

# PJR-B: Paragon Junior Water Pressure System Installation, Operation, and Maintenance

**INSTALLATION:** The motor and circuitry are not waterproof. Install PJR-B in a dry well ventilated location not more than 6-feet above the water supply.

Mount PJR-B to a sturdy platform using four (4) 3/8" stainless steel bolts with flat washers. Operation is most quiet when mounted to a solid surface.

**PLUMBING:** Before making plumbing connections pour water into the pump inlet to aid in initial priming. PJR-B develops substantial pressure and suction; plumbing lines must be rigid pipe or heavily reinforced hose. The inlet to the pump must be 3/4" ID. Install WSB-750 (3/4" NPT ports) pump strainer in the inlet line between the supply tanks and the pump in a location that can be easily serviced.

The discharge line between the pump and the Pressure Storage Tank must be 3/4" ID minimum, and must be free of filters, valves or any other device. (See note about filters and purifiers) The plumbing size after the pressure storage tank may be reduced if desired.

Install CV-75 check valve anywhere between the supply tank and NOFLO™.

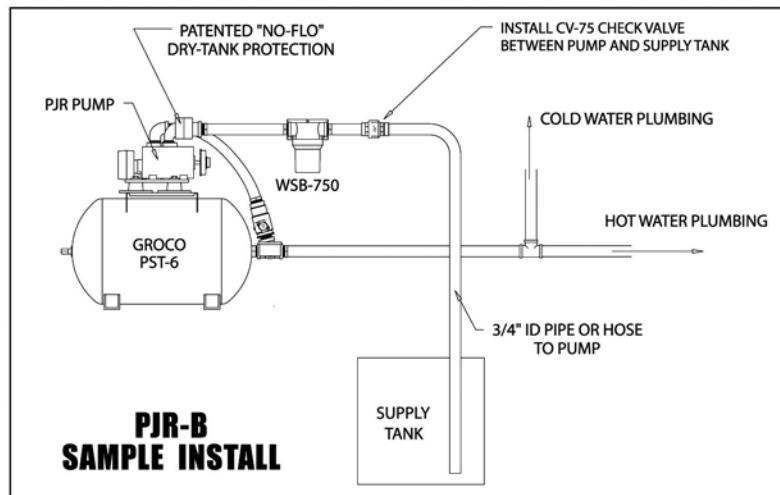
Use of a foot or two of hose at the pump inlet and discharge to help isolate vessel plumbing from pump pulsations.

**PRESSURE STORAGE TANK:** PJR-B includes GROCO® PST-6. Before applying power to PJR-B, the air charge in the PST must be checked and adjusted to 18-20 PSIG. There is an air valve on the tank at the opposite end from the plumbing connection. Remove the protective cap and check and set air pressure with no water pressure present; use a standard tire gauge to check the pressure. Excess pressure can be released by depressing the center of the valve. Use a hand pump such as a bicycle pump to add air if necessary.

**WATER FILTERS AND PURIFIERS:** We do not recommend the use of filters as they will seriously restrict the flow and pressure you desire. If you choose to utilize such a filter, it must be installed after the PST. DO NOT install a filter between the supply tank and the pump.

**ELECTRICAL:** Do not connect PJR-B to the boat's bonding system.

Proper wire size is essential. Refer to the wire size selection information included with this product. Connect positive power to the



To enable NOFLO™ remove the jumper wire. During normal operation NOFLO™ will sense the absence of water and turn the pump off after

terminal block location marked (+); Connect ground (-) to the terminal block location marked (-). Protect PJR-B with a dedicated circuit breaker.

**START-UP:** In preparation for start-up, check all plumbing and electrical connections. Open all faucets and shower heads half-way. Apply power at the circuit breaker; the pump will run and should self-prime. If the pump does not prime within 30-seconds the dry-tank protection system will turn the pump off. Interrupt power at the breaker panel to reset the pump control.

As water flows smoothly from each shower head and faucet, shut it off. When all outlets have been shut off the pump will pressurize the system and shut off. Note that it will take several minutes to fill the PST and the water heater.

