

HAZARD EVALUATION AND CONTROL

Description of Plant: Submersible Trash Pump_____

Model No: P212_____

Assessed By: Evan Miller_____

Company : Flextool (Aust) Pty Ltd

Date: 14/04/97

Issue: A

Hazard Description	Hazard Y/N	Plant & / or Situation	Likelihood	Severity	Risk Control
A - ENTANGLEMENT 1. Can anyone's hair, clothing, gloves necktie, jewellery, cleaning brushes, rags, or other materials become entangled with moving parts of the plant, or materials in motion?	Y	Entanglement with impeller while rotating	5	C	* Do not operate the pump with the body removed. * Keep hands and feet clear of rotating and moving parts as they will cause injury if contacted.
B - CRUSHING					
1. Can anyone be crushed due to:-					
a. Material falling off the plant?	N				
b. Uncontrolled or unexpected movement of the plant or its load?	N				
c. Lack of capacity for the plant to be slowed, stopped or immobilised?	N				
d. The plant tipping or rolling over?	N				
e. Parts of the plant collapsing?	N				
f. Coming in contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	N				
g. Being thrown off or under the plant?	N				
h. Being trapped between the plant and material or fixed structures?	N				

* Refer to Flextool operating instructions.

Likelihood of Occurrence

1. Expected to Happen
2. Common
3. Sometimes
4. Rarely
5. Highly Unlikely

Severity of Result

- A. Fatality
- B. Permanent Disability
- C. Lost Time Injury
- D. Medical Treatment
- E. First Aid Injury

HAZARD EVALUATION AND CONTROL

Hazard Description	Hazard Y/N	Plant & / or Situation	Likelihood	Severity	Risk Control
i. Other factors not mentioned?	N				
C. CUTTING, STABBING & PUNCTURING?					
1. Can anyone be cut, stabbed or punctured due to:					
a. Coming in contact with sharp or flying objects?	Y	Contact with worn/damaged flexible shaft, impeller	3	E	* Handle impellers with care when the pump body is removed. Pumps that have been subject to extensive use with abrasive materials may have impellers that are severely worn leaving sharp, thin or brittle sections. * Use gloves when handling and inspecting the flexible shaft outer casing. Excessive wear of the rubber cover can expose the wire braided reinforcement, allowing it to project and cause injury.
b. Coming in contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair of the plant?	Y	Contact with impeller while rotating	5	C	* Do not operate the pump with the body removed. * Keep hands and feet clear of rotating and moving parts as they will cause injury if contacted.
c. The plant, parts of the plant or work pieces disintegrating?	N				
d. Work pieces being ejected?	N				
e. The mobility of the plant?	N				
f. Uncontrolled or unexpected movement of the plant?	N				
g. Other factors not mentioned?	N				
D. SHEARING					
1. Can anyone's body parts be sheared between two parts of the plant, or material handled by the plant?					

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HAZARD EVALUATION AND CONTROL

Hazard Description	Hazard Y/N	Plant & / or Situation	Likelihood	Severity	Risk Control
E. FRICTION					
1. Can anyone be burnt due to contact with moving parts or surfaces of the plant, or between a part of the plant and a work piece or structure?	N				
F. STRIKING					
1. Can anyone be struck by moving objects due to :					
a. Uncontrolled or unexpected movement of the plant?	N				
b. The plant, parts of the plant or work pieces disintegrating?	N				
c. Work pieces being ejected?	Y	Ejection of water/material	5	C	* Do not operate the pump without a discharge hose fitted. * Ensure that the pump hose is securely fastened to the pump outlet via an appropriately sized coupling and adaptor.
d. Mobility of the plant?	N				
e. Other factors not mentioned?	N				
G. HIGH PRESSURE SUBSTANCES					
1. Can anyone come into contact with substances under high pressure, due to plant failure or misuse of the plant?	Y	Ejection of water/material	5	C	* Do not operate the pump without a discharge hose fitted. * Ensure that the pump hose is securely fastened to the pump outlet via an appropriately sized coupling and adaptor.
H. ELECTRICAL					
1. Can anyone be injured by electrical shock or burnt due to:					
a. The plant contacting live electrical conductors?	N				
b. The plant working in close proximity to electrical conductors?	N				

