

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.

# 3-Inch Premium Trash Pumps



Refer to pump manual 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 40° to 180° (4° to 82° C). For use with nonflammable liquids compatible with pump component materials.

## MAINTENANCE

### ⚠ WARNING

**Always disconnect battery cables and spark plug wire from spark plug before performing any maintenance operation requiring disassembly of the 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 O-ring sealing gaskets are in position. Carefully wipe all surfaces on which O-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).

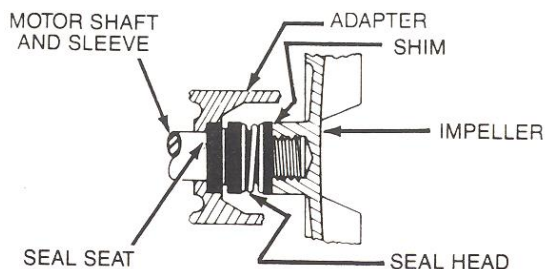


Figure 1 – Mechanical Seal

## REPAIRS & 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. 23) & WEARPLATE (Ref. 26) RENEWAL

When clearance between impeller and cutwater/wearplate exceeds 1/16" at face of impeller or 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. 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/wear plate can then be removed by removing socket head screws (Ref. No. 25) that hold 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.

# 3-Inch Premium Trash Pumps

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 of 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.

**IMPORTANT:** Before installing new shaft sleeve, apply a bead of non-hardening, pliable sealant (such as Permatex® Form-A-Gasket® No. 2) to motor shaft shoulder.

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 or 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.

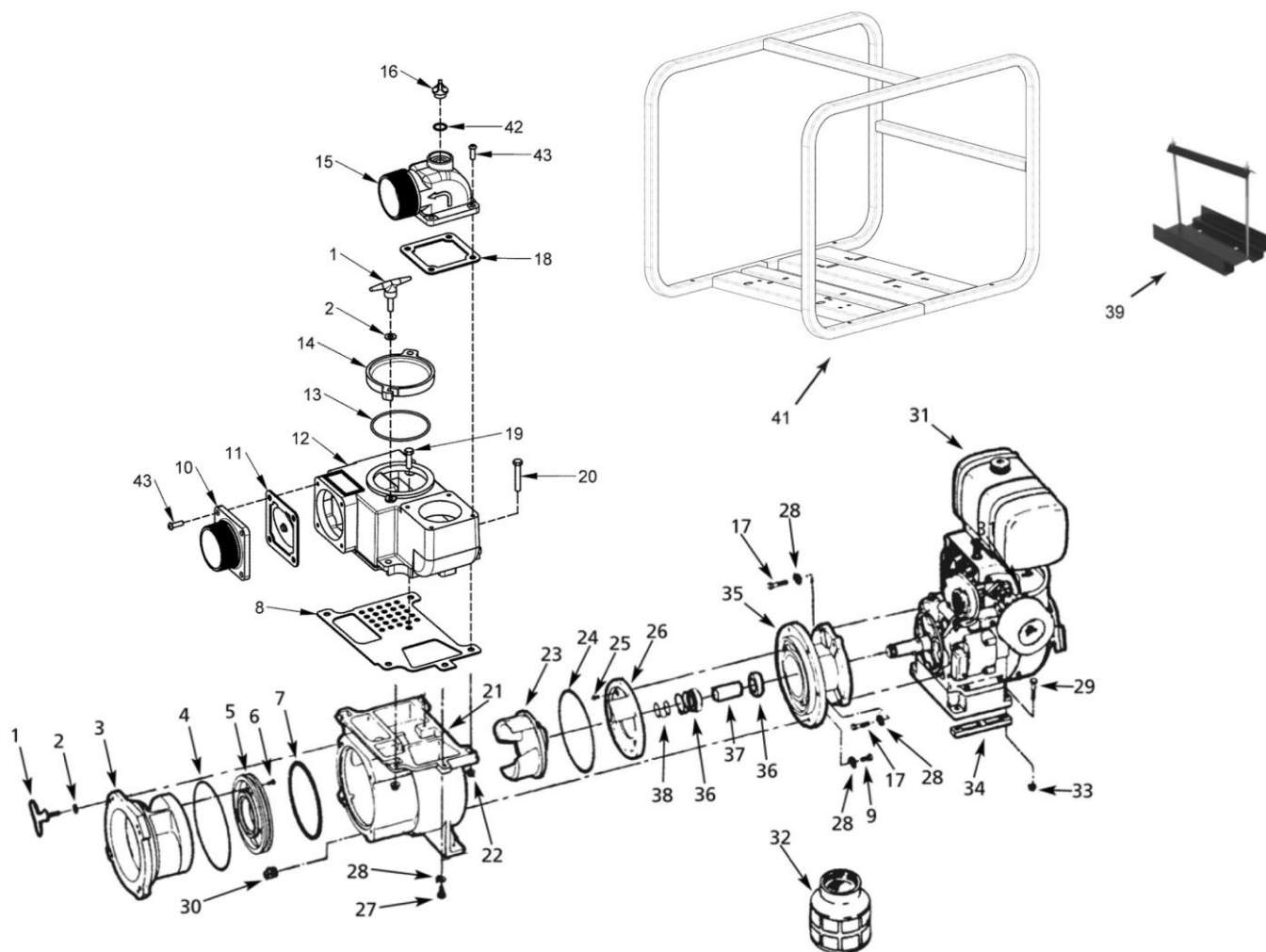
***For Repair Parts contact dealer where pump was purchased.***