**DRY TANK SHUT-DOWN:** These are the dry-tank conditions under which your Paragon Pump will turn off.

\*NOFLO™ has sensed the absence of water at the pump inlet for 30-seconds

\*The pump has run continuously for 10-minutes

Paragon Pumps are equipped with a patented dry tank protection system called NOFLO™, which senses the presence of water at the pump inlet. Some purified water such as reverse-osmosis water or reclaimed water may not be sensed by NOFLO™. If this happens the pump may turn off even though water is present.

A jumper wire is installed across the NOFLO™ terminals. The jumper disables NOFLO™ and permits the pump to operate with purified waters. Dry running protection is still provided by a built-in 10-minute timer.

30-seconds of continuous dry running. If your Paragon pump ever shuts off when you know that water is present and the pump has not exceeded 10-minutes of continuous running, reconnect the jumper wire to disable NOFLO™.

Interrupt power at the breaker panel to reset the pump control.

**Winterization:** Freezing will damage your pump and the connected plumbing. To winterize first allow PJR-B to pump the supply tank(s) dry. Shut off power when the faucets begin to pass air. Disconnect inlet and outlet hoses to drain the connecting plumbing and remove WSB-750 bowl. Pour an ounce or two of potable alcohol (your favorite scotch will do fine) into the pump. Reconnect the hoses to prevent evaporation. DO NOT use automotive antifreeze to winterize as it may be poisonous.

**Maintenance:** Check the WSB-750 inlet strainer at least monthly.

Check the air charge in the PST at least monthly. This is done with no system water pressure present. With a tire gauge check the air charge. It should be the same as the cut-on pressure of the pump (18-20 psi). Add or remove air as needed before applying power to the pump and pressurizing the system with water.

DO NOT lubricate any internal part of the pump.

PARAGON JUNIOR CONTROL SUMMARY			
CONTROL	ON-OFF OPERATION	DRY-TANK PROTECTION	COMMENT
ETM	Pressure Switch	10-Minute w/NOFLO™	Standard Before S/N 020701 Will Not Work
ETM-B	TRANS-1	NOFLO™	Between 030115-01 and 030615-99 (no longer available)
ETM-D	Pressure Switch	NOFLO™	Standard Between S/N 020201-020930

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## Installation, Operation, and Maintenance

	Item	Part Number	Description	Qty	Item	Part Number	Description	Qty
	1-14	P-9000	Pump Assembly	1	8	P-9007	Impeller Guide	1
	1,10	P-9001/9002 Set	Pump Castings set	1	9	1420X34HS	Bolt	2
	2	P-9009 Set	Carbon Bearings (2)	1	12	P-9020	End Cap	1
•	3	P-9014 Set	Impellers (2)	1	13	1032x316SS	Set Screw	2
	4,14	P-9003/4 Assy	Shaft and Eccentrics Set	1	17	P-8004-A	Base	1
	5	P-9006	Separator	1	18	(Voltage)-F	Motor	1
•	NS	P-9006-A	Separator Washer Set (2)	1	20	1032X12HS	Bolt	2
••	6	P-9005	Seals (2) (before 1/85)	1	21	P-9022-A	Mount Foot Set (3)	1
••		2-010	O-Ring (2) (after 1/85)	1	22	Control*	See Paragon Jr Control Summary	1
••	7	2-041	O-Ring (before 1/86)	1	23	1428X12HS	Bolt	4
••		2-042	O-Ring (after 1/86)	1	NS	P-9021-A	Check valve	1
••	11	P-9015	Seal	1	NS	IPS-40	Pressure Switch, UL & CE	1
•	15	P-8002	Pulley for pump	1	NS	P-8005-A	Pressure Gauge	1
•	19	P-8001	Pulley for motor	1	NS	P-8005-B	Pressure Gauge (oil filled)	1
•	25	P-8003	Belt	1				
•	NS	WSA-751	WSA or WSB Filter Basket	1				
•	NS	WSA-752	WSA or WSB Strainer Gasket	1				
•		<b>PJR Regular</b>	<b>Service Kit</b>		<b>*Refer To Control Summary Chart</b>			
•		<b>PJR Master</b>	<b>Service Kit</b>					

