump to "prime" much quicker and easier).

Pre-Filter Connections

Pre-Filter & Stand

10. If you have electrical power available, prepare the necessary outlets, extension cords, etc. If your Nomad unit is equipped with our generator, then start up the generator (refer to generator manufacturer Owners Manual as needed).
11. Plug in the two UV lamps to the appropriate electrical outlet on your generator and **leave them on for 4 minutes before you start the pump and run water through the system. This allows the Ultraviolet light to reach maximum operating intensity.** Start the pump to begin the flow of water.
12. Be sure to have your preferred method of water delivery and storage in place, as purified water will begin to flow at 25+ gallons per minute shortly.
13. Direct the flow of treated water as needed.
14. When completed, drain all hoses for storage.

CAUTIONS

- **ALWAYS allow the UV lamps to run for 4 minutes prior to pumping water**
- DO NOT use any combustible or corrosive liquids
- DO NOT use salt water – your unit will not remove the salt
- DO NOT pour purified water into a contaminated container
- DO NOT reverse water flow through the system
- **Warning: Never look directly at a lighted UV lamp, Ultraviolet rays can be harmful to your eyes. Always shut off water and disconnect power when servicing**
- If you will be storing your Nomad™ purification unit for extended periods of time, remove the filters from the canisters and air dry for 48 hours before storing.
- This unit must be protected against freezing (drain canisters properly)
- DO NOT restrict (or block) water flow at outlet while pump is running
- Your unit contains delicate glass components – please use proper care when handling & transporting

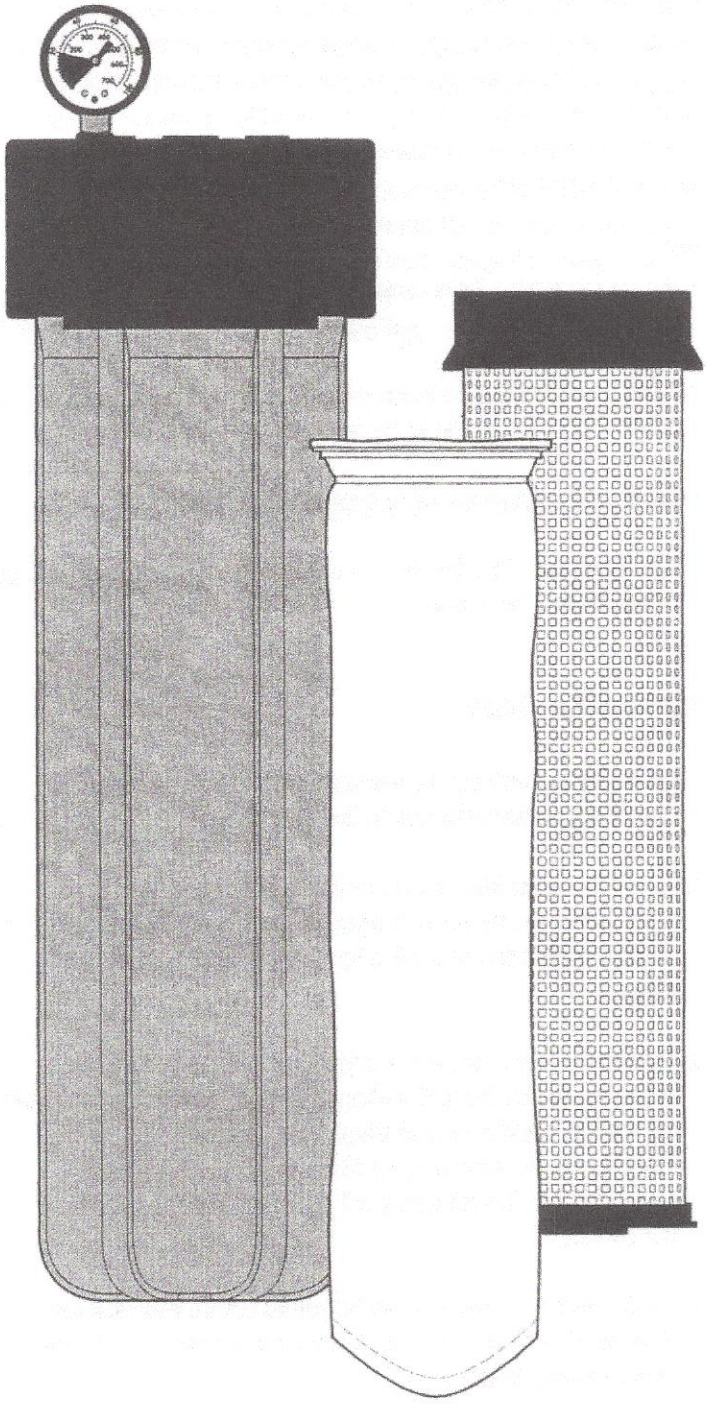
COMPLETED ASSEMBLY

Individual components may vary from unit to unit

USFilter

Over-the-Top Bag Filter System

Installation and Operating Instructions
Models: PBH-410/PBH-420
PBH-410 BT/PBH-420 BT



Specifications

Max. Pressure:	PBH-410/PBH-410 BT	100 psi (6.8 bar)
	PBH-420/PBH-420 BT	90 psi (6.2 bar)
Maximum Temperature:		100° F (37.7° C)
Recommended Service Flow Rate:		3 psid @ 35 gpm (132 Lpm)
Maximum Service Flow Rate:		3 psid @ 50 gpm (188 Lpm)

