

**PAR®**

# Model 44010-2 SERIES



## PAR-MATE™

### Automatic Water Pressure Pump

#### FEATURES

- Self-Priming
- Run Dry
- Super Quiet
- Smooth Flow
- Low Current Draw
- Extra Low Profile
- Easy to Install
- 1/2" (13 mm) Hose Adaptors included

Model 44010-2 SERIES

The PAR-MATE automatic water system pump is designed for self-contained RV's and pleasure boats with multi-fixture water systems. The system is automatic when a faucet is opened, the pump instantly begins operation to provide a constant flow from tank to faucet. Closing the faucet automatically discontinues pump operation.

- MEETS USCG ELECTRICAL REQUIREMENTS INCLUDING IGNITION PROTECTION

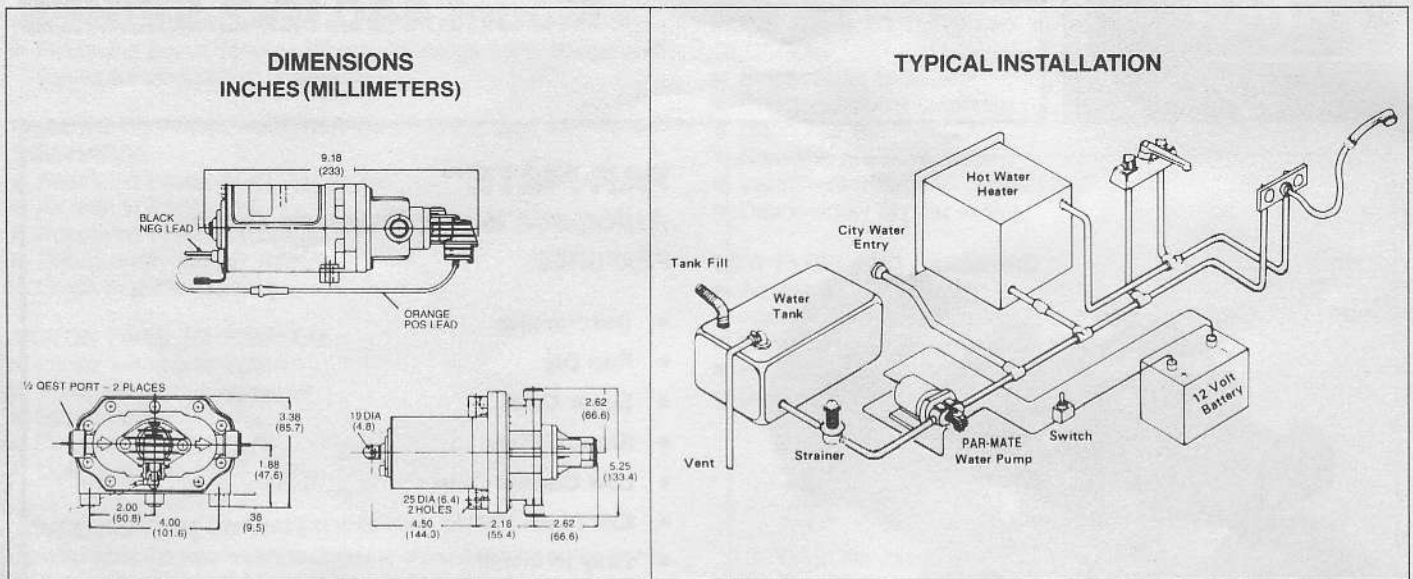
#### SPECIFICATIONS

<b>Pump Body:</b>	Glass Filled Polypropylene
<b>Pump Design:</b>	Dual Diaphragm
<b>Pump Drive:</b>	Ball/Sleeve Bearing
<b>Suction Lift:</b>	Self-priming to 4' (1,2 m)
<b>Ports:</b>	1/2" Threaded
<b>Motor:</b>	Permanent Magnet
<b>Weight:</b>	3.2 lb. (1,5 kg)
<b>Dimensions:</b>	9-3/16" x 5-1/4" x 3-3/8" (233mm) x (133,4mm) x (85,7mm)