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Hazard Description	Hazard Y/N	Plant & / or Situation	Likelihood	Severity	Risk Control
c. Overload of electrical circuits?	N				
d. Damaged or poorly maintained electrical leads and cables?	N				
e. Damaged electrical switches?	N				
f. Water near electrical equipment?	Y	Water contact with live conductors	5	A	* The risk of serious or lethal injury from electrical shock may arise from the combination of electricity and moisture.
g. Lack of isolation procedures?	N				
h. Other factors not mentioned?	N				
I. EXPLOSION 1. Can anyone be injured by explosion of gases, vapours, liquids, dusts or other substances, triggered by the operation of the plant or by material handled by the plant?	Y	Operation with flammable liquids	5	B	* Do not use the pump for handling flammable liquids.
J. SLIPPING, TRIPPING & FALLING 1. Can anyone using the plant, or in the vicinity of the plant, slip, trip or fall due to:					
a. Uneven or slippery work surfaces?	Y	Slip/Trip/Fall	3	E	* Slip/Trip/Fall is a major cause of serious injury or death. Beware of excess hose, the flexible shaft and water left on the walking or work surface. * Do not allow waste water to accumulate under foot. * Exercise care when working in the vicinity of unprotected holes or excavations.
b. Poor housekeeping, eg, swarf in the vicinity of the plant, spillage not Cleaned up?	Y	Slip/Trip/Fall	3	E	* Slip/Trip/Fall is a major cause of serious injury or death. Beware of excess hose, the flexible shaft and water left on the walking or work surface. * Do not allow waste water to accumulate under foot. * Exercise care when working in the vicinity of unprotected holes or excavations.

* Refer to Flextool operating instructions.

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c. Obstacles being placed in the vicinity of the plant, other factors not mentioned?	N				
2. Can anyone fall from a height due to:					
a. Lack of proper work platform?	N				
b. Lack of proper stairs or ladders?	N				
c. Lack of guardrails or other suitable edge protection?	N				
d. Unprotected holes, penetrations or gaps?	Y	Slip/Trip/Fall	3	E	* Slip/Trip/Fall is a major cause of serious injury or death. Beware of excess hose, the flexible shaft and water left on the walking or work surface. * Do not allow waste water to accumulate under foot. * Exercise care when working in the vicinity of unprotected holes or excavations.
e. Poor floor or walking surfaces, such as the lack of a slip-resistant surface?	N				
f. Steep walking surfaces?	N				
g. Collapse of the supporting structure?	N				
h. Other factors not mentioned?	N				
K. ERGONOMIC					
1. Can anyone be injured due to:					
a. Poorly designated seating?	N				
b. Repetitive body movement?	N				
c. Constrained body posture or the need for excessive effort?	N				

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Hazard Description	Hazard Y/N	Plant & / or Situation	Likelihood	Severity	Risk Control
d. Inadequate or poorly placed lighting?	N				
e. Lack of consideration given to human error or human behaviour?	N				
f. Mismatch of the plant with human traits and natural limitations?	N				
g. Other factors not mentioned?	N				
L. SUFFOCATION 1. Can anyone be suffocated due to lack of oxygen, or atmospheric contamination?	N				
M. HIGH TEMPERATURE OR FIRE 1. Can anyone come into contact with objects at high temperature?	N				
N. TEMPERATURE (THERMAL COMFORT) 1. Can anyone suffer ill health due to exposure to high or low temperatures?	N				
O. OTHER HAZARDS 1. Can anyone be injured or suffer ill health from exposure to:					
a. Chemicals?	N				
b. Toxic gases or vapours?	N				
c. Fumes?	N				
d. Dust?	N				
e. Noise?	N				
f. Vibration?	N				

