

Please read and save this Repair 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 the safety instructions accompanying this product could result in personal injury and/or property damage! Retain instructions for future reference.

# 1<sup>1</sup>/<sub>2</sub>-Inch Dewatering Pump

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

## Description

This centrifugal pump is engine-driven, self-priming (to 20 ft. lift) and portable. It is shipped completely assembled and is equipped with a carrying handle. Clog resistant impeller is capable of handling solids up to 3/8" diameter. Shaft seal has stainless steel components, Buna N elastomers, carbon head and ceramic seat. Handles liquids from 40° to 180° F (4° to 82° C). For use with nonflammable, non-abrasive liquids compatible with pump component materials.

## Specifications

Suction inlet . . . . . 1<sup>1</sup>/<sub>2</sub>" NPT  
 Discharge outlet . . . . . 1<sup>1</sup>/<sub>2</sub>" NPT  
 Engine . . . . . 3.5 HP @ 3600 RPM/4 cycle  
 Pump construction

2850-95 . . . . . Cast iron  
 2858-95 . . . . . Cast iron with  
 polypropylene impeller

## Dimensions (overall)

2850-95 . . . . 13 H x 13<sup>3</sup>/<sub>8</sub> W x 16<sup>3</sup>/<sub>4</sub>" L  
 2858-95 . . . . . 16 H x 18 W x 20" L

## Weight

2850-95 . . . . . 53 lbs.  
 2858-95 . . . . . 56 lbs.

## Performance Chart

GPH of Water at Total Head in Feet

10'	20'	30'	40'	50'	60'	*Max. Head
5000	4500	4000	3300	2450	1360	70 ft.

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

## 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 (Ref. No. 4) and seal head (Ref. No.

5) to ensure proper mating of mechanical seal components!

1. Unthread cap screws (Ref. No. 9). Remove casing (Ref. No. 11) and seal (Ref. No. 10) from adapter (Ref. No. 3).
2. Unscrew impeller (Ref. No. 8) from the engine shaft and remove the impeller shims (Ref. No. 7).

**NOTE:** To keep the shaft from turning, remove the shroud from engine and hold the flywheel in place.

3. Slide shaft sleeve and seal head from the engine shaft.
4. Unthread cap screws (Ref. No. 2) 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.
7. Carefully wipe the ceramic surface of the new seal seat with a clean cloth.
8. Wet the rubber portion of the seal 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 the end of 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.

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 on the engine mounting face.

**⚠ CAUTION** Tighten cap screws **EVENLY** to avoid cocking 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. Slip the shaft sleeve with seal head 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.
15. Screw impeller back in place

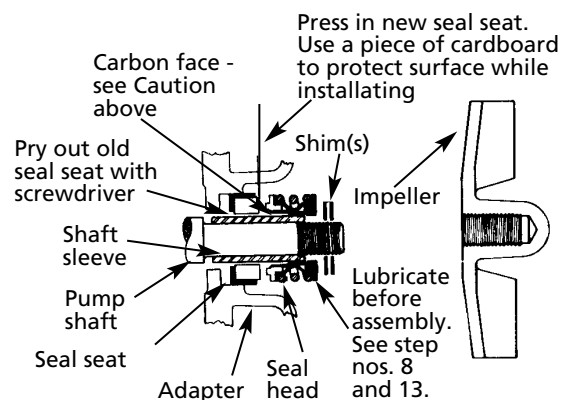


Figure 1 – Mechanical Seal Replacement

# 1½-Inch Dewatering Pump

---

## Maintenance (Continued)

tightening until it is against the shoulder.

16. Install seal and remount the pump casing on adapter.

## SHIM ADJUSTMENT

1. When installing a replacement engine, adapter, impeller, shaft sleeve, volute or casing it may be necessary to vary the number of impeller shims (Ref. No. 7) that will be required. This is easily done by adding one shim more than was removed and reassembling the pump as described in MECHANICAL SEAL REPLACEMENT section.

**NOTE:** When adding or removing shims, it is best to proceed with a 0.010" increment each time. Remove spark plug wire from engine and ground. While tightening the unit together turn the shaft (by pulling on the recoil starter, etc.); feel for the shaft seizing. If shaft begins to seize before the fasteners are completely tight, disassemble the pump and remove one shim and repeat assembly.