Materials of Construction

Filter cap	Polypropylene
Filter body 10-inch	Polypropylene
Filter body 20-inch	Polypropylene
Basket 10-inch	Polypropylene
Basket 20-inch	Polypropylene
Gasket	Buna-N or EPR
O-ring (Sump)	Buna-N
Vent plug	Polypropylene
Drain plug	Polyethylene
Drain valve	PVC
Seals	Buna-N
Gauge	Brass & Bronze
Spanner wrench	Polypropylene

Dimensions

10-inch Filter	7-1/4-inch Diameter x 13-5/8 inch Height
20-inch Filter	7-1/4-inch Diameter x 23-7/8 inch Height

Patent #5,484,529

Precautions

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

CAUTION: Filter must be protected against freezing (when used with aqueous solutions), which can cause cracking of the filter and water leakage.

CAUTION: Because of the product's limited service life and to prevent costly repairs or possible water damage, we strongly recommend that the bottom of all plastic housings be replaced every ten years. If the bottom of your housing has been in use for longer than this period, it should be replaced immediately. Date the bottom of any new or replacement housing to indicate the next recommended replacement date.

NOTE:

- Make certain that installation complies with all state and local laws and regulations.
- Do not use wicking or sealer for fitting connections into the cap of the filter. Teflon® tape is recommended for this purpose.
- Do not install where system will be exposed to direct sunlight.
- Allow a minimum of 3 inches clearance under the filter or optional sump stand to facilitate filter changes.

Installation

1. Before installing, verify that the materials of construction of the USFilter Bag Filter System are compatible with the fluid being filtered.
2. The location of the filter should include the following considerations: (1) adequate space for ease of changing the filter bag, (2) drainage or containment to collect drained or spilled liquid, and (3) proper ventilation, if required.
3. When installing the system, include isolation valves for the filter and support for the filter housing. Use caution when applying heat near the filter housing. It is best to weld or sweat all fittings before assembly to the filter. The filter head may be mounted to the filter support using 5/16 inch X 1-1/4 inch lag bolts. The bolt spacing is 3 inch on center and the bolt circle is 2-1/8 inch.
4. The filter must be installed in the vertical position with the inlet/outlet ports at the top. Flow through the housing is inline. Note the inlet and outlet ports when connecting piping.
5. The filter housing is equipped with a 1/4 inch NPT gauge port on the outlet for installation of a pressure gauge (included) and a 3/8 inch NPT drain port at the base of the sump (3/8 inch NPT ball valve supplied). The gauge or valve should be installed using Teflon® tape as a thread sealant.

Bag Selection

The USFilter Bag Filter Housing is designed for use with USFilter filter bags. However, the housing may accept some filter bags from other manufacturers. The unit is designed to accept a standard 4 inch FILTER SPECIALISTS, INC. (FSI) POLYLOC filter bag.

Other 4 inch filter bags may work if they meet the following criteria:

1. Filter bag length equals the depth of the filter basket plus one inch.
2. The maximum allowable thickness of the filter bag at the sealing surface is .080 inches.
3. The minimum allowable thickness of the filter bag at the sealing surface is .040 inches.
   NOTE: The USFilter bag filter housing may not be compatible with filter bags using reinforcing rings or snap bands.

Start-up

1. Open the inlet valve. It is recommended that the inlet valve be opened before the outlet valve to prevent any backflow.
2. Vent trapped air from the system before opening the outlet valve.
3. Open the outlet valve.

Bag Replacement

The pressure differential across the bag will remain fairly constant until the bag is approximately 80% blinded off. It is recommended that the bag be changed when the pressure differential reaches 15 psi. However, this figure can vary with the type of filter bag. The bag manufacturer's data should be consulted to determine the actual pressure drop for replacement.

WARNING: Review all precautions specific to the handling of the fluid being filtered before changing the filter bag. A filter bag that has been used with a hazardous liquid may contain residual amounts of this material and should be handled with the same safeguards that would be used in handling any hazardous and/or toxic material i.e. gloves, respirators, protective eyewear, etc. Filter bags should be disposed of in accordance with federal, state or local laws and requirements. Failure to follow precautions may result in injury.

1. Close isolation valves to the filter.

2. Drain sump. (See WARNING above)
   NOTE: If bag has not been changed on a timely basis it may not drain. If necessary, the liquid contents of the used bag can be poured into the replacement bag to be filtered.

3. Unscrew sump from cap. Sump will unscrew counter-clockwise.
   CAUTION: Support sump at base while unscrewing to prevent dropping and possibly damaging the sump or drain valve.

4. Remove basket assembly from sump. (See WARNING above)

5. Remove bag from basket.

6. Remove O-ring from groove in the sump and wipe groove and O-ring clean. Relubricate O-ring with clean petroleum jelly (Vaseline®). Insert O-ring in place and press into groove.
   NOTE: This step is important to ensure a proper housing seal. Make certain the O-ring is seated level in the groove.

7. Insert new bag into the basket. Form the bag to the contours of the basket, making sure that the bag extends fully to the bottom of the basket.
   NOTE: Make sure the filter bag overlaps the bag collar to insure a proper seal when the filter housing is closed.

