

FREQUENTLY ASKED QUESTIONS (F.A.Q.)

GENERAL

1. Where can I buy Johnson Pump products, spares, and replacement parts?

- End Users can purchase Johnson Pump products from Big-Box Retailers, Authorized Online Sellers, and Local Marine Dealers.

2. My pump is Centrifugal, what does that mean?

- Centrifugal pumps use momentum of the spinning impeller in contact with a fluid to transfer the rotating force into the fluid and outward through the discharge port. These types of pumps are used in applications where self-priming capabilities are not critical, and water pressure is already supplied to the pump by gravity (gravity fed) or continuously primed via a source such as a seacock or fluid and pump below the waterline.

3. My pump is Self-Priming, what does that mean?

- Self-priming means the pump can draw fluid through the system without any assistance from another pump, gravity, or primer bulb.
- Most cases, this is likely a Flexible Impeller Pump (FIP) or Diaphragm pump. The trick is suction contained within the geometry of the pump design.

4. Why Does my centrifugal pump motor hum, vibrate, and surge, but no water is coming out of the discharge?

- It may be possible the pump is not fully submerged, or the pump is incorrectly oriented or applied in the system.
- See Air-binding/ Airlock.
 - i. All Johnson Pump Bilge/Aerator cartridge, Proline, Ultima, and Heavy-Duty bilge pumps require near vertical orientation in order properly evacuate water from the bilge.
 - ii. Aerators with thru-hull connections below the water line can be oriented at slightly more aggressive angles as they receive as from a location below the water line, or about 1 inch of fluid height.

5. I think my pump is Air-bound or air-locked, what do I do?

- Air binding or airlock is typically a result of air or gasses being trapped in the system either downstream of the pump, or at the impeller, that cannot be passed during operation. This causes the motor to spin, hum, and vibrate, but no water or fluid can be pumped from the discharge line. Remember, the pump is designed to pump much more dense fluids, not air or gasses.
 - i. Make sure all connections on inlet and discharge are tight
 - ii. Make sure discharge line is as straight as possible, or on a continuous linear incline; no dips, valleys, sags, or bends and as short as possible.
- Adjusting the discharge line may relieve the pump from being air-bound by releasing gasses or air from the impeller and system.

6. The instruction manual states not to cut the wires less than 3 inches from the top of the Bilge Pump motor, why is that?

- Typically, if the wires are cut to length 12 inches or shorter from the motor cartridge, the wires are susceptible to “normal bilge water levels” which can then intrude into the wiring and then short circuit, corrode, or damage critical bilge motor electronics. It is important to make sure wires are sealed with proper waterproof/watertight connectors and neatly hung and secured.

CARTRIDGE BILGE & AERATOR PUMPS

7. What type of grease is recommended for the motor cartridge o-ring?

- Motor Cartridge o-rings are installed with FOOD-GRADE Grease (NSF H1) as they are being used in the marine environment for aquatic life safety. The O-ring is of nitrile/NBR material. Other Food-Safe petroleum-based lubricants or oils can be used as well. Vaseline or other household petroleum jellies are not recommended as they can contain acids that degrade the o-ring material over time.

8. Are the replacement cartridge motors used in the 500|700|1000 GPH Bilge pumps the same as their sibling Aerators?

- Yes. the cartridge motors are the same for their sibling items and can be purchased from Johnson Pump retailers and dealers.

9. Will my Cartridge bilge pump housings accept the other sized replacement cartridge motors?

- Yes. The cartridge housing containing the 500, 750, and 1000 GPH motors can be interchanged, however flow may be impacted depending on the installed combination of motor and impeller.

10. I have a Mayfair Marine Bilge or Aerator Pump, is it the same as the Johnson Pump Marine Bilge and Aerator Pumps?

- Yes, more than likely the Red Johnson Pump Marine Cartridge Bilge or Aerator pump is the same design as your original Yellow Mayfair Marine Cartridge Series product.
- Example: Mayfair Aerator 2850 = Johnson Pump 28503; similar trend follows for Bilge Pumps where Mayfair Bilge Pump 3250 = Johnson Pump 32503

11. Will the Johnson Pump Replacement Motor Cartridge fit a Mayfair Maine Cartridge Bilge or Aerator Pump Housing?

- Yes, if the Mayfair Marine motor cartridge contains the same external ear-tabs like the Johnson Pump motor cartridge, the overall fitment should be the same. There may be some minor differences between pump housings such as molded discharge port on the Mayfair pump versus the newer threaded discharge port of the Johnson Pump.