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OPERATING INSTRUCTIONS

1. Before engaging the Flexshaft with the Power Unit start the motor and allow it to warm up for a few minutes.
2. Engage the Flexshaft and start the motor before placing the pump in the water.
3. Avoid sharp bends in the Flexshaft. Position the movable spring on the shaft assembly to provide additional support where the shaft passes over the edge of trenches or obstructions.
4. When pumping from deep pits or excavations avoid subjecting the Flexshaft to the total weight of the pump and the discharge hose. Support the weight of the pump by attaching a rope to one of the pump eye-nuts. Tie the other end of the rope to a support adjacent to the power unit so that it takes the weight of the pump off the Flexshaft.
5. Maximum discharge performance of the pump will only be obtained when a reinforced discharge hose is used. This minimises kinking where the hose passes over obstructions and permits the unobstructed passage of solids.
6. Superior performance will be achieved by using either 64 mm (2½ inch) or 76 mm (3 inch) discharge hose.
7. It is advisable to operate the pump in clean water after use each day or before storing when it has been used for handling sludge or water with a high solid content.

SERVICE INSTRUCTIONS

1. Dismantle the pump and the flexible shaft every 500 working hours. Inspect for wear and lubricate before reassembling.
2. Apply a liberal quantity of grease to the Core Assy. while inserting it into the Casing Assy. from the drive coupling end.
3. If the spindle is worn by the seal/s located in the Screwed Adaptor and it is otherwise satisfactory for further use do not remove the existing worn seal/s from the screwed adaptor. The bore of the adaptor is deep enough to accommodate additional seal/s which will then be located on an unworn area of the spindle.

TROUBLE SHOOTING

The most critical part of the pump is the seal. This is because the seal is subject to wear - particularly when the pump is handling abrasive materials.

It is important that the seal is replaced before it has worn excessively. If the seal is allowed to wear until failure occurs it will allow water to enter the spindle bearings.

If the pump is operated unchecked in this condition water will eventually enter the Flexshaft. Naturally, the cost of repairing a pump which has been allowed to deteriorate in this way will be greater.

Regular inspection of the pump and the seal will avoid these problems.

