

MAINTENANCE

Lubrication
Motor - Permanently Lubricated ball bearings - no service required.
Rotary Seal - Requires no lubrication after assembly.
*The pump must be drained before servicing or if stored below freezing temperatures. Periodic replacement of seals may be required due to normal carbon wear.

Symptom	Problem	Resolution		
No Flow	Insufficient Prime	Prime system with water and purge all air from suction piping. Install check valve.		
	Insufficient Power	Verify power supply and connection from panel to pump. Verify proper voltage. Some models are dual voltage (115/230).		
		Ensure valves are open.		
	Flow Restriction	Ensure plumbing is clear, including suction strainers, check valves, etc. Verify check valve orientation and direction of permitted flow. Clean out leaves or other debris from basket strainer (if applicable).		
		Air leak	Fix air leaks at fittings, connections, strainer basket etc. This typically occurs on the intake side.	
		System Incompatibility	Verify hydraulic compatibility: i.e. pump & pipe are sized for the system.	
	Low Flow	Air leak	Fix air leaks at fittings, connections, strainer basket etc. This typically occurs on the intake side.	
System Incompatibility		Verify hydraulic compatibility: i.e. pump & pipe are sized for the system.		
Insufficient Power		Verify power supply and connection from panel to pump. Verify proper voltage. Some models are dual voltage (115/230).		
		Ensure valves are open.		
Flow Restriction		Ensure plumbing is clear, including suction strainers, check valves, etc. Clean out leaves or other debris from basket strainer (if applicable).		
		Insufficient Prime	Prime system with water and purge all air from suction piping.	
Cavitation		Verify airtight plumbing on the suction plumbing especially fittings! Clean out leaves or other debris from basket strainer (if applicable). Increase pipe size where possible. Decrease suction pipe length, reduce the number of elbows, etc. Verify hydraulic compatibility: i.e. pump and pipe are sized for the system.		
		Sporadic Operation	Insufficient Power	Verify power supply and connection from panel to pump. Verify proper voltage. Some models are dual voltage (115/230).
			Poor Ventilation	Ensure adequate airflow over motor to prevent overheating.
			Excessive Noise	Cavitation
Insufficient Power	Verify power supply and connection from panel to pump. Verify proper voltage. Some models are dual voltage (115/230).			
	Ensure valves are open.			
Flow Restriction	Ensure plumbing is clear, including suction strainers, check valves, etc. Verify check valve orientation and direction of permitted flow.			

Teton Dynamics™ Limited Warranty

This product is warranted to the initial purchaser to be free of defects in materials and workmanship at the time of initial purchase and for a period of 2 years for Teton eco stream™ products. In the event this product malfunctions within two years from the date of purchase, the sole obligation of Teton Dynamics™ (hereinafter referred to as Teton Dynamics™) will be to repair the unit or replace with an equivalent new or factory refurbished unit at Teton Dynamics™ discretion, subject to the following conditions:

- The malfunction is proved attributable to a defect in materials or workmanship, including repairs performed under this warranty. Malfunction for any other reason-including but not limited to misuse, negligence, accident, or tampering with parts, incorrect wiring, or improper installation-will not be remedied under this warranty.
- Teton Dynamics™ specifically does not guarantee chemical compatibility, and expressly does not warrant units from any problems caused by chemical attack or failure due to incompatibility of fluid being pumped with pump materials of construction. Purchaser shall also retain and present to Teton Dynamics™ evidence of purchaser's compatibility tests under actual operating conditions.
- All warranty repairs must be performed by Teton Dynamics™ or a Teton Dynamics™ authorized company. Purchaser must retain the purchase receipt and present it with this certificate as proof of ownership and entitle ment to warranty repairs. Unauthorized repairs will not be compensated by Teton Dynamics™, and are not the responsibility of Teton Dynamics™, and if such repairs damage the product, such damages are not remedied under this warranty.

