

Specifications Information and Replacement Parts Manual

4222-95, 4223-95, 4224-95, 4226-95, 4227-95
4222-V5, 4223-V5, 4224-V5, 4226-V5 and 4227-V5

Please read and save this Replacement Parts Manual. Read this manual and the General Operating Instructions carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. The Safety Instructions are contained in the General Operating Instructions. Failure to comply with safety instructions accompanying this product could result in personal injury and/or property damage! Retain instructions for future reference.

2-Inch Dewatering Pumps

Refer to form 1808-634-00 for General Operating and Safety Instructions.

Description

These dewatering pumps are engine-driven, self-priming (to 20 ft. lift), portable units. Clog resistant impeller is capable of handling solids up to 3/8" diameter. Model series 422x-95 employs Buna-N material for mechanical seal components; Model series 422x-V5 use Viton instead of Buna-N. Viton is recommended for pumping alachlor herbicides (e.g. Monsanto Lasso®) or other compatible liquids. Handles liquids from 40° to 180° F. For use with non-flammable, non-abrasive liquids compatible with pump component materials.

Specifications

Suction inlet 2" NPT
Discharge outlet 2" NPT
Dimensions (overall) approx.

3.5 HP 16.8"H x 13.25"W x 13"L
5.5/6.5 18.5"H x 15"W x 15"L

Engine Options:

B&S Cool Bore 3.5 HP
B&S Intek OHV 5.5 HP
Honda OHV 5.5 HP
Kohler OHV 6.0 HP
B&S Intek I/P OHV 6.5 HP

Basic Construction Cast iron

Maintenance

WARNING *To prevent accidental starting always remove the spark plug, or disconnect and ground the spark plug wire before attempting to service or remove any component.*

MECHANICAL SEAL REPLACEMENT

Refer to figures 1 and 2.

IMPORTANT: Always replace the seal seat, seal head, and shaft sleeve to ensure proper mating of mechanical seal components.

1. Unthread cap screws (Ref. No. 3) and remove casing (Ref. No. 6) from adapter (Ref. No. 4).

NOTE: Inspect gasket (Ref. No. 5). Replace if torn or damaged.

2. Unscrew impeller (Ref. No. 11) from the engine shaft and remove the impeller shims (Ref. No. 12).

NOTE: To keep the shaft from turning, remove the shroud from engine and hold the flywheel in place. The gasoline engine has a threaded shaft. To remove impeller, turn impeller CCW (facing motor shaft).

3. Slide shaft sleeve (Ref. No. 13) and seal head (the part with spring) from the engine shaft.

4. Unthread cap screws (Ref. No. 15) and remove the adapter (Ref. No. 4) from engine mounting face.

5. Push seal seat from the adapter recess with a screwdriver.

6. Clean the adapter recess before inserting a new seal seat.

NOTE: The precision lapped faces on the mechanical seal are easily damaged. Handle your replacement seal carefully.

7. Carefully wipe the ceramic surface of the new seal seat with a clean cloth.

8. Wet the rubber portion of the seal seat with a light coating of soapy water.

9. Press the new seal seat squarely into cavity in the adapter. If the seal seat does not press squarely into the cavity, it can be adjusted in place by pushing on it with a piece of pipe. Always use a piece of cardboard between the pipe and the seal seat to avoid scratching the seal seat. (This is a lapped surface and must be handled very carefully.)

Performance Chart

Model	GPH of Water at Total Head in Feet								*Max. Head
	10'	20'	30'	40'	50'	60'	70'	80'	
3.5 HP	7800	7320	6720	6000	5220	4020	2400	--	76 Ft.
5.5/6.5 HP	9600	9000	8280	7500	6540	5400	4080	2400	90 Ft.

(*) Shut-off; to convert to PSI, divide by 2.31.

2-Inch Dewatering Pumps

Maintenance (Continued)

NOTE: Do not install a scratched, cracked or damaged seal seat; it will leak.

10. After the seal seat is in place, ensure that it is clean and has not been marred.
11. Using a clean cloth, wipe the shaft and make certain that it is perfectly clean.
12. Secure the adapter (Ref. No. 4) on the engine mounting face.

CAUTION Tighten capscrews (Ref. No. 15) **EVENLY** to avoid cocking adapter on rabbet on engine mounting face.

13. Apply a light coating of soapy water to the inside rubber portion of seal head and slide onto the shaft sleeve (Ref. No. 13). Slip the shaft sleeve with seal cartridge onto the engine shaft.