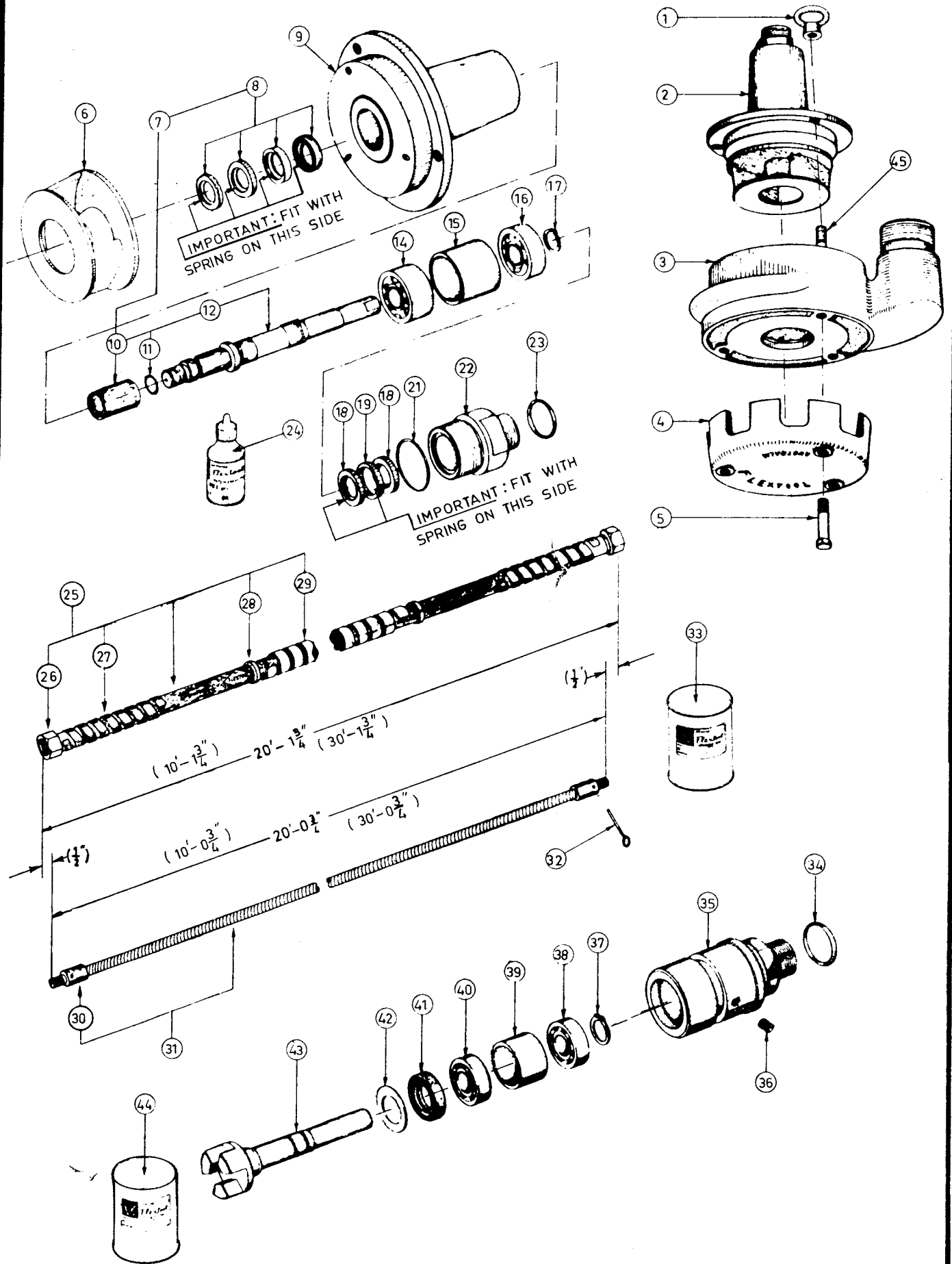


Flextool

SERVICE SHEET

Submersible Pump

Model 212-L S





Flextool
SERVICE SHEET

Submersible Pump

Model 212-L S

FLEXSHAFT ASSY. 212 PUMP TYPE 2 - 3 m (10')..... 8381
 FLEXSHAFT ASSY. 212 PUMP TYPE 2 - 6 m (20')..... 6295
 FLEXSHAFT ASSY. 212 PUMP TYPE 2 - 9 m (30')..... 6468

REPLACEMENT PARTS LIST

* PUMP ASSY. (ALUMINIUM BODY).....6127

Ref. No.	Part No.	Description	Qty.
1.	6170	Eye nut.....	3
2.	8498	Bearing housing assy..	1
3.	6255	Body Assy.....	1
4.	6169	Strainer.....	1
5.	6902	Hex head bolt.....	3
45.	6303	Stud.....	3

* BEARING HOUSING ASSY.....8498

6.	6476	Cast iron impeller....	1
7.	8601	Seal kit.....	1
8.	8494	Oil seal.....	4
9.	6128	Bearing housing assy..	1
10.	8490	Seal sleeve.....	1
11.	8491	O-ring.....	1
12.	8488	Spindle assy.....	1
14.	6180	Ball bearing.....	1
15.	6130	Bearing spacer.....	1
16.	6135	Ball bearing.....	1
17.	4504	Circlip.....	1
18.	4230	Oil seal.....	2
19.			
21.	6490	O-ring.....	1
22.	6131	Screwed adaptor.....	1
23.	7502	O-ring.....	1
24.	6700	Lubricant.....	50ml

