***Please r*ead 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.**

3-Inch Premium Trash Pumps

Refer to form 1808-633-00 for General Operating and Safety Instructions

Description

These trash pumps are high capacity, heavy duty, centrifugal, engine driven, self-priming (to 20 ft. lift), portable units. The pumps are equipped with a precision lapped mechanical seal to reduce leakage, carrying handle, and a clog-resistant impeller capable of handling solids up to 1½" diameter.

Engine shaft on all models is sealed from liquid and protected by a stainless steel shaft sleeve. 3" NPT suction strainer is included. Units are designed to handle water containing mud, sand, sludge, solids and sewage (up to 25% by volume). Handles liquids from 40º to 180º (4º to 82º C). For use with nonflammable liquids compatible with pump component materials.

Specifications

Suction Inlet . . . . . 3"‡
Discharge outlet . . . . . 3" ‡
(‡) Standard NPT (female) pipe thread
Dimensions (overall) 28" L x 22" W x 24" H
RPM 3600
Basic Construction . . . . . Aluminum with . . . . . Cast iron impeller and wearplates

Maintenance

WARNING ***Always disconnect battery cables and spark plug wire from spark plug before performing any maintenance operation requiring disassembly of pump.***

Cleaning

This unit is designed so that for most cleanout or clogging problems, it should not be necessary to remove hoses or piping. Discharge area and manifold (Ref. No. 12) can be reached by opening top cleanout cover plate (Ref. No. 14). Clear all debris from inside manifold and from strainer portion of manifold gasket (Ref. No. 8). Suction area and impeller chamber can be reached by removing suction cleanout cover plate (Ref. No. 3). This plate is locked in position with four threaded handles. Next to two holes thru which these handles pass in locking position there are tapped holes. To remove cover plate, first remove four threaded handles. Then thread two thread handles into an opposite pair of tapped holes. This will serve as a jack to pull cover out of casing.

NOTE: When replacing either cleanout cover plates, be sure)-ring sealing gaskets are in position. Carefully wipe all surfaces on which rings have contact. It will facilitate removal and replacement of suction cover plate (Ref. No. 3) if a thin coating of grease is wiped over o-ring gasket (Ref. No. 7).

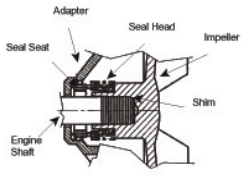


Figure 2B - Mechanical Seal Replacement

REPAIR & REPLACEMENTS:

NOTE: First examine exploded parts illustration which shows all parts and how they are related to one another. Different degrees of dismantling can be accomplished depending on what areas of pump are to be reached. Note that engine front pump assembly can be removed by first removing (6) fasteners (Ref. No. 9) from adapter (Ref. No. 35). Impeller and cutwater/wearplates are subject to wear only by abrasive action of sandy or dirty fluid. If badly worn, all these parts can be replaced easily and pump thus restored to full efficiency.

IMPELLER (REF. NO. 23) AND WEARPLATE (Ref. No. 26) RENEWAL

When clearance between impeller and cutwater/wearplate exceeds 1/16" at face of impeller of 1/8" on outside diameter of impeller, it may be necessary to take corrective action. Increased clearance can cause lengthened priming times and reduced pumping capacity. If both priming and capacity of your unit are satisfactory for your application, it is recommended that no corrective maintenance be performed regardless of what clearances may have developed, since increased clearances in themselves are not generally dangerous to your pump. Normally, new pump face clearances can be restored by simply shimming behind the impeller. (Add shim washers Ref. No. 38). If diameter of impeller is badly worn or if 1/16" shim washers do not restore clearances to less than 1/16" face dimension and/or 1/8" diametral clearance, it is recommended that impeller be replaced. This is usually all that is required since only on unusually abrasive surfaces do cast iron wearplates show deterioration.

REMOVING FRONT WEARPLATE (REF. NO. 5)

Remove suction cleanout cover (Ref. No. 3) using handles (Ref. No. 1) as jack-screws as described under Cleaning. Front wearplate is attached to cover with three 5/16" socket head cap screws (Ref. No. 6). Remove these screws and replace wearplates. Be sure mating surfaces are wiped clean of all dirt.

TO REMOVE CUTWATER/WEARPLATE (REF. NO. 26)

Remove front pump assembly by removing six fasteners (Ref. No. 9) that hold casing (Ref. No. 21) to adapter (Ref. No. 35) and fasteners (Ref. Nos. 42 & 33). Remove impeller (Ref. No. 23) by unscrewing (right hand thread) it from shaft. Cutwater/wearplate can then be removed by removing socket head screws (Ref. No. 25) that hld it to adapter (Ref. No. 35).