8. Screw the sump onto the cap and hand-tighten securely. Do not over-tighten.

Troubleshooting

Leaks

1. Check the O-ring for dirt, cuts, or swelling. Replace O-ring if necessary.

2. Make sure housing is closed properly. Hand-tighten securely. Do not over-tighten.

3. Check all threaded connections and rethread as needed.

4. Check to see if the filter bag is dirty and blinded off. (See WARNING under *Bag Replacement*) If this is the case, replace bag according to instructions.

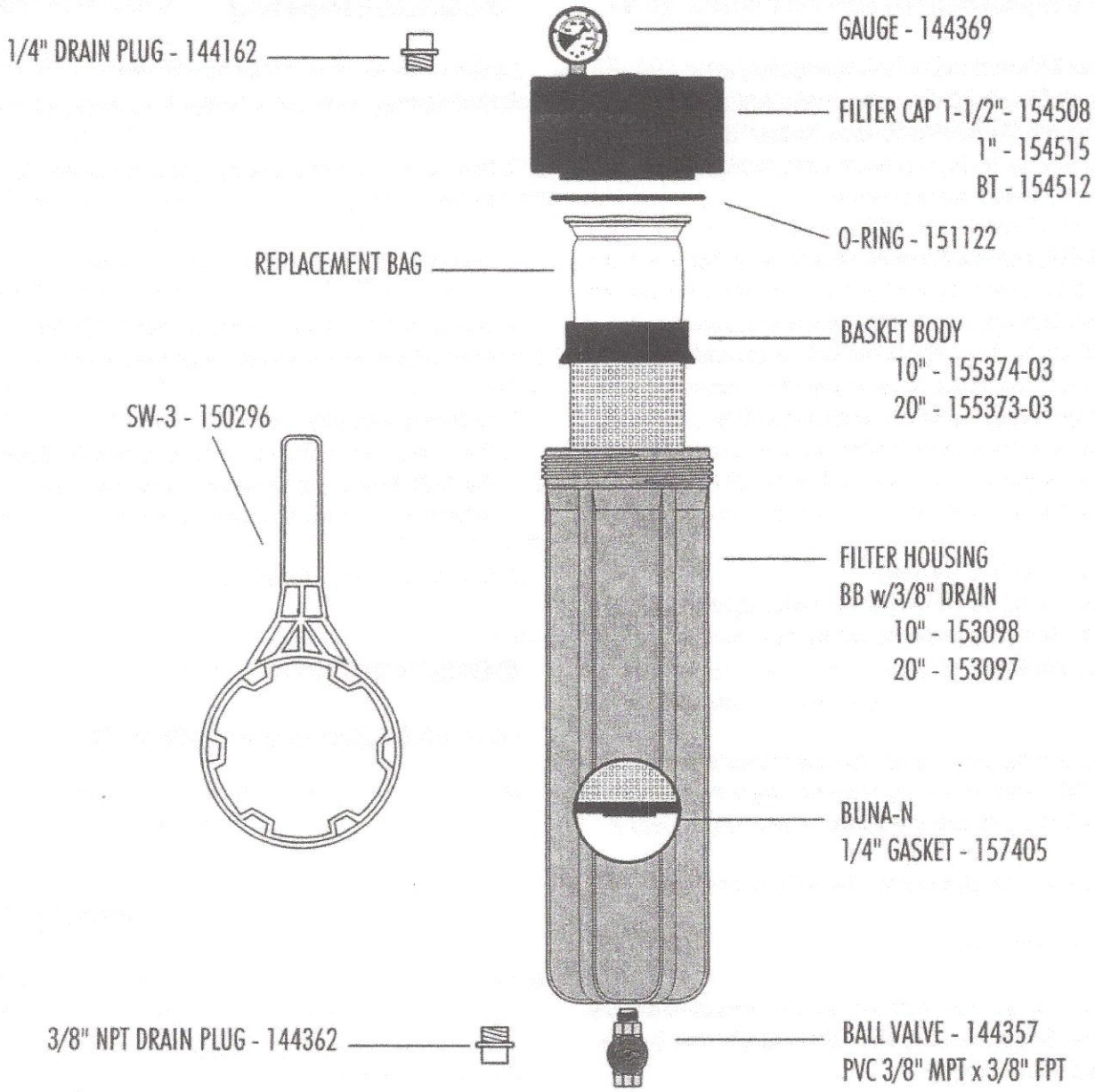
Poor Filtration Results

1. Check to make sure the filter bag is properly seated in the support basket. (See WARNING under *Bag Replacement*) The bag should extend fully to the bottom of the basket and the top should overlap the sealing collar.

2. Check for rips or tears in the filter bag.

QUESTIONS?

Call our Technical Support Department at 1-800-645-5426



WARRANTY of USFilter Bag Filter

This warranty applies only to the USFilter filter housing; it does not apply to the disposable USFilter filter cartridge since its life expectancy varies with the condition of the water being filtered. The filter housing is warranted against defects in material and workmanship for one year from the original date of delivery. We will replace any part of any filter housing which in our opinion is defective, provided the filter housing has not been subjected to tampering, alterations, or improper use after delivery and has not been repaired by anyone except us; however, our obligation hereunder does not include the cost of transportation. We assume no responsibility for damage in transit, and any claims for such damage should be presented to the carrier by the customer. The filter housing is not warranted against freezing.

We make no warranties, express or implied, including without limitation, any warranties of fitness or merchantability, except as expressly set forth above. We shall not be liable for any anticipated or lost profits, incidental damages, consequential damages, costs, time charges or other losses incurred in connection with the purchase, installation, repair or operation of the USFilter water filter, or any part thereof.