* 3 m (10') SHAFT ASSY...TYPE 2...8380

25.	8386	Casing assy.....	1
26.	6171	Ferrule assy.....	2
27.	6139	Outer spring.....	2
28.		N.A.	
29.		N.A.	
30.	9064	Core end.....	2
31.	8388	Core assy.....	1
32.	4475	Service tool.....	1
33.	7280)	Shaft grease.....	1lb
	7281)		5lb

6 m (20') SHAFT ASSY...TYPE 2...6296

Ref. No.	Part No.	Description	Qty.
25.	6297	Casing assy.....	1
26.	6171	Ferrule assy.....	2
27.	6139	Outer spring.....	2
28.	7613	Rubber washer.....	2
29.	8219	Anti kink spring....	1
30.	9064	Core end.....	2
31.	6299	Core assy.....	1
32.	4475	Service tool.....	1
33.	7280)	Shaft grease.....	1lb
	7281)		5lb

* 10 m (30') SHAFT ASSY. TYPE 2...6469

25.	6470	Casing assy.....	1
26.	6171	Ferrule assy.....	2
27.	6139	Outer spring.....	2
28.	7613	Rubber washer.....	2
29.	8219	Anti kink spring....	1
30.	9064	Core end.....	2
31.	6474	Core assy.....	1
32.	4475	Service tool.....	1
33.	7280)	Shaft grease.....	1lb
	7281)		5lb

* COUPLING ASSY TYPE 2.....6572

34.	7502	O-ring.....	1
35.	6575	Bearing housing....	1
36.	4571	Socket set screw....	1
37.	4504	Circlip-external....	1
38.	6143	Ball bearing.....	1
39.	6782	Bearing spacer....	1
40.	6764	Ball bearing.....	1
41.	6573	Oil seal.....	1
42.	7400	Washer.....	1
43.	6784	Spindle assy.....	1
44.	7623)	Bearing grease....	1lb
	7624)		5lb

MANUAL # 617

Pump Shaft 50mm x 6m

SCANNED

10/2010



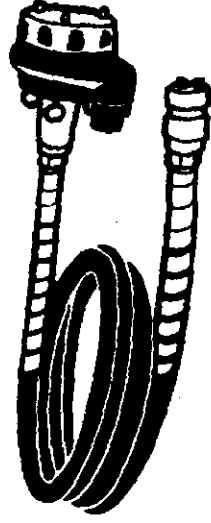
Flextool

1405

Submersible Trash Pump

P212T - P212E - P212C - P212S

OPERATING INSTRUCTIONS



▲ WARNING

To reduce the risk of injury, all operators and maintenance personnel must read and understand these instructions before operating, changing accessories, or performing maintenance on Flextool power equipment. All possible situations cannot be covered in these instructions. Care must be exercised by everyone using, maintaining or working near this equipment.

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INTRODUCTION

Thank you for your selection of Flextool equipment. Flextool have specialised in the design and manufacture of quality products since 1951.

We have taken care in the design, manufacture and testing of this product. It is covered by a six month warranty. Should service or spare parts be required, prompt and efficient service is available from our branches.

General Safety Instructions for the Operation of Power Equipment

The goal of Flextool is to produce power equipment that helps the operator work safely and efficiently. The most important safety device for this or any tool is the operator. Care and good judgement are the best protection against injury. All possible hazards cannot be covered here, but we have tried to highlight some of the important items, individuals should look for and obey Caution, Warning and Danger signs placed on equipment, and displayed in the workplace. Operators should read and follow safety instructions packed with each product.

Learn how each machine works. Even if you have previously used similar machines, carefully check out each machine before you use it. Get the "feel" of it and know its capabilities, limitations, potential hazards, how it operates, and how it stops.

APPLICATIONS

Dams, mines, tanks, tankers, swimming pools, pits, trenches, excavations, construction sites, canal dredging, pile sinking.