12. What about 1250GPH motor and cartridge housing? Can it be interchanged?

- No. The 1250gph housing is different compared to the 500|750|1000 GPH housings. Although it can accept the same motors, the housing does not have the same port and hose connection sizes and will require timely system modifications to make it work in existing bilge/aeration systems. Additionally, flow is determined by the installed combination of motor and impeller as well.

13. Can I rotate the base of the Cartridge Aerator that uses the 90° Thru-hull fitting to make inlet/discharge locations more desirable?

- Although physically it is possible, it is not recommended to unscrew and rotate the cartridge bilge/aerator housing 180°. Reason being the metal screws are self-forming threads into the plastic housing in the currently installed state. Disassembly and reassembly may jeopardize the thread integrity and seal at the joint.

14. What size is the Aerator Thru-hull/ Inlet?

- The Thru-hull is ¾"-14 NPSM.

15. What size is the Cartridge Series discharge outlet?

- The cartridge series discharge outlet is ¾"-14 NPSM.

16. The Aerator instruction manual says do not use Silicone Sealants, Why?

- The Silicone sealants are not recommended for underwater applications, especially connections that should be rather rigid, like a thru-hull. Yes, they can work at first, but silicone is flexible and can degrade overtime with UV exposure and impurities in the water. We recommend more permanent Marine Grade products like 3M 4200, 4200 Fast Cure, or 3M 5200. Please check compatibility of products between your boat's hull material, and the polypropylene material of the Johnson Pump Marine Thru-Hull.

17. My Aerator Pump is not priming, losing prime, and is cavitating?

- Johnson Pump Aerator pumps are centrifugal style pumps, which means they are NOT self-priming. This pump is designed to be fully flooded with water (below the waterline) in order to operate correctly. Additionally, if it is used in a fishing application installed on a transom or thru-hull, this pump will have difficulty operating while the boat is traveling at speeds other than a drift. This is because the flow dynamics of the boat while moving are 'stealing' water from the pump inlet.
- Also, the hose routing needs to be taught (tight, secure) and without any dips or sags, because once air gets trapped inline, it has difficulty removing it. Please inspect the hose routing, and that the pump is well below the waterline. Removal of the cartridge should release any trapped air in the housing, but that does not mean there is not air trapped elsewhere in the hoses. Please be careful when removing the cartridge, as it is possible water may begin to enter the boat. The cartridge can be quickly reinstalled – but most applications a seacock or shut-off valve is required.

CARTRIDGE COMBO – AUTOMATIC BILGE PUMP

18. My previous Ultima Bilge, Ultima Combo, Or Cartridge Combo had a 5-wire Setup. Depending on how the unit was configured (purchased complete, or pieced together by the end-user) you will have either 3 or 4 wires total coming from our equipment, and used in conjunction with our 3-position (ON/OFF/AUTO) rocker panel switch.

- If 4 wires:
 - i. 2 Brown wires (1 from pump, 1 from Ultima Switch)
 1. These 2 brown wires can be spliced together into 1 wire, that will become your manual override wire. (turn the pump on ON-DEMAND with the switch)
 2. The brown with white stripe is your trigger wire for Automatic Operation when selected on the rocker panel switch.
 3. Black is your ground wire.
- If 3 wires:
 - i. 2 Brown wires spliced into 1 from the factory (1 from pump, 1 from Ultima Switch) these are your manual override wire. (turn the pump on ON-DEMAND with the switch)
 1. The brown with white stripe is your trigger wire for Automatic Operation when selected on the rocker panel switch.
 2. Black is your ground wire.
- The previous 5-wire setup:
 - i. 2 Black wires
 1. 1 from pump, 1 from switch. May have been separated, but could have been spliced into 1 ground wire.
 2. 1 Brown with Red Stripe – Was likely the trigger wire.
 3. 2 Brown wires
 1. 1 from pump, 1 from switch. May have been separated, but could have been spliced into 1 Manual Override wire.

