

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. AMT reserves the right to discontinue any model or change specifications at any time without incurring any obligation.

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Periodic maintenance and inspection is required on all pumps to ensure proper operation. Unit must be clear of debris and sediment. Inspect for leaks and loose bolts. Failure to do so voids warranty.

Solids-Handling Pedestal Pumps



Refer to pump manual 1808-635-00 for General Operating and Safety Instructions.

DESCRIPTION

These self-priming (to 20 ft. lift @ 3450 RPM) centrifugal pumps include a clog resistant impeller capable of handling solids as large as 3/8" diameter (up to 25% by volume). A built-in check valve assists in priming and a mechanical shaft seal prevents leakage. Handle liquids from 40° to 180° F (4° to 82° C). For use with nonflammable, nonabrasive liquids compatible with pump component materials.

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.

CLEANING

This unit has been designed with a removable volute enabling the pump to be cleaned or unclogged with ease. Remove casing and volute as described in steps 1 and 2 under MECHANICAL SEAL REPLACEMENT. Remove any debris found inside the unit, reassemble as described in steps 16 and 17 under MECHANICAL SEAL REPLACEMENT.

NOTE: Depending on application, it may be necessary to remove suction and discharge hoses.

MECHANICAL SEAL REPLACEMENT

Refer to Figures 1 and 2

IMPORTANT: Always replace the seal seat (Ref. No. 14), seal head (Ref. No. 13) and shaft sleeve (Ref. No. 12) to ensure proper mating of mechanical seal components!

1. Unthread cap screws (Ref. No. 3) to remove casing (Ref. No. 5) and o-ring (Ref. No. 15) from the adapter (Ref. No. 16).
2. Unthread round head screws (Ref. No. 8) and remove volute (Ref. No. 7) from adapter.
3. Unscrew impeller (Ref. No. 10) from the pump shaft. Remove the impeller shim(s) (Ref. No. 11), shaft sleeve and seal head from pump shaft.
4. Unthread fastener (Ref. No. 19) and remove the adapter from the 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.

PERFORMANCE @ 3450 RPM

GPH of Water At Total Head in Feet

Model	Port Size	HP Req.	10'	20'	30'	40'	50'	60'	70'	80'	90'	Max Head**
3161-99	1-1/2"	3	6720	6420	6000	5460	4740	3700	2500	1200	-	87 ft.
3160-99	2"	3	9000	8400	7800	6960	6000	4800	3120	1250	-	87 ft.

(*) To convert to psi, multiply by specific gravity and divide by 2.31

Solids-Handling Pedestal Pumps

BEARING HOUSING SERVICE

1. Remove front pump assembly as described under "Mechanical Seal Replacement."
2. Remove shaft bearing (Ref. No. 24) and shaft (Ref. No. 25) as an assembly by first removing retaining ring (Ref. No. 21). Push shaft bearing assembly out of pedestal (Ref. No. 20) by rapping on threaded end of shaft with a rawhide mallet or block of wood and a hammer.
3. Ball bearings can now be removed from shaft.
4. If shaft bearings have been removed from shaft, replace by sliding bearing on shaft to shoulder. Replace shaft bearing assembly by sliding assembly into housing threaded end first. Push shaft bearing assembly completely in by gently tapping on keyway end of shaft with a rawhide mallet. Replace retaining ring.
5. Reassemble pump as described in "Mechanical Seal Replacement".

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. 11) 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, be sure that the volute (Ref. No. 7) and adapter (Ref. No. 16) are firmly fitted (check fasteners, Ref. No. 8). 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.