CAUTION Do not touch or wipe the face of the carbon (black) part of the seal cartridge.

14. Replace impeller shims (Ref. No. 12).

NOTE: See Shim Adjustment, below.

15. Screw impeller back in place, tightening until it is against the shaft shoulder.
16. Remount the pump casing (Ref. No. 6) on adapter (Ref. No. 4).

SHIM ADJUSTMENT

When installing a replacement impeller, it may be necessary to vary the number of shims (Ref. No. 12) that will be required. This is done by adding 0.010" shim more than was removed and reassembling the pump as follows:

IMPORTANT: When the clearance between the impeller and casing exceeds 1/16" at the face of the impeller or 1/8" on the outside diameter of the impeller, it may be necessary to take corrective action.

1. Ensure that the casing is snugly in place and check the shaft to make sure it is turning freely. If it turns freely, check to ensure that the adapter (Ref. No. 4) and casing (Ref. No. 6) are seated firmly, compressing gasket (Ref. No. 5) where they meet.

If they are not seated, tighten the fasteners (Ref. No. 3) and recheck the shaft for free turning. Tighten carefully, turning shaft while tightening. If shaft seizes before fasteners are completely tight, disassemble pump, remove one shim and repeat reassembly.

2. If, at any time during shim adjustment, the shaft does not turn free, or a metal to metal rubbing can be heard or felt when turning the shaft, repeat SHIM ADJUSTMENT procedure.

NOTE: The impeller must be as close as possible to casing in order to perform properly and retain suction capabilities.

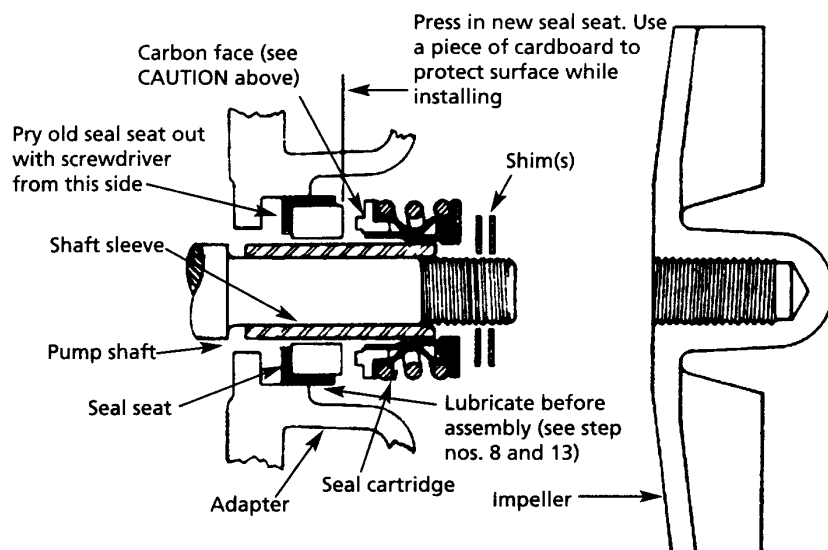


Figure 1 - Mechanical Seal Replacement

For Replacement Parts, contact dealer where pump was purchased.

