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.

# CENTRIFUGAL PUMPS

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

AMT® A Gorman-Rupp Company

## DESCRIPTION

AMT Heavy Duty Solids Handling Centrifugal pumps are suited for liquid and chemical transfer, recirculation, booster service, dirty water and other industrial applications. Stainless steel units are especially effective in applications where rust and/ or corrosion can develop in systems. Pumps are designed to handle liquids with solids content or dissolved solids and debris. Semi-open impeller features self-cleaning ability that makes the unit useful in applications involving up to 1/4” diameter solids and muddy or dirty liquids

A mechanical seal (comprised of carbon, ceramic and stainless steel components) isolates motor shaft from liquid being pumped. Discharge port on pump casing can be rotated in 90° increments with vent and drain plugs for all positions. Buna seals handle liquids from 40° to 180° F (4° to 82° C).Viton® seals handle liquids from 40º to 200º F(4º to 90º C) Maximum ambient temperature 104° F (40° C). Casing working pressure to 100 psi (689 kPa). These are manual units, no controls are supplied. For use with nonflammable, non-abrasive liquids compatible with pump component materials.

## INSTALLATION

Flooded Suction: Net Positive Suction Head Required (NPSHR). Curve with NPSHR available at www.amtpump.com.

1. Problems will arise in operation of this pump unless the recommended NPSHR is supplied to the pump (See “Troubleshooting”chart in 1808-634- 00 manual).
2. Salt Water Usage: Because of crystallization and erosive material on the shaft seal (Ref. Nos. 9, 10), we recommend installation of seal-wash hose (Ref. No. 21). Using a wrench, remove the pipe plug (Ref. No. 20) from adapter (Ref. No. 18) and pipe plug (Ref. No. 15) from casing (Ref. No. 14) (remove pipe plug on the 3 o’clock position). Install optional seal wash hose.

**NOTE:** Applicable only with pumps having (A220-90) seal wash and hose installed or by ordering casing (Ref. #18) with optional seal wash and hose installation (A220-90).

## MAINTENANCE

**⚠WARNING**

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

### REMOVAL OF OLD SEAL

Refer to Figure 1 for seal location.

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

1. Remove fasteners (Ref. No. 6) that connect adapter (Ref. No. 3) to casing (Ref. No. 14).
2. Remove casing and 0-ring (Ref. No. 8).

**⚠ CAUTION**

***Care should be taken not to pinch or “shave” o-ring between adapter and casing.***

3. Using a wrench, remove impeller fastener, impeller seal (where applicable) and impeller (Ref. No. 12).

**IMPORTANT:** Care should be taken to ensure that the same number of shim washers (Ref. No. 11) are replaced behind impeller as were removed. These shim washers are located directly behind impeller. These washers as well as impeller key (Ref. No. 19) (where applicable) become loose as impeller is removed.

4. Seal head and shaft sleeve (Ref. No. 17) (where applicable) can now be pulled from shaft.
5. Pry seal seat from adapter.
6. Push seal head from shaft sleeve (where applicable).

### INSTALLATION OF NEW SEAL

**⚠ CAUTION**

***The precision lapped faces on shaft seal are easily damaged. Handle your replacement seal carefully.***

1. Thoroughly clean all surfaces of seal seat cavity.
2. Using a clean cloth, wipe shaft and shaft sleeve (where applicable) and make certain that they are perfectly clean.
3. Wet rubber portion of new seal seat with a light coating of soapy water. While wearing clean gloves or using a clean light rag, press seal seat squarely into adapter recess. Avoid scratching white ceramic surface. If seat will not position properly, place a cardboard washer over polished surface and use a piece of pipe to press in firmly, but gently
4. Dispose of cardboard washer. Check again to see that polished surface is free of dirt and all other foreign particles and that it has not been scratched or damaged.