- Purchaser shall bear all shipping, packing and insurance costs and all other costs, excluding labor and parts necessary to effectuate repairs under this warranty.
- Periodic check-ups are not covered by this warranty.
- This warranty is in lieu of all other express warranties which now or hereafter might otherwise arise with respect to this product. Any and all limited warranties, including the warranties of merchantability and fitness for particular purpose, shall have no greater duration than the duration period of the express written warranty applicable to this product, and shall terminate automatically the expiration of such duration period. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. No action shall be brought for breach of any implied or express warranty after one year subsequent to the expiration of the duration period of the express written warranty.
- Incidental and consequential damages caused by malfunction, defect, or otherwise, and with respect to breach of any express or implied warranty, are not the responsibility of Teton Dynamics™, and, to the extent permitted by law, are hereby excluded both for property damage and, to the extent not unconscionable, for personal injury damage. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- This warranty does not apply to any malfunction arising out of any application of this product other than normal use, unless such application is upon request specifically approved in writing by Teton Dynamics™.
- The provisions of this warranty are severable and if any provision shall be deemed invalid, the remaining provisions shall remain in full force and effect.
- Rights under this warranty are not assignable without the express prior consent in writing by Teton Dynamics™ and, regardless of the terms of such consent in writing, such assignee shall have no greater rights than his assignor had against Teton Dynamics™.
- After the warranty period, units requiring maintenance or repair may qualify for our exchange program. The exchange program provides an opportunity to repair/replace your pump and/or motor at a nominal charge. Please refer to the Exchange Policy or contact Teton Dynamics™ for details and current pricing.



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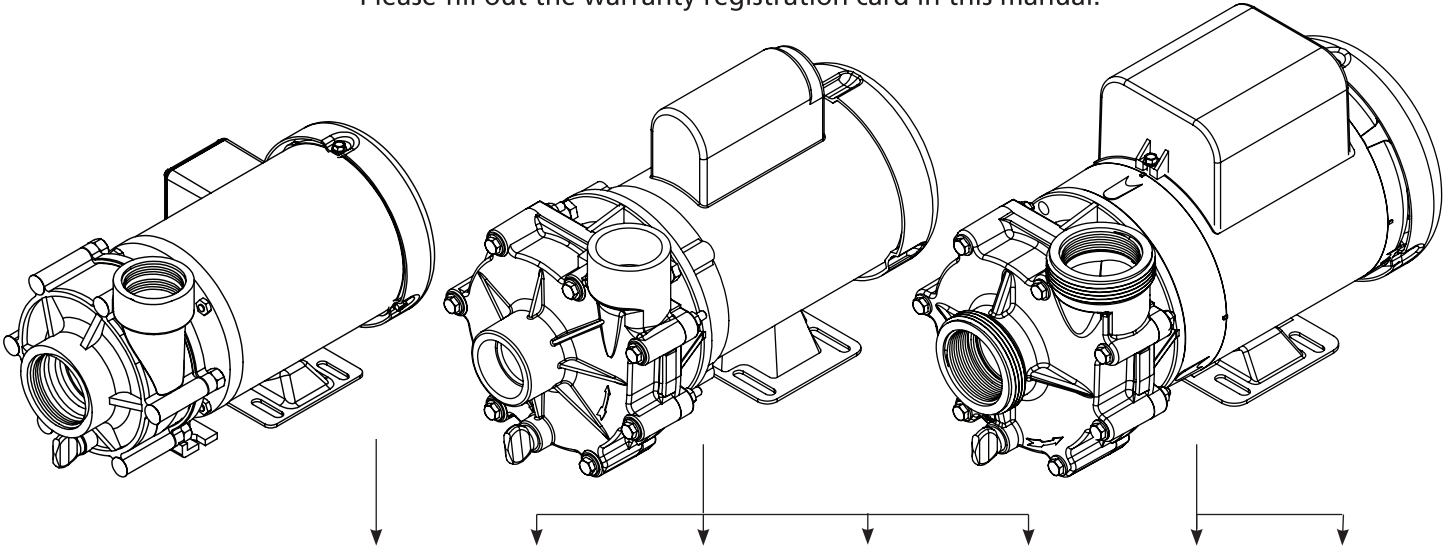
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INSTALLATION AND SERVICE MANUAL

Please fill in for future reference:

MODEL: _____
SERIAL NUMBER: _____
DATE PURCHASED: _____

*Please fill out the warranty registration card in this manual.



