



AUSTRALIAN PUMP

QP WATER PUMP

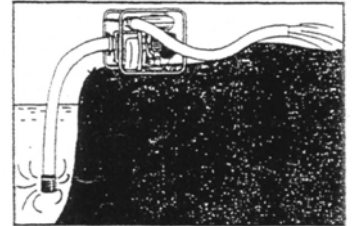
Inspect Unit for shipping damage immediately upon receipt. If any damage exists note damage on shipping docket before signing. Notify your Distributor immediately of any damage to shipment.

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

Installation

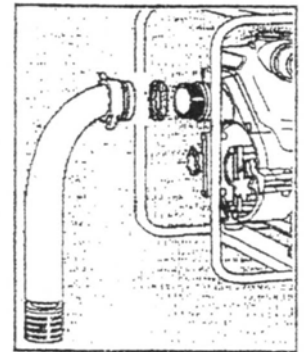
Location

The pump should be located as near as possible to the liquid to be pumped and in no case should the pump be more than 7m (23 feet) above the surface of the liquid supply. The pump should always be as level as possible.



Suction System

Connect horizontal suction hose or pipe to suction flange. Pipe or hose must be self supporting without adding stress to pump body. If a hose is used, it should be of the reinforced type to prevent collapsing under vacuum. All suction system pipe or hose and connections must be free of air leaks, as even a very slight leak will greatly reduce pumping efficiency and priming ability. The pump should be installed with the trash strainer on the suction line to prevent oversized solids from being drawn into the suction system.



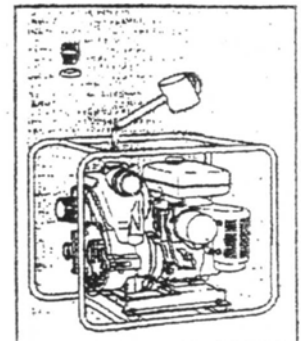
Discharge System

Connect discharge hose or pipe to discharge elbow on top of the pump body.

Operation

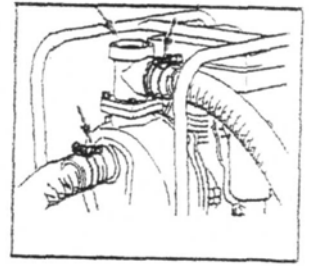
Priming

Remove the flooding cap at the top of the casing and screw it back tightly after filling up the casing with priming water. (Open the gate valve on the delivery line, if so equipped.) In freezing weather use warm water if possible, to prevent damage to internal parts from ice. At each subsequent start, check priming liquid level in pump body since the pump is self-priming only when the body is full of liquid.



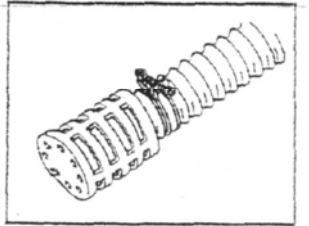
B-2 Tightening Couplings

To prevent air entry or water leakage, tighten the couplings thoroughly.



B-3 Strainer

Always fit strainer to end of suction line and hold it with the tightening band. The strainer should be regularly checked and cleaned out to insure full liquid flow at all times.



B-4 Starting

The pump is ready for operation after completion of the procedures outlined. Start pump by starting the engine as outlined in the Engine Instruction Manual. Open fuel cock, close engine choke, start engine.

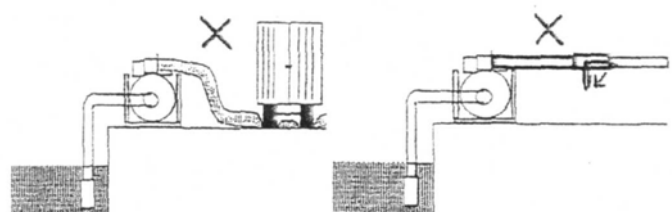
NOTE: QP pumps are self priming and no additional priming is required as long as the casing is filled with water and there are no suction line leaks.

B-5 Shutdown

Operation is stopped by stopping the engine as outlined in the Engine Instruction Manual. Always operate at no load for 2 or 3 minutes to allow cooling before shutdown. When the pump has been operating in freezing weather or in pumping liquid containing considerable amounts of trash and /or foreign matter, it is advisable to remove both the drain plug and the prime plug and allow the body to drain. Flush solids out of the pump body. Replace plugs.

Caution!

1. If flexible hose is laid across a roadway protect it with planking. Instantaneous shut off pressure is applied when a vehicle runs across an unprotected hose and will cause 'hydraulic shock'. This can damage the pump and/or the hose.
2. A relief valve should be used to avoid 'hydraulic shock' if sudden "shut off" cannot be avoided.
3. Do not use QP Pumps with pressure feed e.g. from a fire hydrant.