For servicing under this warranty, return any defective part to YOUR DEALER within the one year period referred to above.

Keep this warranty with your USFilter water filter purchase receipt showing the date of purchase. They are required to validate a claim.

USFilter - Plymouth Products
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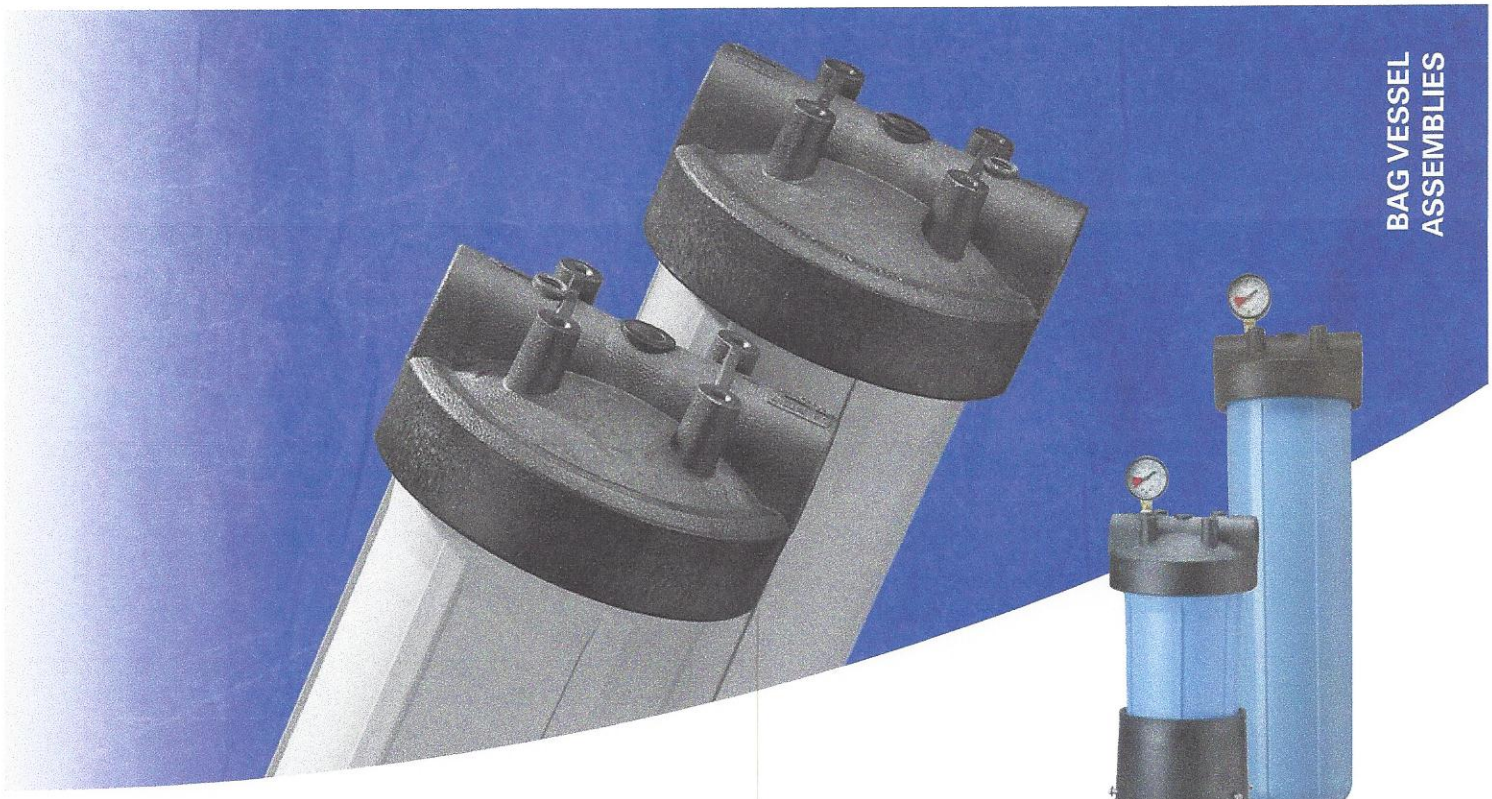


PBH-420

PBH-410
(shown with bag vessel stand)

BAG VESSEL ASSEMBLIES

- **Lightweight corrosion resistant polypropylene construction gives you strength without weight**
- **Available in 1" and 1½" NPT sizes**
- **Comes complete with gauge, wrench and 3/8" drain valve**
- **Choice of 10" and 20" housings**
- **Light enough to be portable**

Pentek's standard bag vessel assemblies keep your system on stream longer by reducing bag filter change time.

The single large Acme thread closure ensures quick opening and positive sealing.

All PBH Series vessels come complete with gauge, wrench and 3/8" drain valve.

PBH Series bag vessel assemblies are made of lightweight corrosion resistant polypropylene to give you all the strength you need without the weight.