Model	XT4000LH	XT3200	XT4400	XT5000	XT6000	XT7000	XT8000
MAX FLOW (gph)	4200	3300	4500	5100	6100	7200	8220
MAX HEAD (feet)	12'	21'	21'	22'	23'	22.6'	22'
MAX POWER (watts)	166	215	253	293	344	452	541
MAX CURRENT (amps)	1.5 @ 115V	1.9 @ 115V	2.2 @ 115V	2.6 @ 115V	3.0 @ 115V	7.3 @ 115V	7.7 @ 115V
VOLTS	115V	115/230V	115/230V	115/230V	115/230V	115/230V	115/230V
MOTOR HP*	1/8	1/8	1/6	1/4	1/3	1/2	1/2
MOTOR	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed
INLET	2" FPT / 2" SOC	1 1/2" FPT 2" SOC	1 1/2" FPT 2" SOC	1 1/2" FPT 2" SOC	1 1/2" FPT 2" SOC	2" FPT 2" SOC	2" FPT 2" SOC
DISCHARGE	1 1/2" FPT 2" SOC	1 1/2" FPT 2" SOC	1 1/2" FPT 2" SOC	1 1/2" FPT 2" SOC	1 1/2" FPT 2" SOC	2" FPT 2" SOC	2" FPT 2" SOC

*Equivalent

WARNING: Please read completely before you install or operate your new pump! This is an external “out-of-pond” pump! It is NOT submersible! Do NOT allow this pump to become submerged! Never run dry! Max. case pressure.- 65 PSI!



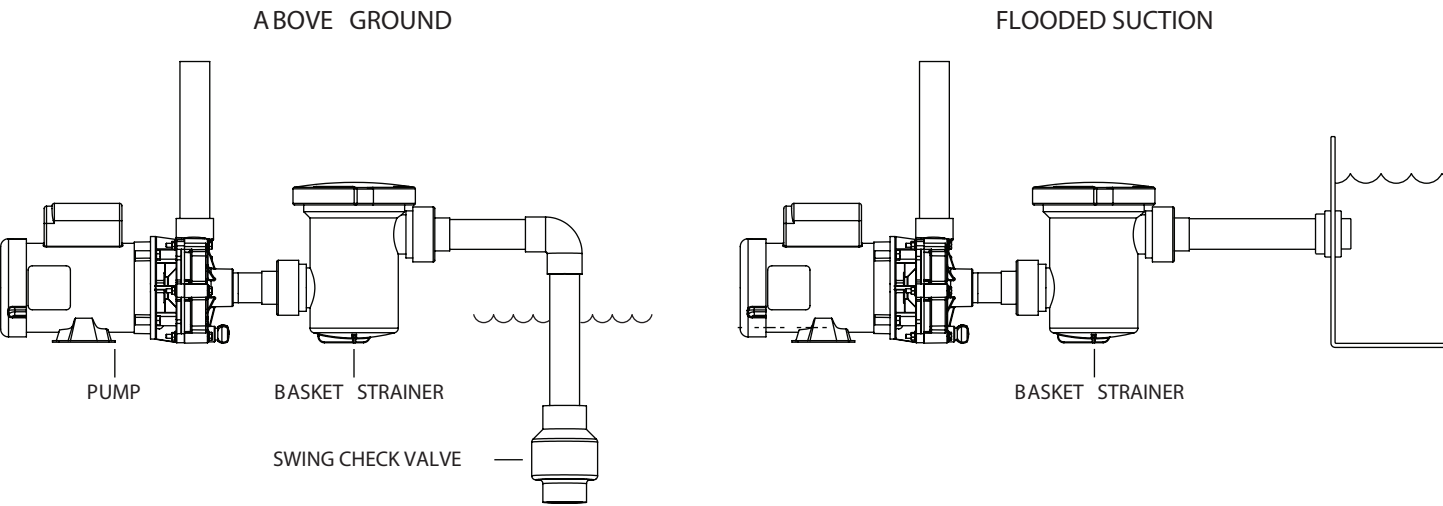
Made in the USA

We congratulate you on your choice of the Teton ecostreamTM Centrifugal Pump! It has been carefully designed using the advantages of today's technology and carefully constructed to give you the dependability of yesterday. To insure proper performance, we urge you to carefully follow the instructions in this manual. If you have any questions, call Teton DynamicsTM for assistance.

