

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.

©2006 American Machine & Tool Co., Inc. of PA, A Subsidiary of The Gorman-Rupp Company, All Rights Reserved.

▲WARNING

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

SWIMMING POOL/HOT TUB PUMPS

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

Description

These bronze centrifugal pumps are designed for high volume liquid handling in spas or other applications where moderate pressures and high volumes are required. Handle liquids from 40° to 180° F (4° to 82° C). These pumps, with optional basket strainer (4530-99) attached, become highly effective self-priming (to 12 ft. lift) swimming pool pumps or filter pumps. Horsepower sizes are available that can be matched to a wide variety of swimming pool filters. All units are manual models. No controls are supplied. For use with nonflammable, non-abrasive liquids compatible with pump component materials.

Important Safety Instructions

Save these instructions

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

A copper bonding conductor of no smaller than 8 AWG must be connected from the bonding lug on the motor to **ALL** metal parts of the pool, spa or hot tub structure, and to all electrical equipment, metal conduit and metal piping within 5 feet of the inside walls of a swimming pool, spa or hot tub, when the motor is installed within 5 feet of the inside walls of the swimming pool, spa or hot tub.

For specific Safety precautions for installation and electrical connection information and to reduce the potential for fire, electric shock, or injury, read and follow all information and instructions contained in the form 1808-634-00 Electric Motor Driven Pumps Operating Instructions.

NOTE: If the pump is located above the liquid level, a positive sealing foot valve or check valve must be installed at the end of the suction line or in the piping just before the pump. If the unit is used with optional strainer basket (4530-99), the foot valve or check valve

will be required only when the suction lift or distance the pump is from the water level is greater than 10 feet. If the 4530-99 strainer basket is not used, it is recommended that you use another suitable means of straining foreign material out of the suction line.

Maintenance

▲WARNING **Make certain that unit is disconnected from power source before attempting to service or remove any component.**

MECHANICAL SEAL REPLACEMENT

Refer to Figures 1 and 2.

IMPORTANT: Always replace both seal seat (Ref. No. 9) and seal head (Ref. No. 10) to insure proper mating of components.

1. Unthread fasteners (Ref. NO. 5) and remove casing (Ref. No. 13) and casing seal (Ref. No. 8).
2. Unscrew impeller (Ref. No. 12) from motor shaft. Remove shims (Ref. No. 11) and retain for reassembly.

NOTE: Some motors use an open end 7/16" wrench across flats on rear of

READ AND FOLLOW ALL INSTRUCTIONS

▲WARNING **To reduce the risk of injury, do not permit children to use product unless they are closely supervised at all times.**

▲CAUTION **This pump is for use with permanently installed pools and may also be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity. For hot tub and spa pumps - do not install within an outer enclosure or beneath the skirt of a hot tub or spa unless so marked.**

motor shaft (remove bearing cap for access) to prevent shaft from turning. Other motor shafts have a screwdriver slot instead of flats.

3. Slide old seal head from motor shaft.
4. Unthread fasteners (Ref. No. 6) and remove assembled adapter (Ref. No. 4) and casing cover (Ref. No. 7) from motor mounting face.
5. Pry seal seat from rear of casing cover with a screwdriver.
6. Clean casing cover seal seat recess before inserting new seal parts.
7. Wet rubber portion of new seal seat with a light coating of soapy water. Press seal seat squarely into casing cover recess. Avoid scratching polished surface.

▲CAUTION **Handle all seal parts with white gloves being careful to keep them clean. Do not touch polished seal faces with your hands. To avoid a leak, do not put lubricants on seal face.**

8. Inspect polished face of seal seat and seal head to ensure they are clean and not marred.
9. Using a clean cloth, wipe shaft and make certain that it is perfectly

clean.

IMPORTANT: If removed, slide slinger washer (Ref. No. 2) onto shaft until it is located approximately 1/8" from face of motor bearing hub.

10. Slide assembled adapter and casing cover onto motor mounting face. Attach with fasteners.

11. Wet inside rubber portion of new seal head with a light coating of soapy water. Slide head onto motor shaft.

IMPORTANT: Reinstall any shims or spacers which may have been removed onto motor shaft before installing impeller.

12. Screw impeller back in place, tightening until it is against shaft shoulder.

13. Replace casing seal and casing. Attach with fasteners.

IMPORTANT: Always inspect casing seal when disassembled. Use a light oil or grease for ease of installation.

Replace when cracked or worn.