# Centrifugal Pumps

5. Wet inside rubber portion of new seal head with a light coating of soapy water. Slide head onto shaft/shaft sleeve. Slide shaft sleeve with seal head onto motor shaft (where applicable). Seal head and seal seat will meet. Reinstall any shims that have been removed (See “Shim Adjustment” section).

**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.

6. Replace impeller key (where applicable) and impeller. Replace impeller seal (where applicable) before screwing impeller fastener in place.
7. Reassemble pump.
8. A short “run-in” period may be necessary to provide completely leak free seal operation.

**SHIM ADJUSTMENT**

When installing a replacement impeller (Ref. No. 12) or motor (Ref. No. 1), it may be necessary to adjust the number of shims (Ref. No. 11) to ensure proper running clearance between impeller and casing (Ref. No. 14).

Proceed as follows:

**NOTE:** A proper running clearance is less than 0.010”.

1. For impeller replacement, 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. Reassemble pump as described in steps 6 and 7. (See “Installation of New Seal” section).

**IMPORTANT:** Ensure that casing is snugly in place and check shaft to make sure it is turning freely (rotate impeller by impeller fastener, Ref. No. 13 with a wrench). If it turns freely, check to ensure that adapter (Ref. No. 3) and casing are fitted metal-to-metal where they meet on outside. If they are not metal-to-metal, tighten fasteners (Ref. No. 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.