#### ELECTRICAL DATA

MODEL	GPM/ L/min.	VOLTAGE	PRESSURE PSI		AMP DRAW (MAX)	FUSE SIZE
			CUT-IN	CUT-OUT		
44010-2000		12 Vdc			5.2	6
44010-2001		24 Vdc	20 Nominal	40	4.0	3
44010-2010	2.5/9,5	12 Vdc			4.2	6
44010-2011		24 Vdc	10 Nominal	20	2.1	3

# INSTALLATION



## MOUNTING

The PAR-MATE pump is self-priming and may be located above or below the fresh water tank in a dry location. To vertically mount this unit, it is best to do so with the motor on top. This will prevent water dripping on motor in the event of a leak. **Place pump on a solid surface and secure with the three mounting screws being careful not to compress the rubber grommets which act as shock absorbers.**

## PLUMBING

**Flexible potable water hose is recommended instead of rigid piping at pump.** If you choose to use copper, provide a short length of hose between copper pipe and the pump to avoid noise and vibration. Use clamps at both ends of hose to prevent air leaks into the water line. NOTE: Intake hose must be minimum 1/2" (13mm) ID reinforced hose. Main distribution line from pump outlet should also be 1/2" (13mm) ID with branch and individual supply lines to outlets no smaller than 3/8" (10mm). Select two of the port adaptors supplied to match your plumbing system. Do not overtighten adaptors - hand tighten only. A PAR "Pumpgard" 36400-0000 in line strainer should be installed between pump and tank to keep debris out of system. Fresh water tank must be vented. The pump inlet and outlet hoses may be wrapped with foam rubber to prevent unnecessary noise from hydraulic vibrations. Avoid any kinks or fittings which could cause excessive restrictions. Remember to periodically clean faucet screens. Water purifiers or filters usually create backpressure and should be on separate feed.



**WARNING** FIRE HAZARD. WIRING MUST COMPLY WITH APPLICABLE ELECTRICAL STANDARDS AND INCLUDE A PROPERLY SIZED FUSE OR CIRCUIT BREAKER. IMPROPER WIRING MAY CAUSE A FIRE RESULTING IN INJURY OR DEATH

IF YOU ARE NOT FAMILIAR WITH APPLICABLE ELECTRICAL STANDARDS, HAVE THE UNIT INSTALLED BY A QUALIFIED ELECTRICIAN.



**WARNING** DO NOT PUMP GASOLINE OR OTHER FLAMMABLE LIQUIDS. DOING SO MAY CAUSE A FIRE OR EXPLOSION RESULTING IN INJURY OR DEATH.

## WIRING

In an easily accessible location, install a switch to control electricity to the pump. Turn the pump off when not in use for extended periods, or when tank is out of water.

The electrical circuit should be protected with a 6 amp fuse for the 12 Vdc Models or a 3 amp fuse for the 24 Vdc Models in the positive lead. The pump circuit should not include any other electrical loads. The open terminal on the switch is positive. Black Wire from the motor is negative.

Select wire size from chart below. Use total length of wire from electrical source to pump and return. Chart allows for 3% voltage drop. If in doubt, use next larger wire size.

Total length in feet	0-20 (0-6 M)	20-35 (6-11 M)	35-55 (11-17 M)
12 Volt	#14 AWG (2.5 mm <sup>2</sup> )	#12 AWG (4 mm <sup>2</sup> )	#10 AWG (6 mm <sup>2</sup> )
24 Volt	#16 AWG (1.5 mm <sup>2</sup> )	#14 AWG (2.5 mm <sup>2</sup> )	#12 AWG (4 mm <sup>2</sup> )

After installation, check the voltage at the pump motor. Voltage should be checked when pump is operating along with all the inside electrical fixtures. Full voltage must be available at the pump motor at all times.