ULTIMA COMBO – AUTOMATIC BILGE PUMP

19. My previous Ultima Bilge, Ultima Combo, Or Cartridge Combo had a 5-wire Setup. Depending on how the unit was configured (purchased complete, or pieced together by the end-user) you will have either 3 or 4 wires total coming from our equipment, and used in conjunction with our 3-position (ON/OFF/AUTO) rocker panel switch.

- If 4 wires:
 - i. 2 Brown wires (1 from pump, 1 from Ultima Switch)
 1. These 2 brown wires can be spliced together into 1 wire, that will become your manual override wire. (turn the pump on ON-DEMAND with the switch)
 2. The brown with white stripe is your trigger wire for Automatic Operation when selected on the rocker panel switch.
 3. Black is your ground wire.
- If 3 wires:
 - i. 2 Brown wires spliced into 1 from the factory (1 from pump, 1 from Ultima Switch) these are your manual override wire. (turn the pump on ON-DEMAND with the switch)
 1. The brown with white stripe is your trigger wire for Automatic Operation when selected on the rocker panel switch.
 2. Black is your ground wire.

ULTIMA BILGE - AUTOMATIC BILGE PUMP

20. My Ultima Bilge 600|800|1000|1250GPH pump is constantly running.

- Please ensure the correct wiring process is used, that should have been included in the product packaging. If wired incorrectly, or wired directly to power, make sure the correct leads are powered and oriented during installation.
- The thermoplastic housing is sonically welded and encapsulates the entire switch unit and pump unit. It is possible during manufacturing that the sonic weld at the parting line of the material has fatigued or allowed for water intrusion. Moisture contained within the switch may be causing the contacts to read a signal and trip the pump to run.

21. How do I remove the basket of my Ultima Bilge Pump for installation or cleaning?

- The basket is removable by depressing the black tabs on either side of the pump body, and either pulling the black basket down and away from the pump housing, or, if already installed, the pump body lifting directly up and away from the basket.

ULTIMA SWITCH – AUTOMATIC FLOAT SWITCH

22. My pump has the Ultima Switch, and the pump runs constantly in the AUTOMATIC operation.

- It may be possible that the switch is oriented too closely to another item, causing water droplets and moisture to be detected across the sensor technology. Try to relocate the switch away from any surfaces according to the instruction manual.
- Water may have intruded into the electronics of the ultima switch, causing an auto-on trigger. The switch needs to be replaced immediately.

23. What amperage does the Ultima Switch draw when in standby mode and when operating?

- The Ultima switch draws less than 20 microamps when in standby mode, and is essentially negligible when the pump is operating.

HEAVY DUTY BILGE & AERATOR PUMPS

24. Do the Johnson Pump 1600|2200|4000GPH Heavy Duty Bilge pumps share the same motor, housing, or basket?

- No, the HD Bilge pumps do not share the same motors, however the 1600 and 2200 do share the same intake basket, check valve assembly, and 1-1/4" and 1-1/8" barbed hose fittings.

25. What size outlet is my 1600|2200 GPH Bilge or Aerator Pump?

- The outlet is 1" FNPT (Female National Pipe Taper), and contains separate 1-1/4" and 1-1/8" barbed hose fittings.

26. What size outlet is my 4000 GPH Bilge Pump?

- The outlet is 2" FNPT (Female National Pipe Taper), and contains separate 2" and 1-1/2" barbed hose fittings.

BILGE ACCESSORIES

27. Can I place a bilge pump in-line or connected to my Bilge Alert High Water Alarm?

- Although the Ultima switch is indeed used on our pump products, the design intent of this High Water Alarm is not equipped to handle the required amperage draw through all the components in the system. Thus, it is not recommended to install a pump in the system.

28. Can I place additional High Water Sensors with my Bilge High Water Alarm Kit?

- Yes, however extreme caution needs to be considered and installed by a professional.
 - i. Additional sensors can be placed in PARALLEL, and it is important to use a proper diode to ensure no current is back-fed through other sensors. Some units come pre-installed with Diodes from boat manufacturers, however retail products will need them installed.

WASH DOWN & WATER PRESSURE PUMPS (WD & WPS)

29. My Washdown (WD) or Water Pressure System (WPS) pump motor is not pumping, or continuously pumping, what do I do?

- Possibly a stuck pressure switch, attempt to safely bypass the switch, running power directly to the pump power leads.
 - i. If this solves the issue, the pressure switch (microswitch) needs attention or replacement.
 - ii. If issue is not corrected from above, ensure all hose connections are not kinked, blocked, or obstructed. Apply power to the system again. If not corrected, pump/motor may need to be addressed.
- Contact your dealer or location of purchase for replacement and warranty information.