2. Once having added one shim more than original, ensure that the volute (Ref. No. 11) and adapter (Ref. No. 3) are firmly fitted (check fasteners Ref. Nos. 2 & 9). When engine turns

freely add shims until it does strike, then remove a 0.010" shim. This should allow the proper clearance.

3. Proper running clearance for the impeller should be as close as possible to volute without striking; maximum clearance is 1/32" (0.032")
4. Follow the above procedure until proper clearance is obtained. This will ensure maximum performance.

***For Repair 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

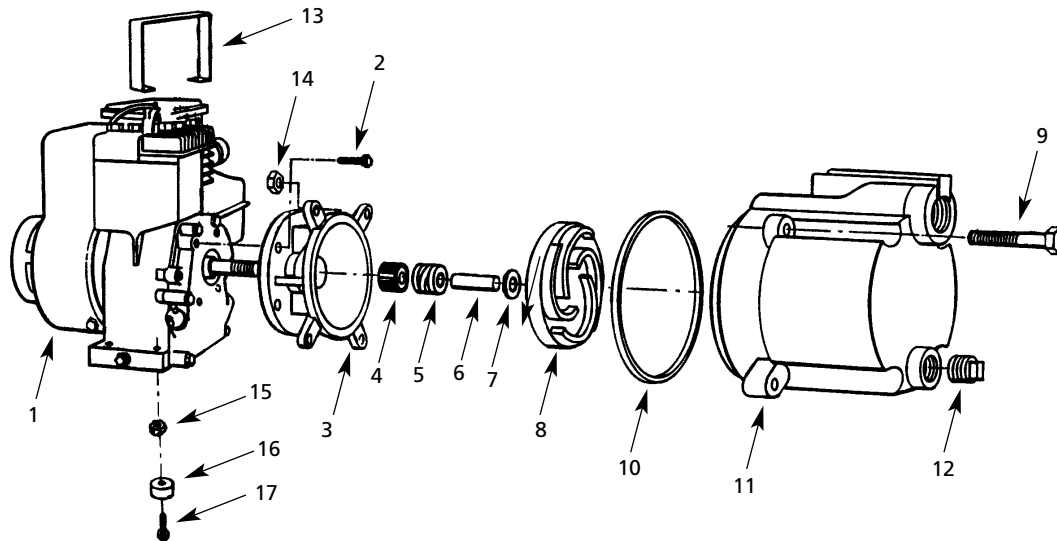


Figure 2 – Repair Parts Illustration

### Repair Parts List

Reference Number	Description	Part Number for Models:		Qty.	Qty.
		2850-95	2858-95		
1	Engine	1630-003-00	1630-003-00	1	1
2	Fastener	*	*	4	4
3	Adapter	1526-000-01	1526-000-01	1	1
4&5	†Shaft seal -Buna-N	1640-162-90	1640-162-90	1	1
	†Shaft seal -Viton	1640-162-91	1640-162-91	1	1
6	Shaft sleeve	1483-000-00	1483-000-00	1	1
7	Impeller shims (1) 0.010"; (1) 0.020"; (1) 0.030"	1658-000-90	1658-000-90	1	1
8	Impeller	1537-000-03	2890-010-00	1	1
9	Fastener	*	*	4	4
10	Casing seal -Buna N	1531-000-00	1531-000-00	1	1
	Casing seal -Viton	1532-000-00	1532-000-00	1	1
11	Casing	1558-000-04	1558-000-04	1	1
12	1/2" NPT Pipe plug	*	*	1	1
13	Carry handle	1496-001-00	1549-009-90	1	1
14	Fastener	*	*	4	4
15	Fastener	*	*	4	4
16	Rubber foot	1508-000-00	—	6	—
17	Fastener	*	*	4	4
Δ	Base	3400-100-00	4220-100-00	1	1
Δ	1½" NPT pipe nipple	1696-043-00	1696-043-00	2	2

(\*) Standard hardware item available locally.

(Δ) Not Shown.

(†) Seal seat and head available in a set only.

[illegible]