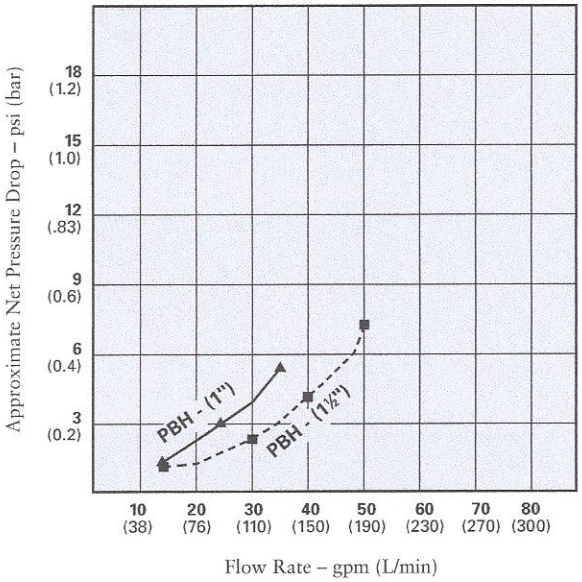
Bag vessel assemblies are economically priced, allowing you to install a duplex system for totally uninterrupted flow rates.

Bags are available in polypropylene felt, absolute-rated high-efficiency polypropylene and nylon monofilament mesh–ideal for filtering and straining applications from 1 to 800 microns.

PENTEK FILTRATION

Pure Quality.™

BAG VESSEL
Assemblies



Housing Specifications and Performance Data

Model	Maximum Dimensions	Initial ΔP (psi) @ Flow Rate (gpm)	Maximum Pressure
PBH-410 (1")	13-1/8" x 7-1/4" (333 mm x 184 mm)	1 psi @ 15 gpm (0.07 bar @ 57 L/min)	100 psi (6.9 bar)
PBH-410 (1 1/2")	13-5/8" x 7-1/4" (346 mm x 184 mm)	1 psi @ 20 gpm (0.07 bar @ 76 L/min)	100 psi (6.9 bar)
PBH-420 (1")	23-3/8" x 7-1/4" (594 mm x 184 mm)	1 psi @ 15 gpm (0.07 bar @ 57 L/min)	90 psi (6.2 bar)
PBH-420 (1-1/2")	23-7/8" x 7-1/4" (606 mm x 184 mm)	1 psi @ 20 gpm (0.07 bar @ 76 L/min)	90 psi (6.2 bar)

- PBH-410 accepts a standard 4" x 8¼" (102 mm x 210 mm) bag. Dimensions allow for 1" (25mm) overlap on basket.
- PBH-420 accepts a standard 4" x 18½" (102 mm x 470 mm) bag. Dimensions allow for 1" (25mm) overlap on basket.

Materials of Construction

- **Housing** Polypropylene
- **Cap** Polypropylene
- **Gauge** Bismuth Brass (lead free)
- **Vent Plug** Polypropylene
- **Drain Plug** High Density Polypropylene
- **Ball Valve** PVC/Buna-N Seals
- **Basket** Polypropylene
- **O-Ring and Gaskets** Buna-N
- **Maximum Temperature** 100°F (37.8°C)

NOTE: Many standard bags with rings may be used in these vessels. Refer to Pentek's bag filter specifications sheet for 1 to 200 micron quick-install bags. Bag Vessel Stand sold separately.

PENTEK FILTRATION

ISO-9001 REGISTERED MANUFACTURER

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Pentair Water Treatment

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BP, BPHE AND BN SERIES FILTER BAGS

- **Thermally welded unique design results in consistent filtration efficiencies**
- **Semi-rigid cylindrical design is easily crushed and incinerated**
- **Higher productivity – faster bag "change-outs"**

Polypropylene bags are compatible with a broad range of corrosive fluids including organic solvents, oils, acids, alkalis and micro-organisms.

BP Series (Polypropylene Felt) Bags
An assortment of filtration ratings is offered – from 1 to 200 microns – to comply with any filtration requirement.

The bags are manufactured from felt because of its high solids loading capabilities, in comparison to similar mesh fabrics. The media is created by needle-punching two layers of synthetic fibers together in a supporting scrim. A glazed finish, created by melting the outermost surface fibers, is used to produce a bond that reduces the possibility of migration.

BPHE Series (High Efficiency) Bags
High efficiency bags are offered for those critical applications when high efficiency combined with high dirt-holding capacity is required. Polypropylene materials are processed into microfibers with diameters of 1-10 microns or more. These fibers are converted into filter material. Microfiber media are covered with spun-bonded polypropylene.

BN Series (Strainer) Bags
Woven monofilment materials are offered in nylon with micron ratings of 50-800 and efficiencies from 75 to 95 percent. The materials are cleanable and reusable.