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

Ref. No.	Description	Part Number	Qty.
1	Tee Handle	1601-000-00	6
2	Flat Washer	*	6
3	Suction Clean Out	1596-000-01	1
4	O-Ring #261 Buna N	Incl. w/Ref KIT	1
5	Front Wear Plate	1597-000-01	1
6	Socket Head Cap Screw SS	*	3
7	O-Ring #437 Buna N	Incl. w/Ref KIT	1
8	Manifold Gasket	Incl. w/Ref KIT	1
9	Hex Head Cap Screw	*	6
10	Suction Plate Kit	3S5X-050-95	1
11	(includes Ref. Nos. 10 and 43) Flapper Valve Assembly Buna N	1A31-300-90 & Incl. w/Ref. KIT	1
12	Manifold Kit (includes Ref. Nos. 1, 2, 12, 13,14,19, 20, 22, 27, and 28)	3100-080-96	1
13	O-Ring #243 Buna N	Incl. w/Ref KIT	1
14	Manifold Clean Out Cover	1602-001-01	1
15	Discharge Manifold Kit (includes Ref. Nos. 15 and 43)	3S5X-080-95	1
16	Plug with O-Ring Kit (includes Ref. No. 42)	3SXB-170-90	1
17	Hex Head Screw	*	4
18	Discharge Manifold Gasket EPDM	1A31-301-00 & Incl. w/Ref. KIT	1
19	Hex Head Cap Screw SS	*	1
20	Hex Head Cap Screw	*	4
21	Casing	1587-000-01	1
22	Flange Nut	*	4
23	Impeller	1594-000-01	1
24	O-Ring #260 Buna N	Incl. w/Ref KIT	1
25	Socket Flat Head Screw SS	1741-000-00	4
26	Cutwater/Wear Plate	1595-000-01	1
27	Hex Head Cap Screw	*	1
28	Split Lock Washer	*	11
29	Hex Head Cap Screw	*	4
30	3/8" NPT Pipe Plug	*	1
31	Engine (3103-96) B&S Vanguard	1639-024-00	1
	Engine (3103-96) Honda GX270	1639-026-00	1
	Engine (3104-96) Honda GX270 E-Start	1639-028-00	1
	Engine (3102-D6) 10 HP Diesel	1639-039-00	1
32	3" NPT Suction Strainer	C520-90	1
33	Flange Nut	*	12
34	Raising Block	-	-
35	Adapter	1588-000-01	1
36	Shaft Seal - Viton/Silicon Carbide	1640-167-90	1
<b>KIT</b>	<b>Gasket Kit (Male Flange Type)</b> (includes Ref. Nos. 4, 7, 8, 11, 13, 16, 18, 24, and 42)	<b>3100-301-92</b>	<b>1</b>
37	Shaft Sleeve	1555-140-03	1
38	Impeller Shim Kit	1656-000-90	1
39	Battery Tray Kit (E-Start Models Only) (includes 13" Battery Cable & 30" Battery Cable - not shown)	1696-BAT-K0	1
41	Roll Cage Frame Assembly	1696-100-K0	1
42	O-Ring #117 Buna N	Incl. w/Ref KIT	1
43	Button Head Screw	*	8