Shim adjustment

When installing a replacement impeller (Ref. No. 12), motor (Ref. No. 1), casing (Ref. No. 13), casing cover (Ref. No. 7), or adapter (Ref. No. 4) it may be necessary to adjust the number of shims (Ref. No. 11) to ensure proper running clearance between impeller and casing. Proceed as follows:

NOTE: A proper running clearance is less than 0.016".

1. For component replacement other than motor, add one (0.010") shim in addition to those removed originally.
2. For motor replacement, add two (0.010") shims in addition to shims removed during disassembly.
3. Disassemble and reassemble pump as described for component being replaced in applicable steps under MECHANICAL SEAL REPLACEMENT.

IMPORTANT: Ensure that casing is

snugly in place and check shaft to make sure it is turning freely (use screwdriver or 7/16" open end wrench on end of motor shaft to turn). If it turns freely, check to ensure that casing cover and casing are fitted "metal to metal" and adapter and motor are fitted "metal to metal" where they meet on outside. If they are not, tighten fasteners (Ref. Nos. 5 and 6) and recheck shaft for free turning. Tighten carefully, turning shaft while tightening so that motor bearings are not damaged in the event that too many shims were installed. If shaft seizes before fasteners are completely tight, disassemble pump and remove one shim and repeat reassembly.

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

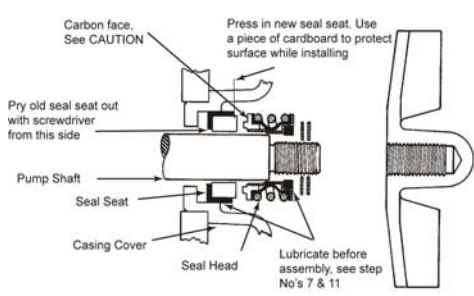


Figure 1 - Shim Adjustment

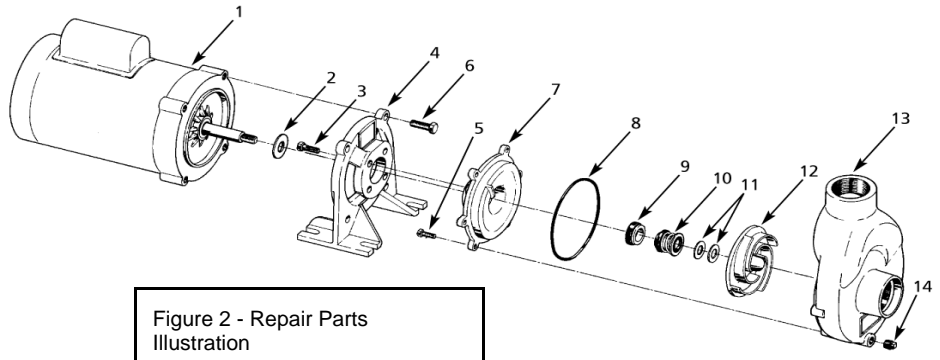


Figure 2 - Repair Parts Illustration

Repair Parts List

Ref. No.	Description	Part Number For Models:					Qty.
		3880-97	3881-97	3882-97	3883-97	3884-97	
1	Motor	1626-062-00	1626-063-00	1626-064-00	1626-065-00	1626-066-00	1
2	Slinger washer	*	*	*	*	*	1
3	Fastener	*	*	*	*	*	4
4	Adapter	1993-000-01	1993-000-01	1993-000-01	1993-000-01	1993-000-01	1
5	Fastener	*	*	*	*	*	6
6	Fastener	*	*	*	*	*	4
7	Casing Cover	2104-003-01	2104-003-01	2104-003-01	2104-003-01	2104-003-01	1
8	Casing seal	-Buna N (standard) 2104-004-00	2104-004-00	2104-004-00	2104-004-00	2104-004-00	1
		-Viton (optional) 2105-023-00	2105-023-00	2105-023-00	2105-023-00	2105-023-00	1
9 & 10	± Shaft seal assembly	- Buna N (optional) 1640-161-90	1640-161-90	1640-161-90	1640-161-90	1640-161-90	1
		- Viton (optional) 1640-161-91	1640-161-91	1640-161-91	1640-161-91	1640-161-91	1
11	Shims (kit contains 0.010, 0.020 & 0.030 - 1 ea.)	1657-000-90	1657-000-90	1657-000-90	1657-000-90	1657-000-90	1
12	Impeller	2104-006-01	2104-006-02	3880-051-01	3880-052-01	2104-015-02	1
13	Casing	2104-000-01	2104-000-01	2104-000-01	2104-000-01	2104-000-01	1
14	Pipe Plug	*	*	*	*	*	1

(*) Standard hardware item, available locally
 (±) Seal assembly available as set only (includes seal head and seat).