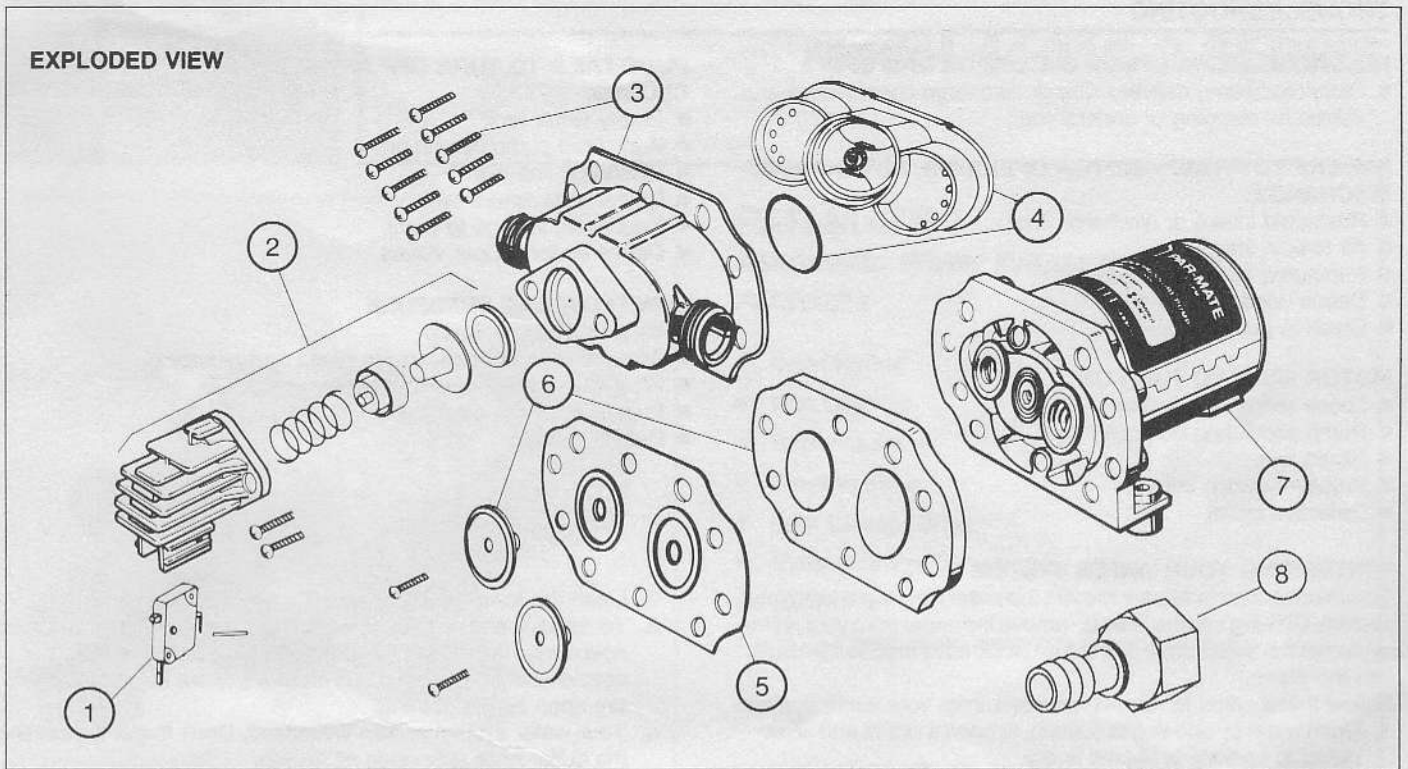
## OPERATION

1. Check level of water in tank.
2. Open all faucets hot and cold.
3. Switch pump to on position and wait for hot water tank and water lines to fill.
4. Close each faucet as flow becomes steady and free of air (close cold water faucet first). Pump should shut off soon after closing last faucet.
5. Pump is now ready for automatic operation. It will start when faucet is opened and stop when faucet is closed.
6. If pump will be inoperative for a considerable length of time, turn off circuit to pump and bleed system by opening faucets.

**CAUTION: Motor case will get hot. Prolonged contact during operation may cause a burn.**



**EXPLODED VIEW**



**PARTS LIST**

KEY	DESCRIPTION	QTY	PART NO.
1	Micro Switch	1	18753-0141
2	Std. Pressure Switch	1	37121-0010
	Low Pressure Switch	1	44814-1000*
3	Body Kit	1	44013-2000
4	Valve Kit	1	44038-1000
5	Diaphragm	1	44017-2000
6	Plate/Piston Kit	1	44032-2000
7	Motor Kit 12 Volt DC	1	44043-2012
	Motor Kit 24 Volt DC	1	44043-2024
8	Hose Adaptor	1	43990-0010

\* Low Pressure Switch used on -2010 and -2011 models.