REMOVING SEAL (REF. NO. 36)

1. Remove pump casing (Ref. No. 21) and impeller (Ref. No. 23) as described under "To Remove Cutwater/Wearplate" above.
2. Remove shaft sleeve (Ref. No. 37) with seal head assembly and spring on it. Remove seal head assembly and spring from sleeve.
3. Remove seal seat using two screwdrivers or other suitable tools.

REPLACING SEAL (REF. NO. 36)

1. Thoroughly clean shaft surface and all surfaces of seal seat cavity.
2. Wet rubber portion of new seal with a light coating of soapy water. Press seal seat squarely into adapter (Ref. No. 35) recess. Avoid scratching polished surface.

NOTE: When handling all seal parts, be careful to keep them clean. Do not touch seal faces with your hands. Do not put lubricants on seal face. This would cause a leak.

3. Inspect polished face of seal seat and seal head to ensure they are clean and not marred.
4. Using a clean cloth, wipe shaft sleeve (Ref. No. 37) and make certain that it is perfectly clean.
5. Wet the inside rubber portion of new seal head with a light coating os soapy water.
6. Put seal head assembly on shaft sleeve and slide assembly onto shaft. If it is not possible to slide assembly into place with your fingers, use a sleeve of proper diameter so that pressure is applied to rear of drive ring. Ease shaft sleeve and seal head assembly into place. DO NOT drive it with a hammer.
7. Replace shims (Ref. No. 38) and impeller (Ref. No. 23).
8. Replace casing (Ref. No. 21) and six fasteners (Ref. No. 9) that hold casing to adapter.
9. After assembly, remove wire from spark plug, turn engine shaft by hand slowly, using recoil starter, to check for striking of impeller on casing. If striking of rubbing occurs, adjust impeller shims as required and reconnect spark plug wire.
10. A short "run-in" period may be necessary to provide a tight seal joint.

IMPORTANT: Never run seal dry for any length of time.

SHIM (REF. NO. 38) ADJUSTMENT

When installing a replacement impeller, it may be necessary to vary the number of shims that will be required. This is easily done by adding one shim more than was removed and reassembling pump as described.

Replacement Parts List

Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.
1	Tee handle	1601-000-00	6	26	Cutwater/wearplate	1595-000-01	1
2	Flat washer	*	6	27	Hex head cap screw	*	1
3	Suction clean out	1596-000-01	1	28	Split lockwasher	*	11
4	O-ring (suction clean out)	1598-000-00	1	29	Hex head cap screw	*	4
5	Front wearplate	1597-000-01	1	30	3/8" NPT Pipe plug	*	1
6	Socket head cap screw SS	*	3	31	Engine (3100-96) B&S 8 HP Pro	1639-023-00	1
7	O-ring (front wearplate)	1599-000-00	1		Engine (3103-96) Honda 9 HP	1639-026-00	1
					Engine (3104-96) Honda 9 HP E-Start	1639-028-00	
8	Manifold gasket	1600-000-00	1		Engine (3102-D6) 10 HP Diesel	1639-039-00	1
9	Hex head cap screw	*	10	32	3" NPT Suction strainer	C520-90	1
10	Suction plate	1589-000-01	1	33	Flange Nut	*	12
11	Flapper valve assembly	1694-000-90	1	34	Raising Block	-	-
12	Manifold	1593-000-02	1	35	Adapter	1588-000-01	1
13	O-ring seal (manifold clean out cover)	1582-000-00	1	36	Shaft seal Viton/Silicon carbide	1640-167-90	1
14	Manifold clean out cover	1602-001-01	1	KIT	Complete seal kit includes Ref. Nos.	S310-BSC-K0	
15	Discharge manifold	2184-010-01	1		4,7,8,11,13,18,24,36,37		
16	1" NPT pipe plug	*	1	37	Shaft sleeve	1555-000-00	1
17	Hex head screw	*	8	38	Impeller shims contains(1) ea.	1656-000-90	1
18	O-ring seal (discharge manifild)	2184-011-00	1		0.010", 0.020", 0.030"		
19	Hex head cap screw SS	*	1	39	† Battery tray kit includes:	1696-BAT-K0	1
20	Hex head cap screw	*	4		† 13" Battery cable (not shown)		
21	Casing	1587-000-01	1		† 30" Battery cable (not shown)		
22	Flange nut	*	4	40	3" NPT nipple kit (includes 2 nipples,	C367-90	
23	Impeller	1594-000-01	1		Teflon)		
24	O-ring seal (casing to adapter)	1592-000-00	1	41	Roll cage frame assembly	1696-100-K0	1
25	Socket flat head screw SS	1741-000-00	4				

(*) Standard hardware item, available locally.
(†) Electric Start models only
(●) For engine parts refer directly to engine manufacturer.
NOTE: Wheel kit available separately; order model A735-90

For Repair Parts, contact dealer where pump was purchased.