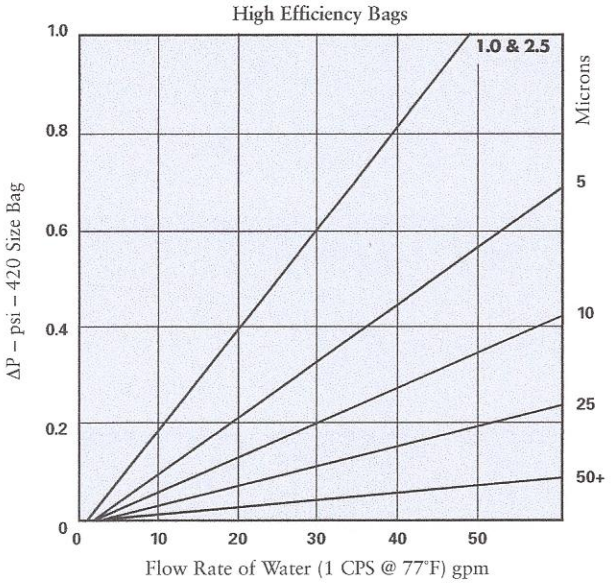
* YOUR UNIT

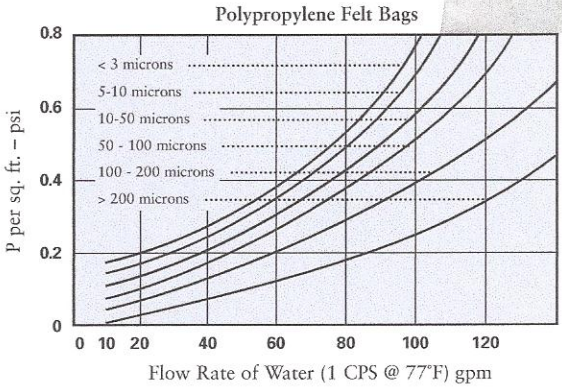
PENTEK FILTRATION

Pure Quality.™

BP, BPHE and BN SERIES

Filter Bags





Viscosity (cps)											
50	100	200	400	800	1000	1500	2000	4000	6000	8000	10000
4.5	8.3	16.6	27.7	50.0	56.2	77.2	113.6	161.0	250.0	325.0	430.0
Correction Factor											

1. The graph shows the ΔP produced by a 420 size filter bag of water, 1 cps @77°F.
2. If a 410 size bag is being used, multiply the value obtained by 2.33.
3. Strainer bags can be said to have the same ΔP as felt bags.

Bag Specifications and Performance Data

Model	Dimensions	Filter Media	Micron Rating	Case Quantity
BP-410 BP-420	4" x 8-5/8" (102 mm x 218 mm) 4" x 18" (102 mm x 457 mm)	Glazed Polypropylene Felt	1, 5, 10, 25, 50, 100, 200	20
BPHE-10 BPHE-20	4" x 8-5/8" (102 mm x 218 mm) 4" x 18" (102 mm x 457 mm)	Polypropylene microfibers with spun-bonded polypropylene covers	1, 2.5, 5, 10, 25, 50, 75, 100	20
BN-410 BN-420	4" x 8-5/8" (102 mm x 218 mm) 4" x 18" (102 mm x 457 mm)	Nylon monofilament mesh	50, 100, 150, 200, 250, 300, 400, 600, 800	20

* YOUR UNIT

- **Maximum Temperature** 200°F (93.3°C) (bags only)
  See application literature for housing rating.

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
NOTE: This information is for general guidance. Users should test bag materials with media involved to determine compatibility.
CAUTION: Protect against freezing to prevent cracking of the filter and water leakage.

PENTEK FILTRATION

ISO-9001 REGISTERED MANUFACTURER

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NORMAL MAINTENANCE

The following instruction will provide you with all the needed information to properly maintain your Noah product so that you may enjoy the benefits of safe, drinking water for years to come. It is important that your water treatment system be **properly maintained** to ensure water quality. Normal maintenance on your unit consists of the following:

1. **Filter Replacement**
2. **Generator Maintenance**
3. **Pump Maintenance**
4. **Pre-Filter Maintenance**
5. **UV Light Replacement**
6. **Periodic Cleaning**

FILTER REPLACEMENT

Filter life is virtually impossible to predict. There is no "normal" period of use that can be estimated given the infinite combinations of water conditions, frequency of use, etc. A reduced flow rate indicates that filters must be changed. **Use only filters provided by Noah Water Systems, as they are specifically designed to work in the ultraviolet disinfection process.** ***The use of non-Noah Water Systems filters will void your warranty.***

TO CHANGE FILTERS:

1. Disconnect power to all components
2. Unscrew blue canister housing (counter-clockwise) using provided canister wrench; remove old filter and discard. **(See Figure 6)**
3. Rinse out canister and fill 1/3 full with water. Add 2-3 tablespoons bleach, scrub thoroughly with brush or sponge. Rinse well.
4. Lubricate the canister O-ring and gasket with the silicon-based lubricant (provided in tool kit). **Do not use any petroleum-based lubricants**. Wipe groove and O-ring / Gasket clean and replace by pressing the O-ring down into the groove with two fingers (or place gasket on rim of canister). This will ensure a proper seal. **(See Figure 7)**
5. Replace discarded filter with a Noah replacement filter. For carbon filter replacement, be sure that the rubber washer gaskets are in place at both the top and bottom of the filter before re-installing.
6. Twist the canister clockwise and tighten into the machine head until no threads are visible (use canister wrench as needed). DO NOT OVERTIGHTEN.

Figure 6

Figure 7

NOTE: When opening filter housing to change cartridge, it's common for O-ring / Gasket to lift out of the canister and stick to the head. **(See Figure 7)**

NOTE: The canister must be rotated completely onto the machine head so that all threads have been used. If the canister does not screw on completely, then the filter is not properly seated onto the machine head. Re-try the operation as needed.

CAUTION: If the O-ring/Gasket appears damaged or crimped, it should be replaced (2 spares provided in tool kit). Contact Noah Water Systems for additional replacements.

GENERATOR MAINTENANCE

Please refer to the generator manufacturers Operating Manual for details on operation and periodic maintenance. Remember that your generator is a motorized piece of equipment, requiring periodic maintenance. Proper care of your generator will ensure long-lasting operation and maximum benefit of your overall Nomad system. Everything you need for routine maintenance has been provided. Please review the toolbox for a supply of oil, air filter, oil filter, spark plug etc., and all the tools necessary for routine maintenance.