DISASSEMBLY & ASSEMBLY
For centrifugal transfer pumps
Check Valve

- a. Unscrew suction cover set bolt or screw, and remove the suction cover.
- b. Unscrew the set bolt or screw with washer, and remove the check valve.
- c. For setting the new check valve, screw the set bolt or screw to fit the valve with valve seat of suction cover.
- d. Install the suction cover with O-ring or packing.

a. Volute Casing

- a. Unscrew the casing set bolt, and remove the casing from the casing cover.
- b. Remove the volute casing that is placed into casing cover.
- c. Install the new volute casing with O-ring or packing into the casing cover correct position.
- d. Adjust the clearance between front surface of impeller and side plate volute casing to be within 0.2 to 0.5mm (0.008 to 0.020 inch) when the volute casing is pushed in by adjusting the number of adjusting liners at impellerboss.
- e. After confirming the volute casing to the casing cover, and screw the casing set bolts evenly and tightly.

b. Impeller

- a. Disclose the impeller by removing the volute casing same way as above.
- b. Loosen the impeller by tapping gently with a mallet in a counter clockwise direction.
- c. Turn impeller counter clockwise, and remove from shaft.
- d. Remove the mechanical seal from the impeller, and set it at the back side of new impeller.
- e. Screw the new impeller on engine shaft by turning in the clockwise direction, and make it tight by tapping gently with mallet in a clockwise direction.
- f. Set the volute casing and casing as mentioned above

c. Mechanical Seal

- a. Remove the impeller as mentioned above
- b. Replace with a new mechanical seal at the back side of removed impeller and at the seat of casing cover.
- c. Check the scaling surfaces of mechanical seal free dust, and set the impeller, volute casing and casing as in the way abovementioned 3.

For Trash Pumps

Clogged Impeller

- a. Unscrew drain set handles and dismantle the drain cover from casing.
- b. Dismantle volute casing.
- c. Wash impeller with water.
- d. Place volute casing O-ring and drain cover O-ring and screw drain cover after washing sealing surface with water.
- e. Screw drain cover set handle evenly at right and left side.



Impeller

- a. Dismantle the drain cover and volute casing as described above 1.
- b. The impeller is now exposed
- c. Impeller is attached to the engine shaft with a screw.
- d. Tap the impeller at the lead part in counter-clockwise direction with a mallet
- e. Screw new impeller on shaft by hand, and tighten by using a mallet, tapping at the lead part of the impeller in a clockwise direction.

Check Valve

- a. Unscrew suction cover set nut or cap-screw, and remove suction cover.
- b. Unscrew check valve set bot or screw with washer at the back of the suction cover.

Mechanical Seal

- c. Dismantle the impeller as above.
- d. D. Remove the mechanical seal sleeve from the shaft.
- e. Mechanical seal rotary section and spring will be removed with the sleeve.
- f. Remove mechanical seal stationary section from the seat of casing cover.
- g. Set the new mechanical seal sleeve to the shaft after assembled with new rotary section spring. (Check to see if the mechanical seal O-ring is placed correctly to the seat)
- h. Set new mechanical seal rotary section and spring with the sleeve to fit the slit of the sleeve with spring stopper.
- i. Screw the impeller as described above.

Troubleshooting

PROBLEM	CAUSE	REMEDY
Pump does not turn over	Impeller jamming	Adjust impeller spacing, disassemble and clean
Pumping volume is lower than normal	Air leak on suction side	Check fitting and piping on suction side. Replace if necessary.
	Reduction of engine performance/rpm	Take to engine repair Agent
	Damaged mechanical seal	Relace mechanical seal
	Excessive suction lift	Move pump closer to liquid
	Leaking water	Take to Aussie Pump repairer
	Clogging of foreign substance in impeller	Disassemble and clean
	Wear of impeller	Replace impeller
Pump does not self prime	Suction of air on suction side	Check hoe and fitting at suction side
	Insufficient priming water inside pump casing	Prime fully
	Loose drain plugs	Tighten the 2 plugs completely
	Engine loses performance	Take to engine repairer
	Sucking air from mechanical seal	Replace mechanical seal



PUMP SAFETY



This symbol, the industry's "Safety Alert Symbol", is used throughout this pamphlet and on the pump's safety labels to warn of the possibility of personal injury. We request that you take special care in reading and understanding the safety precautions before operating the pumps or its equipment.

PLEASE TAKE THE TIME TO READ THIS PAMPHLET BEFORE OPERATING PUMP



CAUTION

MECHANICAL SEAL WILL BE SEVERELY DAMAGED, IF PUMP IS RUN DRY WITHOUT PRIMING WATER.



PUMP SAFETY PRECAUTIONS

A. GENERAL

1. **USE COMMON SENSE!** Most accidents can be avoided by using common sense and concentrating on the job to be done.
2. Do not wear loose clothing that can become entangled in operating machinery.
3. Do not operate pump without guards in place.
4. Do not pump hazardous material. (flammable, caustic, etc.)
5. Only qualified personnel should install and operate pump.
6. Secure the pump after it is in its operating position so it does not tip over, roll, slide, or fall.
7. Read the maintenance and operating instruction manual supplied with the pump.
8. Keep hands and feet clear of moving parts. **DO NOT** stick hands or fingers in pump when operating.