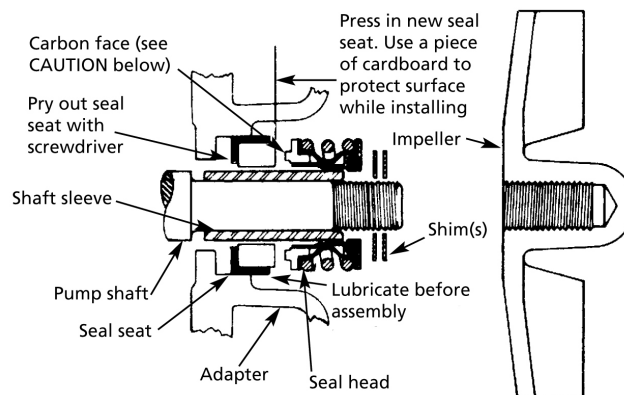


Figure 1 - Mechanical Seal Replacement

Solids-Handling Pedestal Pumps

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

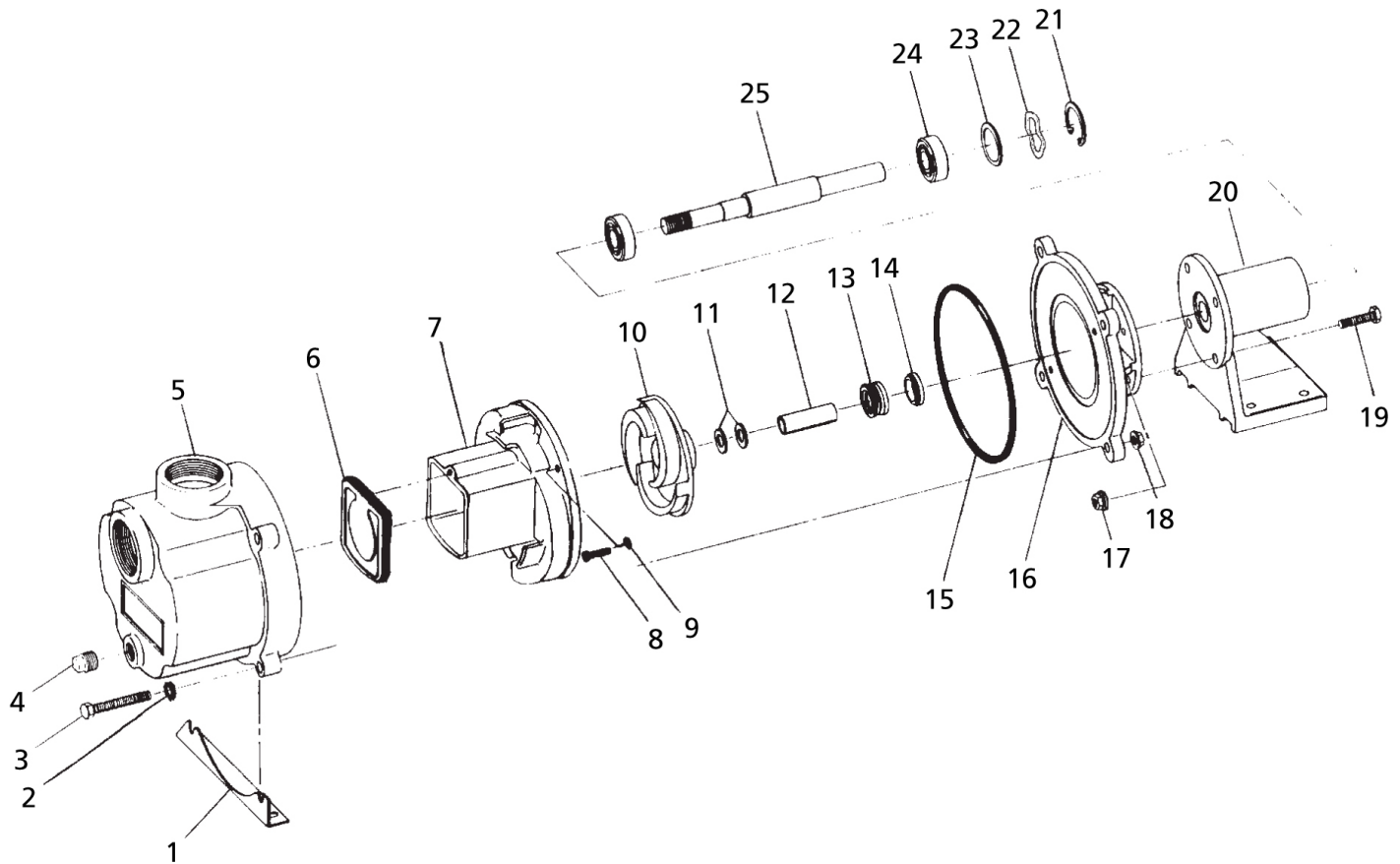


Figure 2 - Repair Parts Illustrations

Repair Parts List

Ref. No.	Description	Part Number for Models		Qty
		3160-99	3161-99	
1	Foot	1611-000-00	1611-000-00	1
2	Washer	*	*	4
3	Fastener	*	*	4
4	1/2" NPT Plug	*	*	2
5	Casing	2111-001-02	2111-001-01	1
6	Flapper Valve – Buna N	Incl. w/Ref KIT	Incl. w/Ref KIT	1
7	Volute	1612-000-01	1612-000-01	1
8	Fastener	*	*	2
9	Washer	*	*	2
10	Impeller	1493-000-01	1493-000-01	1
11	Impeller Shim Package	1658-000-90	1658-000-90	1
12	Shaft Sleeve	1483-140-09	1483-140-09	1
13 & 14	Shaft Seal Assembly – Buna N (standard)	1640-162-90	1640-162-90	1
15	Casing O-Ring – Buna N	Incl. w/Ref KIT	Incl. w/Ref KIT	1
16	Adapter	1608-005-00	1608-005-00	1
17	Nut	*	*	8
18	Fastener	*	*	2
19	Fastener	*	*	2
20	Pedestal	1695-030-01	1695-030-01	1
21	Retaining Ring	1695-034-00	1695-034-00	1
22	Wave Washer	1806-023-00	1806-023-00	1
23	Bearing Shim Package	1696-008-90	1696-008-90	1
24	Ball Bearing	1695-031-00	1695-031-00	1
25	Pump Shaft	1695-001-00	1695-001-00	4
KIT	O-Ring/Flapper Kit - Buna N (includes Ref. Nos. 6 and 15)	3160-300-90	3160-300-90	1

(*) Standard hardware item, available locally.