30. Can I use a Washdown (WD) Pump as a Water Pressure (WPS) Pump or vice versa?

- No, these pumps are not intended to be used as the alternate application for a variety of reasons. The WD pumps offer nearly DOUBLE the pressure of the WPS pumps. This may sound like a good thing, but it can cause fittings to burst, constantly blow the pressure relief valve of a hot water heater or other auxiliary equipment, as well as damage to other inline components (accumulator tanks, valves/gaskets/ etc.)
- WD pumps use NITRILE valves which for raw water with likely contaminants like oils and fuels, which are not safe or intended for POTABLE (drinking) water. WPS pumps use EPDM valves, which are for drinking water.

31. On the end of the Accumulator tank there is a T-fitting; which end is the inlet and which is the outlet?

- The accumulator tank does not truly have an inlet or outlet designated as it is just used as a small semi-pressurized storage vessel. The outlet side of the WPS water pressure pump can be connected to either of the two barbs on the T-fitting and still operate as intended.

SHOWER SUMP MULTIPOINTS

32. How do I use the inlet/outlet ports on Shower Sump Multiports?

- Determine which size ports you want to use with your system. Some of the ports have staggered sizes to allow for various connections. Simply cut-off the tips of the black plastic barbs only 1/8"-1/4" to reveal the holes that enter the sump. You can also use a drill, but it is important to make sure any debris is removed in order to keep the pump and internal check valve operating properly.

33. How do I access the Check valve in the shower sump multiport?

- The check valve is a flapper style valve that is sealed and contained inside the inlet port manifold and cannot be accessed for replacement.

34. Since I cannot replace my flapper style check valve, can I clean my check valve inside the sump?

- Yes, but it does require some disassembly of the sump unit. The pump/float switch will need to be removed so you can access the outlet port. From here, place a dampened and light detergent cloth over a small diameter dowel that can be passed through the outlet of the multiport unit from inside to outside. Make sure no sharp edges catch or tear the flapper valve. Make sure to flush out the flapper from inside-out. Once cleaned, to verify function of the flapper style check valve you can blow from OUTSIDE to INSIDE and you should have resistance from the valve. (do not use compressed air as it can damage and deform the flapper). If no resistance, it is possible the valve may be stuck or damaged and would require replacement of the sump unit.

ENGINE COOLING & FLEXIBLE IMPELLER PUMPS

35. Where do I find the Model Number and Specific PN for my Engine Cooling pump?

- Most Engine Cooling pumps and Flexible Impeller Pumps have the 'generic' pump model/type number and product-specific part number etched into the front cover of the pump. The 'generic' model/type number follows the format of F7B-9, and the pump-specific part number follows 10-#####-##.

WARRANTY INFORMATION

36. For questions or comments you can always contact Johnson Pump Marine Customer Service at:

Phone: +1 (847) 671-7867

email: jp-customerservice@spxflow.com

37. I think my product is defective, or is experiencing an early failure, where can I find out warranty information?

- SPX Flow, Inc. | Johnson Pump Marine employs a strategic warranty process to ensure that end users' and customer needs get addressed quickly and in a timely manner. To guarantee this, Johnson Pump authorized dealers, distributors, and resellers are the first line of defense to quickly replace defective or malfunctioning products. Warranty programs exist between SPX Flow, Inc | Johnson Pump Marine and our vast authorized dealer, distributor, and reseller networks that will handle the rest. SPX Flow, Inc. | Johnson Pump Marine does not sell direct to end users or consumers, and will only manage warranty replacement, credit, refund, or return to the authorized parties mentioned above within the current terms and conditions provided for each qualifying sale or order.

38. I purchased a Johnson Pump Marine product on Amazon.com (USA), but the 30-day return period has expired. What can I do now?

- If the product is still under Johnson Pump Marine Manufacturer's Warranty Period; Please Inquire with Johnson Pump Marine Customer Service team via email: jp-customerservice@spxflow.com with a copy of your Amazon purchase receipt that includes date of purchase and product model and also include ship-to address and telephone number.