PUMP MAINTENANCE

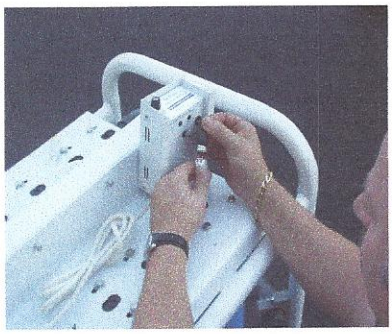
Please refer to the pump manufacturers Operating Manual for details on the operation and maintenance of your pump. Remember that your pump is a motorized piece of equipment, requiring periodic maintenance. Proper care of your pump will ensure long-lasting operation and maximum benefit of your overall Nomad system.

PRE-FILTER MAINTENANCE

Your Nomad unit has been fitted with this pre-filter assembly to remove large amounts of sand, silt and other sediment before it enters the system. This cleanable and washable 50-micron bag filter will provide greatly enhanced filter life. Please refer to the bag filter manufacturers Operating Manual in the following pages for details on the operation and maintenance of your bag pre-filter.

LAMP REPLACEMENT

Lamps rarely burn out, but they do lose their disinfection power. Under continuous operation, lamps must be changed every year. To change the lamp, detach the UV control box by removing the 4 screws at the base of the control box. Lift the unscrewed control box (with UV light attached) straight up to avoid breaking the old lamp. Remove the lamp from the plug, discard and replace with new lamp. Slide the lamp back into the sleeve and re-attach the control box by tightening the 4 screws.



NOTE: Touch only the ends of the lamp, as fingerprints on the glass reduce the lamp's effectiveness. Gently wipe away any fingerprints or smudges from lamp with damp cloth.

SANITIZING PROCEDURE FOR PERIODIC CLEANING AND PRE-STORAGE

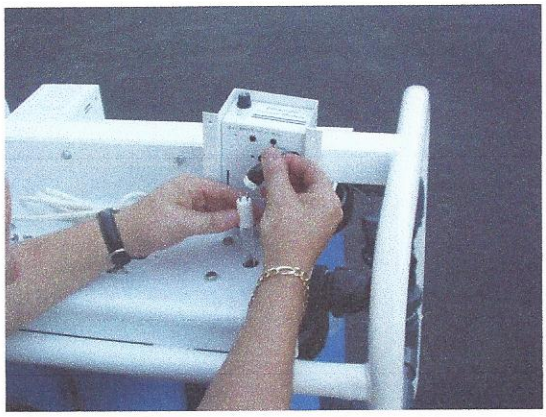
In large container, mix 50+ gallons of sanitizing solution using 1 tsp bleach per gallon of clean water. Remove carbon filters, immerse them in the solution, and re-install empty canisters. With both suction and outlet hoses in the sanitizing solution, turn the unit on and cycle the solution for 10-15 minutes. Turn off the power and allow unit to sit for additional 30 minutes. If this was a periodic cleaning, flush chlorinated water from the system and resume water treatment. For pre-storage cleaning, drain water from hoses & canisters, allow unit and filters to air-dry for 48 hours before re-assembly and storage.

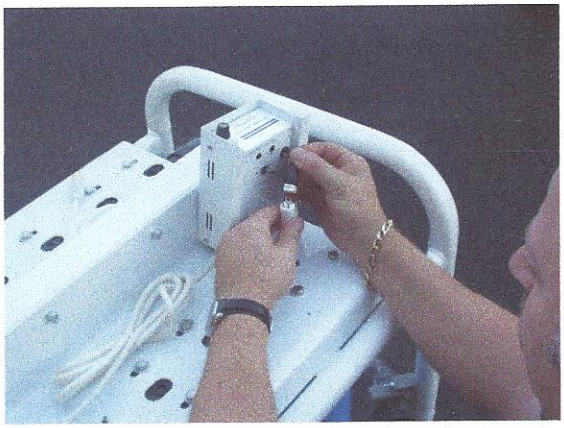
QUARTZ SLEEVE: The quartz sleeve should be cleaned each time filters are changed. The presence of iron or poor water quality will require more frequent cleaning of the quartz sleeve. Clean parts except the filters and electronic parts with soap and water. **Do Not Attempt To Remove Quartz Sleeve** as a part of your normal maintenance. Damage to the system and personal injury may occur. Contact Noah Water Systems if the quartz sleeve is broken or needs replacement.

CAUTION: Do not attempt to clean filters or electronic parts.

UV BULB INSTALLATION INSTRUCTIONS

The ultraviolet bulbs in your unit have been removed for shipping purposes and must be re-installed before use. The UV bulbs are stored in the bottom of this case in the cardboard tubes. You may refer to the Operating Manual for a more detailed explanation of the bulb installation process. Keep in mind to ***touch only the white ends of the lamp, as fingerprints on the glass will reduce the lamp's effectiveness.*** Locate the 2 UV controller assemblies (the blue canister to the right on both sides of your unit). Remove the 4 screws that hold the UV controllers in place and lift up the assembly, removing the UV connector wire. Insert the UV bulb (4-prong connector facing up) about ¾ down into the hole. Connect the 4-prong end of the bulb to the wire connector. Slide the connected bulb into the chamber until it stops. Note that the wire connector will also be fully inserted into the hole, leaving only the