INSTALLATION

Please read carefully! When properly installed the Teton ecostreamTM will provide dependable trouble-free service.

1. Locate the pump as near the water source as possible. A flooded suction situation is preferred. The pump is not self-priming, therefore, if the fluid level is below the pump, a swing check valve must be installed and the pump primed prior to start-up. (Figure 2)
2. Mount motor base to a secure, immobile foundation.
3. Use only plastic fittings on both the intake and discharge ports. Seal pipe connections with TeflonTM paste. These fittings should be self-supported and in neutral alignment with each port. (i.e. Fittings must not be forced into alignment which may cause premature line failure or damage to the pump volute.) For non-flooded installations, a strainer basket and check valve are recommended.
4. Never restrict the intake. Keep both input and discharge lines as free of elbows and valves as possible. Always use pipe of adequate diameter. This will reduce friction losses and maximize output.
5. The Teton ecostreamTM is not self-priming! It must not be run dry! We recommend a flooded suction installation. Please read carefully! When properly installed, the Teton ecostreamTM will provide dependable, trouble-free service.



(Figure 2)

WARNING: DO NOT RUN DRY!



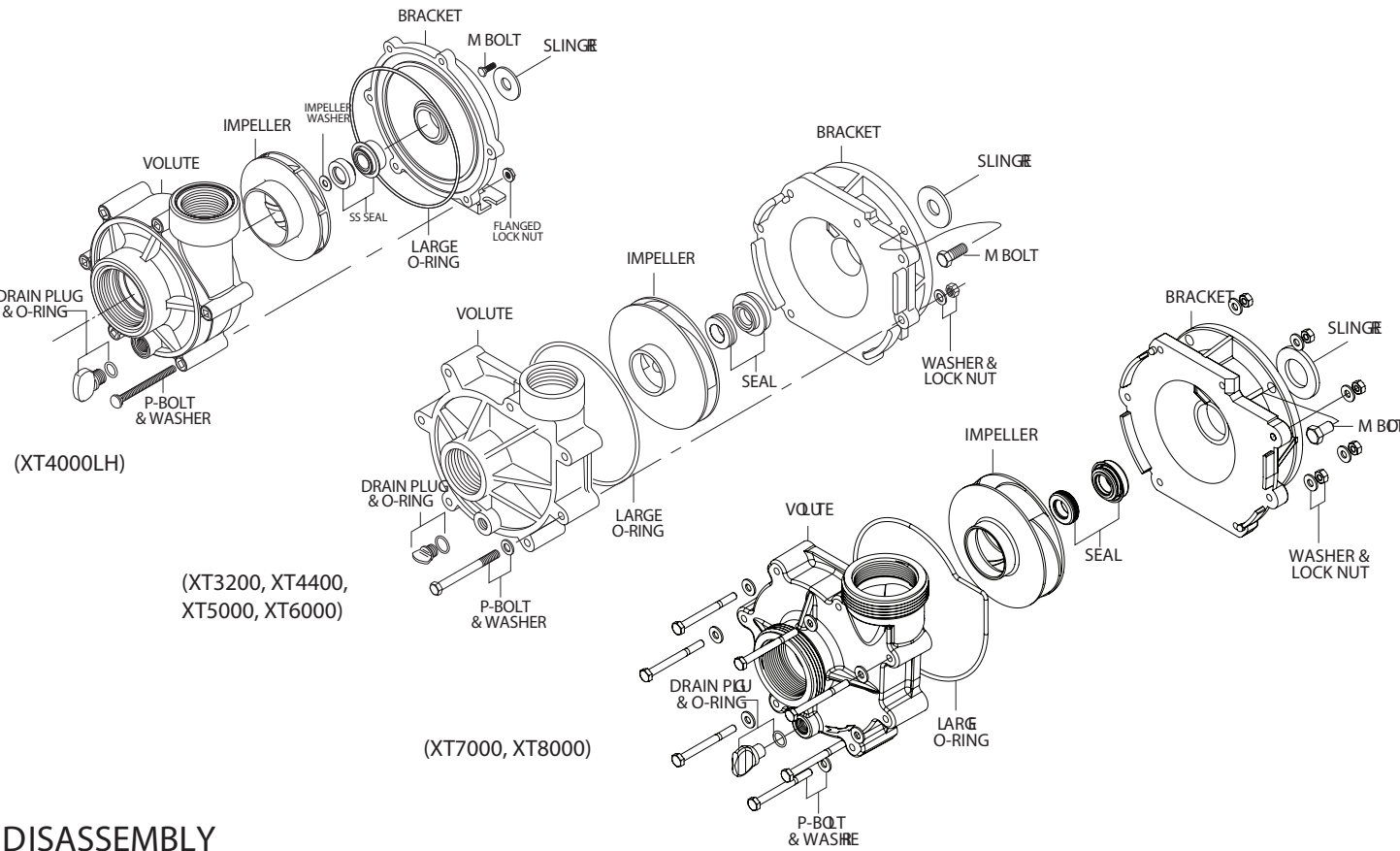
WARNING: ALWAYS SHUT OFF ELECTRICAL POWER BEFORE INSTALLATION AND / OR SERVICING THIS PUMP! All electrical wiring should meet state and local ordinances. Improper wiring may not only be a safety hazard but may permanently damage the motor and/or pump! 230V 50 HZ MOTORS AVAILABLE - CONTACT YOUR SUPPLIER FOR INFORMATION.