Please provide following information:
-Model number
-Serial number (if any)
-Part descriptions and number as shown in parts list

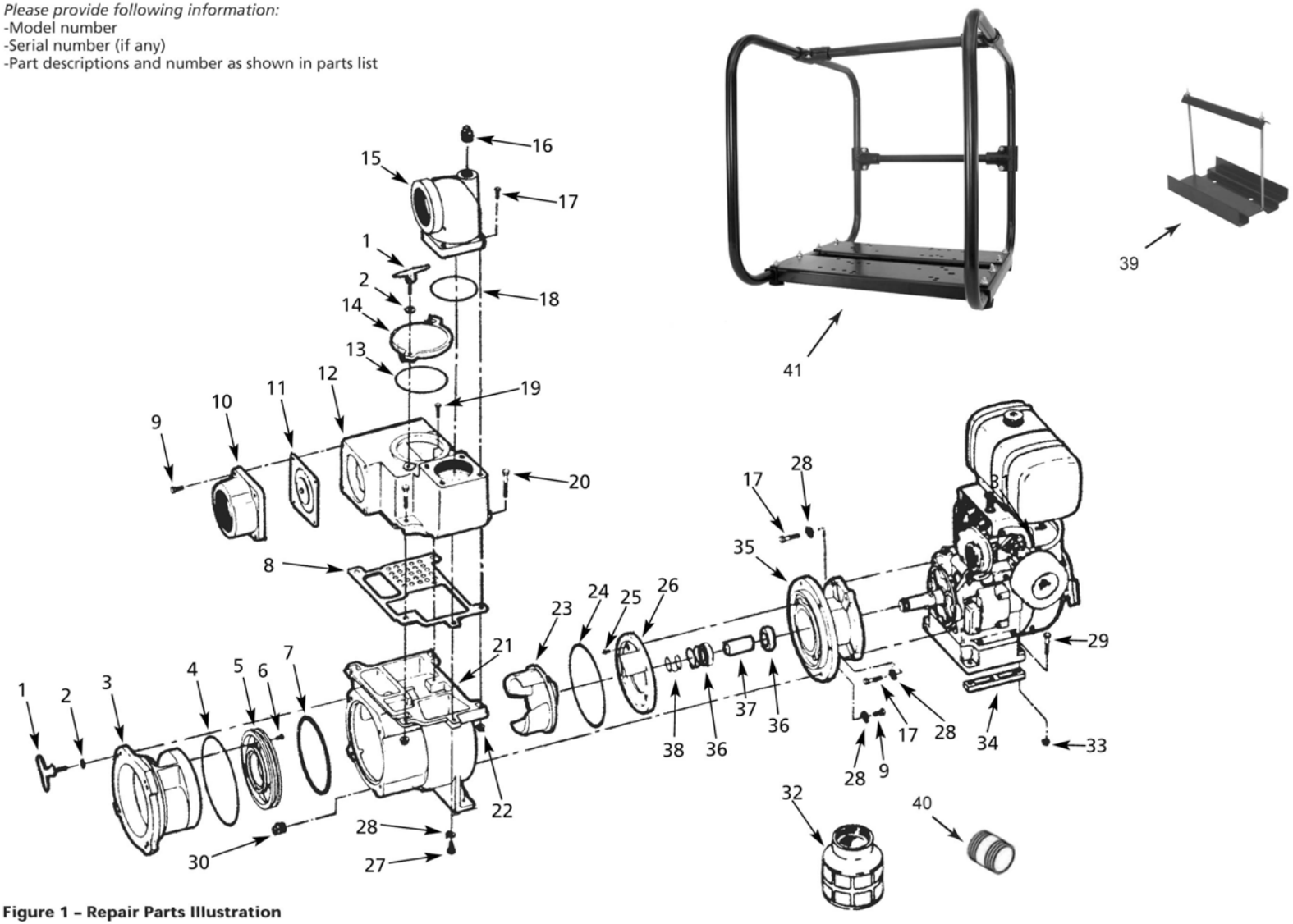


Figure 1 – Repair Parts Illustration