9. **Do not close down or restrict discharge hose. Be careful of discharge hose whipping under pressure.**
10. **PUMP TOWED BEHIND VEHICLE**
 - a. **Make sure hitch is properly attached.**
 - b. **Always attach safety chains.**
 - c. **Check tires for proper inflation and road worthiness.**
 - d. **If towing on the highway, make sure the trailer meets Department of Transportation requirements.**
11. **Make sure lifting device's fasteners are tight each time before lifting.**

B. GAS/DIESEL ENGINE POWERED PUMPS

1. EXHAUST GASES

- a. **Never operate in an enclosed building or area where exhaust gases can accumulate.**
- b. **Do not breathe exhaust fumes when working in the area of the engine. (Exhaust gases are colourless, odourless and deadly poison.)**
- c. **Never operate near a building where exhaust gases can seep inside, for example: through an open window or a door.**
- d. **Never operate in a pit or sump without making provisions to suck the exhaust gases out.**

2. EXHAUST SYSTEM

- a. **Keep exhaust system components tight and in good working condition.**
- b. **Exhaust system parts get very hot and stay hot for some time after shutting the engine off – do not touch.**

3. FUEL

- a. **Never add fuel to the tank while the engine is running. Stop engine and allow it cool. Avoid spilling fuel!**
- b. **Make sure fuel lines and fittings are tight and in good condition.**
- c. **Do not smoke while refuelling the engine.**
- d. **Do not refuel near open flame; wipe up all spilled fuel.**
- e. **Store gasoline in approved container and location.**

4. MAINTENANCE AND REPAIR

- a. Disconnect spark plug wire while performing maintenance or repair on the pump or engine.
- b. Always replace safety devices removed during service or repair before operating.

5. 12-VOLT ELECTRICAL SYSTEM

- a. Connect negative battery lead to ground to prevent damage to charging system.
- b. To prevent arcing, when removing battery, disconnect negative lead first. When replacing battery, connect negative lead last.
- c. Do not spill battery acid. If spilled, rinse off immediately with water.

6. DIESEL

Follow engine manufacturer instructions explicitly on hand cranking.

7. OVERHEATING – DO NOT RUN THE PUMP FOR OVER TEN MINUTES WITHOUT WATER FLOWING THROUGH IT!

Overheating pumps can cause severe burns and injury. If overheating of pump casing occurs:

- a. Stop the pump immediately.
- b. Allow the pump to cool completely.
- c. Slowly and cautiously vent the pump.

C. ELECTRIC MOTOR POWERED PUMPS

1. GROUND FAULT CIRCUIT INTERRUPTER

Never operate a pump with a plug-in type power cord without a ground fault circuit interrupter.

2. WET HANDS

Never handle energized power cords with wet hands.

3. WATER

Never let extension cords or the plug connection lay in water. Locate the pump such that it cannot fall into the water (except when using the Submersible pumps.)

4. EQUIPMENT

Never use cords with frayed or cut or brittle insulation. Check the cord on the pump for nicks in the insulation and for sound connections to the ground fault interrupter plug and motor.

5. QUALIFIED ELECTRICIAN

Any wiring to be done on pumps should be done by a qualified electrician.

6. LIFTING THE PUMP

Never use the cord to aid in lifting the pump.

7. PUMP MAINTENANCE AND REPAIR


Be sure the pump is disconnected from the power of the appropriate circuits are dead and locked out before doing any maintenance or repair work on the pump.

8. MOTOR OVERLOAD

Do not exceed the manufacturer's recommendation for maximum lift or discharge head, as this could cause the motor to overheat. Use appropriate circuit breaker for fuse.

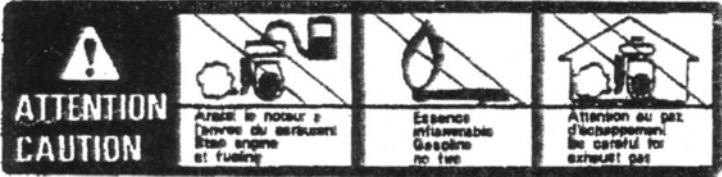
9. EXPLOSIVE ATMOSPHERE

Unless the pump has been designed for it, never use it in any kind of possible explosive atmosphere.



CARE OF ATTENTION, CAUTION LABELS

- 1) Always keep labels clean without stain or mud to clearly recognize the caution details.
- 2) Use new labels if original labels have become obliterated.
- 3) Certainly stick the labels on the same place as before when parts with labels are changed by repairing something.



USE UNLEADED
GASOLINE ONLY
SANS PLOMB
SEULEMENT

DO NOT RUN DRY

CAUTION: Irrespective of pump material of construction or elastomer type, **ALWAYS** flush pump with fresh water after use if other than clean fresh water has been pumped.



AUSTRALIAN PUMPS INDUSTRIES

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RELIABLE PRODUCTS.....RELIABLE PEOPLE