## TROUBLESHOOTING

### PULSATING FLOW – PUMP CYCLES ON AND OFF

- Restricted pump delivery. Check discharge lines, fittings and valves for clogging or undersizing.

### FAILURE TO PRIME – MOTOR OPERATES, BUT NO PUMP DISCHARGE

- Restricted intake or discharge line.
- Air leak in intake line.
- Punctured pump diaphragm.
- Debris under flapper valves
- Crack in pump housing

### MOTOR FAILS TO TURN ON

- Loose wiring connection
- Pump circuit has no power
- Blown fuse
- Pressure switch failure
- Defective motor

### WINTERIZING YOUR WATER SYSTEM

To winterize, it is necessary to drain the water from the entire water system. Blowing into the lines to remove the water from your water system is not satisfactory due to the check valve mechanism built into the pump.

Follow these steps to remove all water from your water system:

1. Drain water by opening tank drain, or open a fixture and allow pump to operate until tank is dry.

### PUMP FAILS TO TURN OFF AFTER ALL FIXTURES ARE CLOSED.

- Empty water tank
- Punctured pump diaphragm
- Discharge line leak
- Defective pressure switch
- Insufficient voltage to pump
- Debris under flapper valves

### LOW FLOW AND PRESSURE

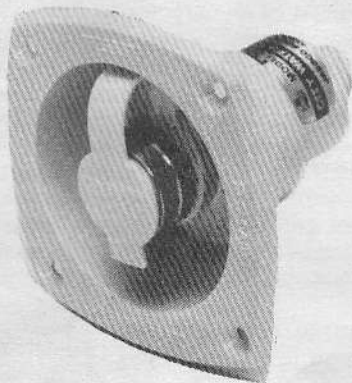
- Air leak at pump intake
- Accumulation of debris inside pump and plumbing
- Worn pump bearing (excessive noise)
- Punctured pump diaphragm
- Defective motor

2. Open the lowest outlet in water system to drain lines.
3. To remove any remaining water (about a cup), remove outlet hose on pump and activate pump. To blow out lines, attach air nozzle where outlet hose was removed. Make sure all fixtures are open before starting.
4. Your water system is now winterized. Don't forget to reattach the outlet hose and close all fixtures.

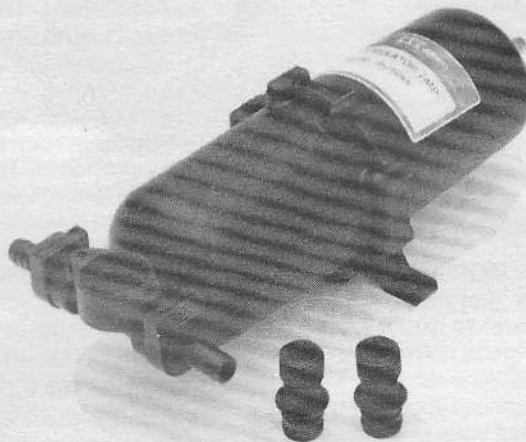
**DANGER: DO NOT USE AUTOMOTIVE TYPE ANTI-FREEZE. IT IS POISONOUS. USE OF THIS TYPE ANTI-FREEZE WILL CAUSE SERIOUS INTERNAL INJURY OR DEATH.**

## PAR WATER PRESSURE SYSTEM ACCESSORIES

**REGULATOR  
44410-SERIES**



**ACCUMULATOR TANKS  
30573-0000**



**PUMPGARD  
35400-SERIES**



THE PRODUCTS DESCRIBED HEREIN ARE SUBJECT TO THE JABSCO® ONE YEAR LIMITED WARRANTY, WHICH IS AVAILABLE FOR YOUR INSPECTION UPON REQUEST.

**ITT Jabsco**

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