(\*) Standard Hardware Item, Available Locally

**NOTES:**

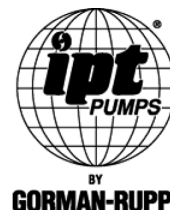
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**NOTES:**

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## General Information

**SALES POLICY:** AMT products are sold through our established Distributors. We do not sell direct to the consumer or organization not entitled to trade recognition. Therefore, possession of our catalogs and/or price list(s) does not infer an offer to sell.

**MINIMUM ORDER:** We appreciate your order, however, all orders are subject to a minimum \$35.00 net invoice charge (excluding freight). This applies to all pump and parts purchase orders.

**PRICES:** Prices are subject to change without notice. All orders accepted are subject to prices in effect at time of shipment.

**PAYMENT TERMS:** Terms, upon establishment of credit, are Net 30 days. Past due accounts may be subject to a service charge of 1.5% per month. Domestic or assignable letter of credit is required for all export trade.

**PAST DUE ACCOUNTS:** AMT reserves the right to withhold open account shipments on any past due account. Invoices are considered past due after thirty (30) days. In the interest of sound business, all orders are subject to approval of the Credit Department.

**SHIPPING INSTRUCTIONS:** All shipments will be made F.O.B. the factory. Where instructions for shipment do not appear on the order, the shipment will be made according to our best judgment. Full risk of loss (including transportation delays and losses) shall pass to the customer upon delivery of the products to the carrier at the F.O.B. point. When loss or delay occurs, primary responsibility for tracing rests with the customer. When there is LOSS or APPARENT VISIBLE DAMAGE to a shipment, when tendered for delivery, **DO NOT** give the carrier a clear receipt. Note such damage on the carrier's delivery receipt and **HAVE THE DRIVER SIGN THE RECEIPT.**

**PRODUCT REVISIONS:** AMT reserves the right to discontinue, change or improve its products or any portions thereof without being obligated to provide such a change or improvement for units sold and/or shipped prior to such a change or improvement.

**LEAD TIME:** Products designated "Quick Ship Product", also referred to as "QSP" will normally be shipped within 24 hours of receipt of a non-cancellable purchase order. Only limited quantities of "QSP" pumps are available.

**STANDARD LEAD TIME:** Lead time is two weeks for all non "QSP" product. AMT reserves the right to revise lead times as required due to availability of materials and all other causes beyond our control.

**VIP SHIPMENT:** Select AMT and IPT branded pumps are available for next day shipment for non-QSP (Quick Ship Products) items and subjected to a specific model surcharge per unit noted in the respective price book. Requires calling for availability, confirmation and a non-cancellable purchase order or credit card payment prior to shipment. The expedited shipping charges are an additional cost added separately from the VIP charges per item. AMT reserves the right to revise lead times as required due to availability of materials and all other causes beyond our control. QSP quantities are limited as determined by AMT.

ALL purchase orders must be submitted via hard copy sent to AMT customer service department by fax, EDI or e-mail.

**RETURN GOODS POLICY:** Goods shall not be returned without a return goods authorization number (RGA) issued by AMT customer service. The RGA number must be listed on the packing list. Only current model and part numbers with a valid date code may be returned (within one year from date of purchase). **A 20% restocking and packaging charge will apply to all returns. All shipping charges must be pre-paid. No exceptions.**

**ORDER CHANGES BY CUSTOMER:** Orders in process may not be changed except with written consent and may be subject to special charges.

## 12 Month Limited Warranty

### EXTENT AND DURATION OF LIMITED WARRANTY

**Coverage:** American Machine & Tool Company (herein "AMT") or IPT Pumps by Gorman-Rupp (herein "IPT") or Gorman-Rupp Industries Division of The Gorman-Rupp Company, Patterson, or the Gorman-Rupp Company (herein referred to as "G-R Unit") each individually warrants that its products and parts shall be free from defects in material and workmanship for twelve (12) months from the date of purchase by the original end user when installation is made and maintenance is performed in accordance with G-R Unit's recommendations. Wear and tear resulting from use and items normally consumed in use are not covered.