Harbour & rescue services, pork producers, abattoirs, plumbers, drainers, builders, rural producers, government, water, sewerage, power & telecommunication authorities.

Industrial plants, maintenance workshops, hire contractors.

The pump is suitable for continuous use at temperatures up to 65°C

Operation at higher temperatures up to 95°C is permissible providing immersion is intermittent and is not continuous.

FUNCTIONS AND CONTROLS

The product is a submersible pump. The pump head operates underwater, driven by a rotating flexible shaft that transmits the torque from the drive unit to the pump head. Submersible operation of the pump head ensures that it is self priming and does not require suction hose.

The pump is designed with wide passages through the strainer, impeller and body to allow the unobstructed passage of solids. It is suitable for handling fluids with a high solid content such as sand, sludge, silt, effluent up to 60% in suspension, oil and water.

The pump is available with general purpose, abrasive resistant and chemical resistant pump head models. The pump should be selected with a model that best suits the most common applications.

Select the shortest standard flexshaft length (3, 6 or 9 m) to suit the common application/s. Non standard flexible shaft lengths are available to order for custom installations.

The pump is fitted with a quick action 60 mm (2.36 in) diameter flexible shaft coupling for operation from a drive unit fitted with a 45 mm (1.75 in) diameter 3-tooth dog drive).

A petrol or diesel motor drive unit with a minimum of 3.7 kW (5 hp), an electric motor drive unit with a minimum rating of 2.2 kW (3 hp) or an air motor drive unit with a minimum rating of 3.8 kW (5 hp) is required.

ACCESSORIES

Drive units are available with petrol, diesel, air and electric motor drives.

Extension flexshafts (3 & 6 m) extend the length of an existing pump flexshaft and are available to enable dewatering of holes to a depth of 12 m. A sealed quick-action coupling allows underwater operation of the coupling.

A Jackshaft drive is available to replace the flexible shaft coupling and allow the pump to be direct coupled or vee belt driven from an existing petrol, diesel or electric motor.

A Whip hose is available to mount between the pump outlet and discharge hose. This diverts a portion of the discharge through a flexible whip hose to stir solids into suspension.

HAZARDS AND RISKS

NEVER allow any person to operate a machine without adequate instruction.

ENSURE all operators read, understand and follow the operating instructions.

SERIOUS INJURY may result from improper or careless use of this machine

Some models of P212 pumps weigh in excess of 25 kg. Handling and positioning may require two people of appropriate strength, along with correct lifting techniques

1 MECHANICAL HAZARDS

DO NOT operate the pump with the body removed.

KEEP hands and feet clear of rotating and moving parts as they will cause injury if contacted.

DO NOT leave the equipment in operation while it is unattended.

ENSURE that the equipment will remain stable and will not move or fall while in operation.

DO NOT operate the pump without a discharge hose fitted.

ENSURE that the pump hose is securely fastened to the pump outlet via an appropriately sized coupling and adaptor.

ENSURE that repairs to machinery are carried out by COMPETENT personnel.

1 ELECTRICAL HAZARDS

THE RISK OF SERIOUS OR LETHAL INJURY from electrical shock may arise from the combination of electricity and moisture.

1 FIRE & EXPLOSION HAZARDS

PETROL is extremely flammable and explosive under certain conditions.

1 CHEMICAL HAZARDS

CARBON MONOXIDE exhaust gases from internal combustion motor driven units can cause death in confined spaces.

1 ADDITIONAL HAZARDS

HANDLE IMPELLERS WITH CARE when the pump body is removed. Pumps that have been subject to extensive use with abrasive materials may have impellers that are severely worn leaving sharp, thin or brittle sections.

USE GLOVES when handling and inspecting the flexible shaft outer casing. Excessive wear of the rubber cover can expose the wire braided reinforcement, allowing it to project and cause injury.

DO NOT use the pump for handling flammable liquids.

Slip/Trip/Fall is a major cause of serious injury or death. Beware of excess hose, the flexible shaft and water left on the walking or work surface.

