

TROUBLESHOOTING

WARNING: BEFORE SERVICING PUMP, CLOSE SEA COCK, TURN OFF POWER AND DRAIN WATER FROM HOSES!!

Failure to Prime -Motor operates, but no pump discharge

- Restricted intake or discharge line
- Air leak in intake line
- Debris in pump
- Punctured pump diaphragm (pump leaks)
- Crack in pump housing

Motor fails to turn on

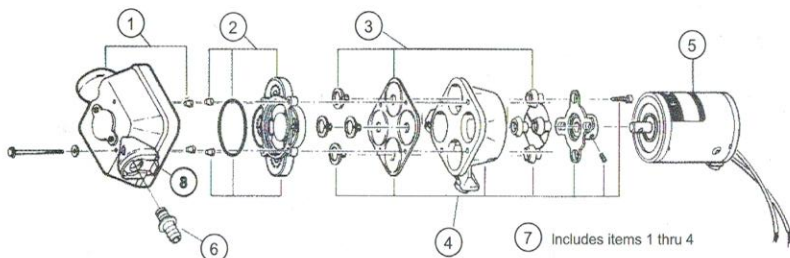
- Blown fuse
- Pump circuit has no power
- Loose wiring connection
- Defective motor

Low Flow and Pressure

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

Pulsating Flow

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



Quite often when a pump is worn or defective the one failed component has overburdened others. To avoid frequent aggravating repair, offers service kit assemblies making repairs as quick and easy as possible.

TO DISASSEMBLE

Upper Housing

1. Loosen but do not remove four pump head screws and carefully remove upper housing assembly (1)
2. Inspect check valve (2) for debris
3. Reassemble new upper housing (1)

Check Valve Assembly

Follow step 1

3. Replace check valve (2)
4. Reassemble upper housing (1)

Lower Housing, Diaphragm, Motor

Follow step 1

3. Rotate lower housing (4) so mounting notch opening on lower housing exposes set screw which holds bearing housing to shaft
4. Loosen this set screw by inserting wrench 1/8" Allen wrench into mounting notch opening. Then, slide lower housing (4) off motor shaft.

Diaphragm Cont'd

5. Loosen four cam piston screws with Phillips head screw driver and pull apart cam from inner pistons. (Pistons should always be replaced when a new diaphragm is installed.)

Motor Cont'd

5. Replace Motor (5)

TO REASSEMBLE

Motor

1. Reassemble lower housing assembly (4) to motor. (Follow steps 4 to 10.)

Diaphragm

2. Lower housing is assembled with:

Flat side of diaphragm and outer pistons facing motor

Hex stem of inner pistons must be aligned into hex holes in outer pistons (4)

Outer pistons must be aligned with alignment slots on cam assembly making sure screw holes align in cam assembly, otherwise diaphragm will leak.

3. Tighten cam piston screws partially, center piston in diaphragm, then tighten screws securely (18 in. lbs. torque)

Lower Housing

4. Reassemble lower housing assembly (4) to motor.

5. Retighten set screw securely. Set screw head must be positioned facing motor covering seam (indentation). (Positioning of this screw is critical to avoid misalignment and subsequent diaphragm damage.)

Upper Housing, Check Valve

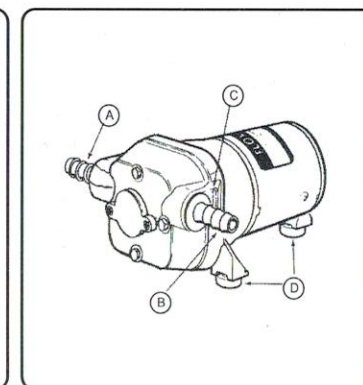
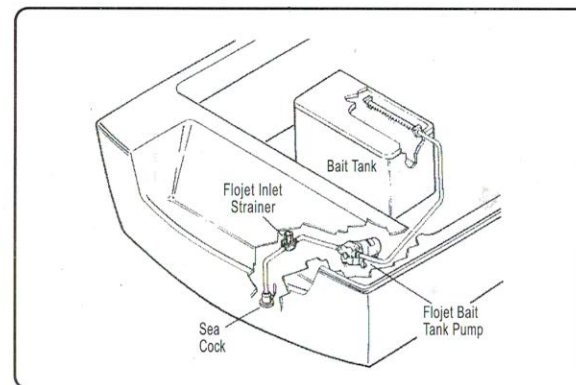
6. Reassemble upper housing (1)

7. Properly seat O-Ring in check valve assembly (2) and check if ferrules and screen are in place on upper housing (1)

8. Install check valve (2) into upper housing (1) and push in.

9. Assemble on to lower housing (4), align 4 screws on to motor by rotating lower housing (4) if necessary to align feet

10. Tighten screws evenly to 30 in. lbs. torque.



INSTALLATION

STEP 1

Remove shipping plugs from Quad pump ports. Some water from factory testing may spill out.

STEP 2

Install inlet A and discharge B port connectors. Firmly push slide clips C forward to lock port connectors in place.

STEP 3

Slide rubber mounts fully into 4 mounting tracks.

STEP 4

Mount pump vertically, with pump head down or horizontally in an accessible location. If mounting vertically, motor

up, attach motor mounts first, then pump head mounts, while supporting weight of pump.

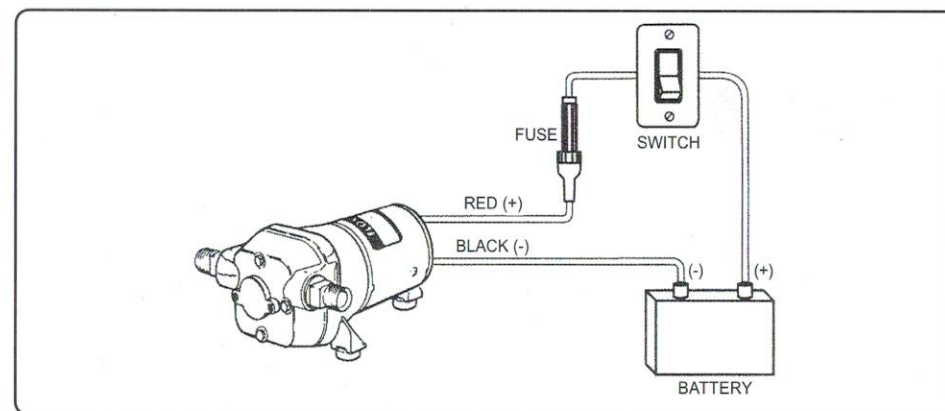
STEP 5

Use 3/4" I.D. flexible hose (preferably braided or reinforced). Use hose clamps on the slip-on barb hose connectors.

STEP 6

Install a 3/4" in line strainer # 01610-000 in accessible location between sea cock and pump inlet.

This strainer or equivalent is required for pump warranty to be valid.



WIRING

STEP 1

Use 14 gauge stranded wire to 20', 12 gauge to 50' from power source.

STEP 2

Use a 10-15 amp rated (lighted) on-off switch on the (+) positive (red) motor lead.

STEP 3

Install 10 amp fuse protection in the positive switched lead for the - 501 and - 504 models, use a 15 amp fuse for the - 502 and a 5 amp fuse for the - 503 model.