### EXCEPTIONS

( A ) This Limited Warranty shall not apply to mechanical seals in AMT or IPT pumps and the following products and parts: engines, motors, trade accessories and all other products, components, parts and materials not manufactured by the G-R Units. These items may, however, be covered by the warranties of their respective manufacturers. ( B ) This warranty does not extend to or apply to any unit which has been repaired or altered at any place other than by a G-R Unit, or by persons not expressly approved by a G-R Unit to make repairs or alterations, nor to any unit the serial number, model number or identification of which has been removed, defaced or altered. ( C ) This warranty does not extend to any product manufactured by a G-R Unit, which has been subjected to mis-use, neglect, accident, improper installation, or use in violation of instructions furnished by a G-R Unit. ( D ) Pump Kits: This warranty does not extend to any product sold by a G-R Unit unassembled as a Pump Kit. Pump Kits are warranted against defects in material and workmanship for 60 days from the date of shipment from a G-R Unit. Any Pump Kit parts deemed defective by a G-R Unit will be replaced free of charge within 60 days of shipment. Pump Kits are not returnable for credit.

### LIMITATIONS

**THE G-R UNITS' SOLE AND EXCLUSIVE WARRANTY WITH RESPECT TO THEIR PRODUCTS AND PARTS IS THIS LIMITED WARRANTY. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS AND/OR IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.**

### EXCLUSIVE REMEDY AND DAMAGES

The sole and exclusive remedy for breach of this Warranty by a G-R Unit and the entire extent of its liability for such breach or for damages arising from the use of the products and parts covered under this Limited Warranty, shall be as follows:

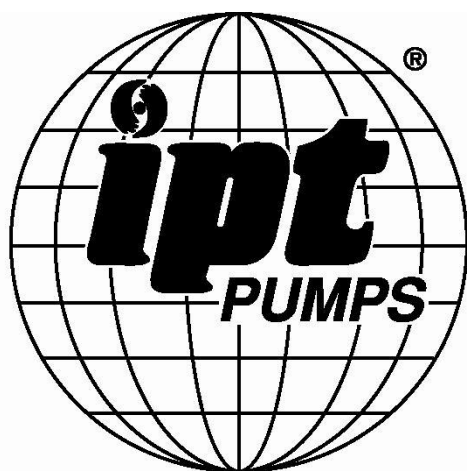
- Repair or Replacement:** If inspection shows that any G-R Unit product or part covered under this Limited Warranty is defective in materials or workmanship, the G-R Unit shall repair or replace the defective or non-conforming product or part without charge, whichever the G-R Unit chooses. You must have properly maintained and used the product or part claimed to be defective in accordance with the maintenance schedule or manual, which comes with the product. No allowance will be made for labor, installation, removal, transportation or other charges incurred by you in connection with such repair or replacement.
- To obtain the above remedy:
  - Immediately notify the G-R Unit upon discovery of the claimed defect in materials or workmanship and provide the serial number or date code of the product and/or part(s) or provide the G-R Unit with the invoice or bill of sale referencing the product by no later than the expiration date of the warranty period.
  - The G-R Unit will advise whether inspection will be necessary and how whether repair or replacement will be made. If inspection by the G-R Unit is necessary, the pump or defective part must be sent freight pre-paid to the G-R Unit. Return shipment will be F.O.B. the G-R Unit's plant.
  - Return Goods Authorization Requirement:** No product will be accepted for return or replacement without the prior written authorization of the G-R Unit. Upon such authorization, and in accordance with instructions from the G-R Unit, the product will be returned to the G-R Unit, shipping charges prepaid by the Buyer.
- Damages:** The G-R Unit's liability for damages for breach of this Limited Warranty shall not exceed the amount of the purchase price of the product or part(s) in respect to which Such damages are claimed. **IN NO EVENT SHALL THE G-R UNITS BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES FOR BREACH OF THIS LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.





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