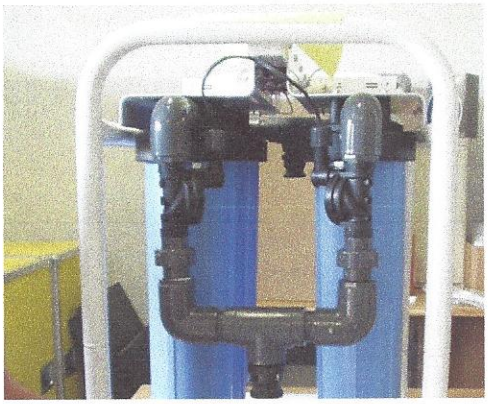




wire exiting the top. Re-secure the UV controller assemblies back to the top of the bracket with the 4 screws. You're done! To prevent breakage, we recommend you remove and secure the bulb whenever you ship this unit, especially via common carrier. 3rd party shipping personnel just don't handle baggage with the same care you and I would. "Handle With Care" and "Delicate – Glass" labeling typically goes unnoticed.

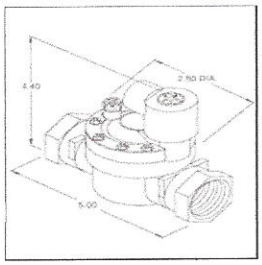
** See OPERATING MANUAL for more details

The Nomad Solenoid Safety Valve



The Nomad series solenoid valve is factory-installed on all Nomad units produced. This normally closed valve insures that the valve will open only when the UV Control Module is plugged in and the UV Lamp is operational and drawing the expected electrical current. **This insures that no water will flow through the system without being exposed to the proper Ultraviolet exposure.**

This diaphragm type valve is constructed of glass filled nylon. Designed to operate at pressures from 10-125 psi. with an optimum flow range of 3 to 35 GPM. An external manual override is incorporated. The slow close feature prevents water hammer. The elastomer is a standard Buna-n (Nitrile).



Materials

Seals	Buna-N (Nitrile)
Internal Wetted Components	Stainless Steel Glass Filled Nylon
Port Size	1 inch NPT female, inlet and outlet
Fluid Temperatures	Maximum to 120°F
Flow Range	3 – 35 GPM

Electrical

Solenoid Voltage	AC 50/60 Hz- 120 volts
Power Consumption	AC-5 watts
Coil Construction	Standard Class A (105°C)

Friction Loss Chart

Model	Size		Pressure Loss in PSI					
			5 GPM	10 GPM	15 GPM	20 GPM	30 GPM	
205	1"	Globe	3.00	2.20	1.90	3.10	5.10	
		Angle	----	----	----	----	----	

Noah WATER SYSTEMS™

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TOOL KIT INVENTORY

GENERAL MAINTENANCE ITEMS

- **PLIERS, UTILITY KNIFE and SCREWDRIVERS** – General utility tools
- **RATCHET SET** – 3/8" drive for miscellaneous use

GENERATOR MAINTENANCE ITEMS

- **OIL (2 Quarts total)** – for oil changes - SAE 30
- **SPARK PLUG** – Replacement, NGK part # CR5HSB or equivalent
- **SPARK PLUG GAP TOOL** – To maintain proper spark plug gap
- **SPARK PLUG REMOVAL TOOL** - for spark plug removal

PURIFICATION PLANT MAINTENANCE ITEMS

- **O-RINGS (2, large)** – Replacement for filter canister
- **O-RINGS (2, small)** – Replacement used for quartz tube
- **SILICONE GREASE** – General lubricant for o-rings
- **FILTER WRENCH (2)** – For removing blue canister housings
- **BAG FILTERS (2)** – Additional supply of cleanable bag filters

PUMP MAINTENANCE ITEMS

- **OIL (2 Quarts total)** – for oil changes - SAE 30
- **AIR FILTER** – Replacement, Honda part #17211-ZE1-000
- **SPARK PLUG** – Replacement, NGK part # BPR6ES or equivalent
- **SPARK PLUG GAP TOOL** – To maintain proper spark plug gap
- **SPARK PLUG REMOVAL TOOL** - for spark plug removal

MAINTENANCE / SERVICE RECORD

DATE	MAINTENANCE PERFORMED	RESULTS

WARRANTY INFORMATION

- Noah Water Systems products are warranted to be free from defects in material and workmanship (under normal use) for a period of three (3) years from the date of purchase.
- All merchandise supplied by Noah but designed, manufactured and assembled by others (i.e. pumps, generators, electrical components etc) shall be accepted by Buyer with only those warranties made by such vendors or manufacturers and in lieu of any additional warranties on the part of Noah.
- Filters are not warranted due to varying water conditions.
- Noah Water Systems will, at its discretion, either repair or replace defective equipment.
- This warranty will ***not apply*** to products that (in the opinion of Noah) were not properly installed, misapplied, damaged, altered, used with incompatible fluids or used with replacement filters and other components not manufactured or supplied by Noah Water Systems.
- Noah Water Systems' obligation under this warranty is limited to the repair or replacement of the product.
- Noah Water Systems shall not be liable for freight damage incurred during shipping.
- Noah Water Systems shall not be liable for any labor, damage or other expense.
- Noah Water Systems shall not be liable for any indirect, incidental or consequential damages or any kind incurred by the reason of the use or sale of any defective product.
- Any products returned to Noah Water Systems for warranty consideration must be shipped freight prepaid.

Noah WATER SYSTEMS™

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