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

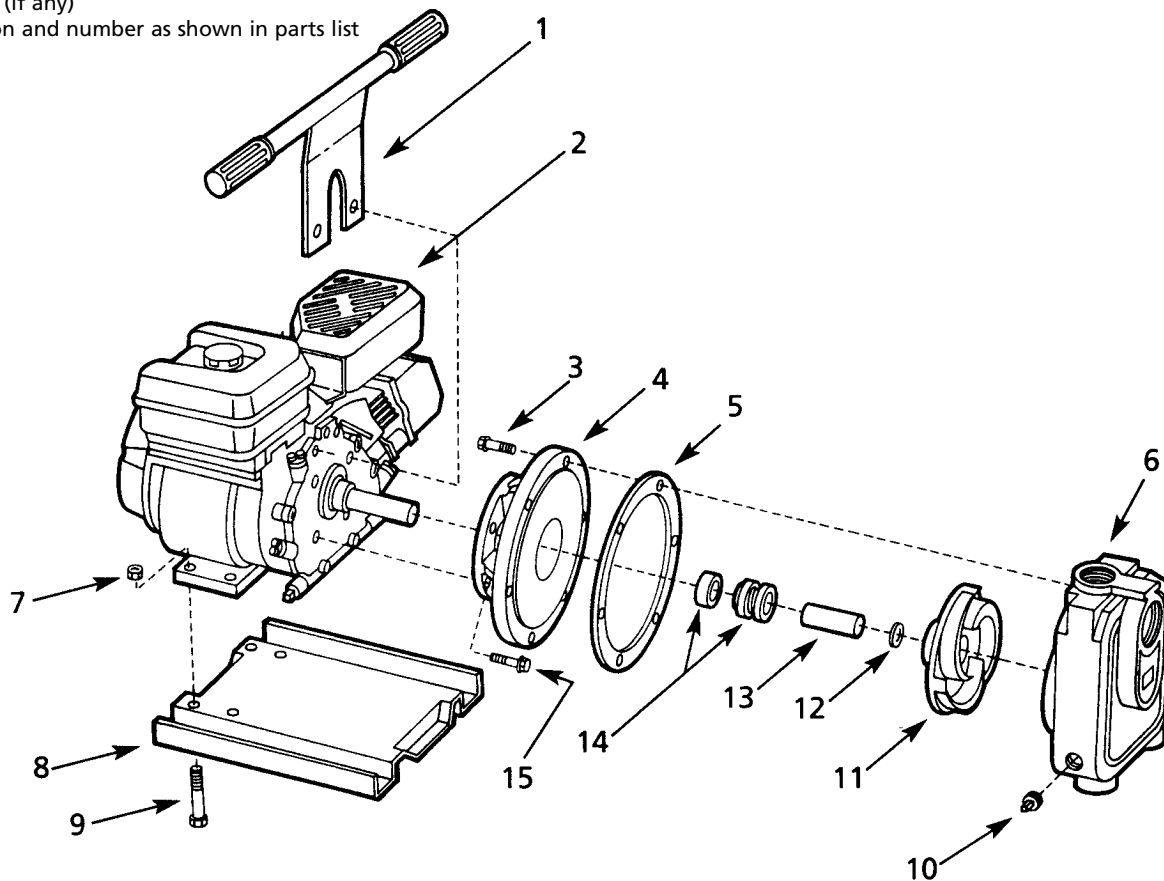


Figure 2 - Replacement Parts Illustration

Replacement Parts List

Ref No.	Description	Part Number for Models:					Qty.
		4222-95 & 4222-V5 3.5HP B&S	4223-95 & 4223-V5 5.5HP Intek	4224-95 & 4224-V5 6.5HP Intek	4226-95 & 4226-V5 5.5HP Honda	4227-95 & 4227-V5 6HP Kohler	
1	Carrying Handle	1549-007-90	1549-007-90	1549-007-90	1549-007-90	1549-007-90	1
2	Engine	1630-003-00	1639-019-00	1630-018-00	1639-036-00	1639-035-00	1
3	1/4-20 x 3/4" Stainless Hex Capscrew	*	*	*	*	*	6
4	Casing adapter	1474-000-01	1474-000-01	1474-000-01	1474-000-01	1474-000-01	1
5	Gasket	1478-000-00	1478-000-00	1478-000-00	1478-000-00	1478-000-00	1
6	Casing	2214-000-01	2214-000-01	2214-000-01	2214-000-01	2214-000-01	1
7	5/16-18 Hex Flange nut	*	*	*	*	*	4
8	Base	4220-100-90	4220-100-90	4220-100-90	4220-100-90	4220-100-90	1
9	5/16-18 x 1-1/2" Hex capscrew	*	*	*	*	*	4
10	1/2 NPT Pipe Plug	*	*	*	*	*	2
11	Impeller	1493-000-01	1496-002-01	1496-002-01	1496-002-01	1496-002-01	1
12	Impeller Shim Set, (Contains:(1) each of 0.010, 0.020, 0.030)	1658-000-90	1658-000-90	1658-000-90	1658-000-90	1658-000-90	1 Pkg
13	Shaft Sleeve	1483-000-00	1483-000-00	1483-000-00	1483-000-00	1483-000-00	1
14	Seal Assembly - Buna N (for Models 422?-95)	1640-162-90	1640-162-90	1640-162-90	1640-162-90	1640-162-90	1
	Seal Assembly - Viton (for Models 422?-V5)	1640-162-91	1640-162-91	1640-162-91	1640-162-91	1640-162-91	1
15	5/16-24 x 3/4" Hex Flange capscrew	*	*	*	*	*	4

(*) Standard Hardware, available locally

NOTE: Pipe nipples included with pump (not shown), Part Number 1696-044-00