DO NOT allow waste water to accumulate under foot.

EXERCISE care when working in the vicinity of unprotected holes or excavations.

Sump pumping is the simplest method of dewatering. Pumping from 'open' sumps is generally used in coarse sands and gravels. It is difficult to control the migration of 'fines' and should not be used if soil displacement is a critical factor of consideration when working near existing structures, roads, etc.

ADDITIONAL INFORMATION

Refer to the drive unit operation instructions for additional safety and operation information on the appropriate drive unit. These are supplied free of charge by mail or fax.

OPERATION

For information on correct starting procedures refer to the engine manufacturers operation manual.

Do not engage the drive coupling while the motor is rotating.

Before engaging the flexshaft with a petrol drive unit start the motor using the recoil starter, increase the speed to full throttle and allow it to warm up for a few minutes.

If using an electric motor, switch on and check the motor rotation is in an anti-clockwise direction when viewing its drive dog front on.

Stop the motor.

Turn the bell housing trigger 180 degrees. Insert the flexshaft coupling fully into the housing of the drive unit and release the trigger. Push the coupling into the housing and twist the flexible shaft until the drive dogs are fully engaged and the trigger returns to the horizontal position.

The motor may now be started.

If the pump flexible shaft is fitted with an external movable spring, it should be positioned to provide support where the shaft passes over the edge of a trench or obstruction.

When pumping from deep pits or excavations avoid subjecting the flexshaft to the total weight of the pump and the discharge hose. Support the weight of the pump by attaching a rope to one of the pump eye-nuts. Secure the other end of the rope to a support adjacent to the power unit so that it takes the weight of the pump off the flexshaft.

Drive units should be operated on a level surface. If the surface is not level the drive unit should be restrained to ensure that it does not move due to vibration or the weight of the pump and the hose.

Avoid extended running of the pump without water, or with the flexible shaft in a tight curve.

Never operate the pump flexible shaft in the reverse direction, as this will damage the flexible core. If the impeller is fouled, remove the bearing housing and manually clear the impeller.

How To Get The Best Performance From Your Pump.

Maximum discharge performance of the pump will only be obtained when a reinforced discharge hose is used. This minimises kinking where the hose passes over obstructions and permits the unobstructed passage of solids.

If there is a tendency for the pump head to bury itself in heavy sediment, overcome this by improvising an auxiliary strainer. Remove the top from an empty 20 litre drum and punch openings around the sides. Place the pump head in the drum below the water.

Improved head performance will be obtained by increasing the governed speed of the drive unit motor. It is recommended that a motor with a minimum output of 5.6 kW (7.5 hp) is used for continuous running above 3,000 r/min.

Pumping Clean Water

When there is a need to pump clean water without the sludge, grit or solids that have collected at the bottom of a stream, dam, tank or pit, keep the pump off the bottom. This will also minimise wear from pumping abrasive materials.

In a pit or excavation attach a rope to an eye nut on the pump and suspend the pump from the rope.

In dams and ponds support the pump from a float made from an empty sealed steel or plastic container or a marine buoy.

A cane basket may also serve as an auxiliary strainer.

Pumping Heavy Sludge and Solids

Best results are obtained if the solids on the bottom of the pit or pond are stirred into the surface liquid. The most effective way of achieving this is to direct a hose from the submersible pump, a large volume tap or a second pump, using waste water, into the tank or pit for a short time until the solids are stirred from the bottom.

Use a Suitable Hose

Layflat hose is lightweight and rolls flat to facilitate handling and storage. It is less expensive than reinforced discharge hose. However, layflat hose can kink and impede the flow of the fluid and solids. For best results when using layflat hose, lay it flat on the ground keeping it free from kinks, bends and twisting where possible.

A reinforced hose of 50 mm diameter will improve the discharge performance, while a 75 mm diameter hose will give superior discharge performance.