ELECTRICAL HOOK-UP

1. Check that supply voltages match the motor's requirements.
2. Check motor wiring and connect, according to instructions on motor, to match supply voltage.
3. Power cord should be protected by conduit or by cable and be of proper gauge. It should be no longer than necessary.
4. Power should be drawn directly from a box with circuit breaker protection or with a fused disconnect switch.

PUMP END ASSEMBLY

1. Clean and inspect all pump parts (O-ring, seal seats, motor shaft, etc.).
2. Apply sealant to the bracket bore ID wall and around the seal case - follow sealant mfg. instructions. We recommend using Gasgacinch[®]. Silicone sealant can also be used.
3. Press carbon graphite seal into bracket while taking care not to damage carbon graphite face.
4. Place slinger (rubber washer) over motor shaft and mount bracket to motor.
5. Carefully, lubricate the seal seat elastomer OD and impeller hub ID with water. Press the seal seat into the impeller hub making certain that the ceramic is in evenly - the sealing surface should be parallel with the impeller hub.
6. Carefully lubricate carbon-graphite and ceramic sealing surfaces with CLEAN water. Do not use silicon lubricants or grease!
7. Assemble Bracket to motor with four M-bolts.
8. Thread impeller onto shaft and tighten! If required, remove motor end-cap and use a screwdriver on the back of motor shaft to prevent shaft rotation while tightening. Replace motor end cap.
9. Seat large O-ring in volute slot and assemble volute to bracket with screws, washers and nuts. Tighten in a cross pattern (30 in-lbf).
10. Install drain plug with its O-ring in volute drain hole.
11. Before operating pump, allow a proper cure time for the sealant used in step 2.



DISASSEMBLY

1. Shut off power to motor before disconnecting any electrical wiring from the back of the motor.
2. Disassemble volute from bracket by removing the screws.
3. Remove cap covering shaft at back of motor and with a large screwdriver, prevent shaft rotation while unscrewing impeller.
4. Remove ceramic piece from impeller. (If you are replacing the seal)
5. Detach bracket from motor.
6. Remove carbon-graphite seal from bracket by pressing out from the back. Do not dig out from the front! (If you are replacing the seal)