Quick Action Hose Fittings

Cam lever-action fittings enable quick connection of hose to the pump. They save time and eliminate problems with dirty screw threads and missing washers that are common with nut and tail screw thread fittings. Joiners are available for coupling separate hoses.

CARE AND PREVENTIVE MAINTENANCE

The most critical part of the pump is the seal. This is because the seal is subject to wear, particularly when the pump is handling abrasive materials. It is important that the seals and the sleeve are replaced before they have worn excessively. If the seals and sleeve are allowed to wear until failure occurs allow water will enter the spindle bearings.

Noisy bearings will not be apparent due to the noise level from the drive motor.

If the pump is operated unchecked in this condition water will eventually enter the flexshaft. Naturally, the cost of repairing, a pump which has been allowed to deteriorate in this way will be greater.

Regular inspection of the pump and the seal will avoid these problems.

Check the 3-tooth dog on the drive coupling to ensure that it is fully meshed and not worn.

Check the strainer for missing sections that could allow the entry of large objects and result in damage or obstruction of the impeller or volute.

Dismantle the pump and the flexible shaft every 500 hours. Inspect for wear and lubricate before reassembling

Apply a liberal quantity of grease to the core assembly when inserting it into the casing assembly from the drive coupling end.

If the spindle is worn by the seal/s located in the adaptor and it is otherwise satisfactory for further use do not remove the existing worn seal/s from the screwed adaptor. The bore of the adaptor is deep enough to accommodate additional seal/s which will then be located on an unworn area of the spindle.

Check the flexible shaft for kinks and external damage by laying it out straight on a workbench or the floor. Although it still operates a badly kinked flexible shaft may result in a broken inner core.

CLEANING AND STORAGE

It is advisable to operate the pump in clean water after use each day or before storing when it has been used in sludge or water with a high solid content. This will ensure that mud and sludge do not dry out and obstruct the body or the impeller. The three eye nuts can be unscrewed to allow removal of the pump body and access to the impeller. Hire operators should check the impeller for rags, solidified mud and debris after each hire. While the body is removed check the spindle bearings for slackness and smooth rotation.

SPECIFICATIONS

General Purpose Model

⊙ 2,900 r/min
Maximum head
Maximum discharge
16.5 m
63,000 litre/h

⊙ 3,700 r/min
Maximum head
Maximum discharge
>26.0 m
>64,500 litre/h

Abrasion Resistant &

Chemical Resistant Models

⊙ 2,900 r/min
Maximum head
Maximum discharge
15.0 m
56,400 litre/h

⊙ 3,700 r/min

Maximum head
Maximum discharge
26.0 m
64,500 litre/h

Outlet
Solids

50 mm (2 in BSP)
Up to 28 mm dia. or up
to 60% in suspension

Flexshaft dia (mm)

Std 13 x 32
HD 16 x 38

TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSES AND CORRECTION
The drive motor is operating, but the pump is not functioning.	<ul style="list-style-type: none"> • Check that the coupling is fully inserted in the bell housing and secured by the trigger. • Check that the impeller is not obstructed. • Check that a kink in the discharge hose has not created an air lock preventing water from initially entering the pump. • Check that the pump is sufficiently submerged to allow water to cover the impeller. • Check that electric motor rotation is as shown by the direction arrow on the bell housing (anti-clockwise when viewing its drive dog). • A 240 volt single phase electric motor can run in reverse due to incorrect internal connection of the motor winding when repaired. • A 415 volt three phase electric motor can run in reverse if operated from a power connection with incorrect phase rotation. • Check that the threaded core ends on the flexible drive core have not unscrewed from the pump or coupling spindle due to reverse rotation of the motor. • Check that the inner flexible core has not failed.
There is a tendency for the pump head to bury itself in heavy sediment	<ul style="list-style-type: none"> • Overcome this by improvising an auxiliary strainer. Remove the top from an empty 20 litre drum and punch openings around the sides. Place the pump head in the drum below the water.