# Centrifugal 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***

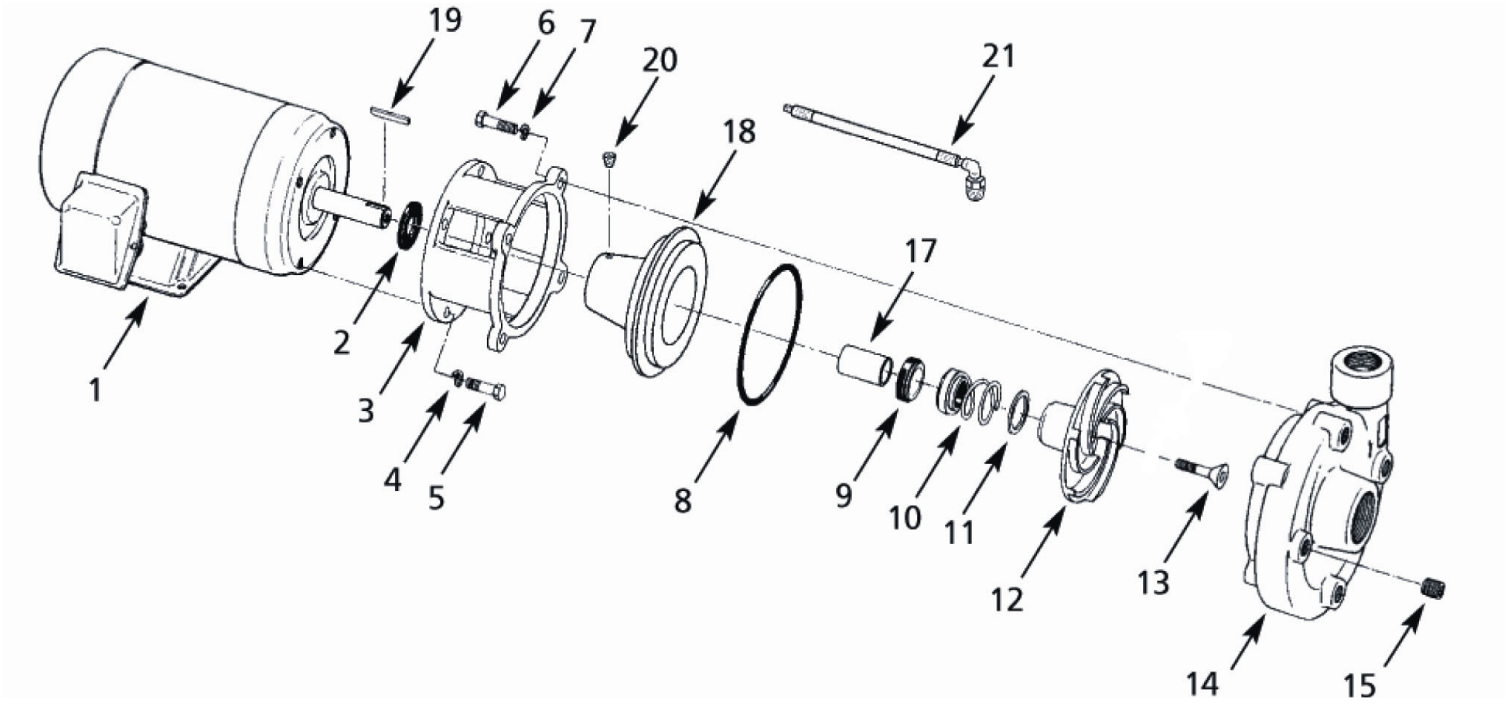


Figure 1 - Repair Parts Illustrations

## Repair Parts List

| Ref. No. | Description | Part Number for Models: 3156 3157 2HP | 315A 315B 3HP | 3150 2HP | 3151 3HP | 315E 3152 5HP | Qty. |
|---|---|---|---|---|---|---|---|
| 1 | Motor - 1 Phase TEFC | 1626-305-00 | 1626-306-00 | - | - | 1626-078-00 | 1 |
| | Motor - 3 Phase TEFC | 1627-311-00 | 1627-312-00 | 1627-350-00 | 1627-351-00 | 1627-352-00 | |
| 2 | Slinger Washer | N/A | N/A | 1470-093-00 | 1470-093-00 | 1470-093-00 | 1 |
| 3 | Adapter - Cast Iron | 4890-030-01 | 4890-030-01 | 3150-033-00 | 3150-033-00 | 3150-033-00 | 1 |
| | Adapter - Stainless Steel | 4890-031-98 | 4890-031-98 | 3150-033-00 | 3150-033-00 | 3150-033-00 | |
| 4 | Washer | * | * | * | * | * | 4 |
| 5 | Fastener | * | * | * | * | * | 4 |
| 6 | Fastener | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | 4 |
| 7 | Washer | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | 4 |
| 8 | O-Ring | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | 1 |
| 9,10 | Shaft Seal Assembly | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | 1 |
| 11 | Impeller Shim Kit | 1806-044-90 | 1806-044-90 | 1664-000-90 | 1664-000-90 | 1664-000-90 | 1 |
| 12 | Impeller | 3156-011-00 | 3156-010-00 | 3150-013-00 | 3151-013-00 | 3152-013-00 | 1 |
| 13 | Impeller Fastener | 1784-001-00 | 1784-001-00 | 1759-003-00 | 1759-003-00 | 1759-003-00 | 1 |
| 14 | Casing - Cast Iron | 3156-001-95 | 3156-001-95 | 3150-001-95 | 3150-001-95 | 3150-001-95 | 1 |
| | Casing - Stainless Steel (includes Ref. Nos. 6, 7 14 and 15) | 3156-001-98 | 3156-001-98 | 3150-003-98 | 3150-003-98 | 3150-003-98 | |
| 15 | Pipe Plug | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | 4 |
| 17 | Shaft Sleeve | - | - | 1555-142-00 | 1555-142-00 | 1555-142-00 | 1 |
| 18 | Casing Cover - Cast Iron | - | - | 3150-025-09 | 3150-025-09 | 3150-025-09 | 1 |
| | Casing Cover - Stainless Steel | - | - | 3150-023-09 | 3150-023-09 | 3150-023-09 | |
| 19 | Impeller Key | - | - | 1471-030-00 | 1471-030-00 | 1471-030-00 | 1 |
| 20 | Pipe Plug (optional for seal wash) | * | * | * | * | * | 1 |
| 21 | Hose (optional for pumps w/ seal wash) | 4261-170-00 | 4261-170-00 | 4261-170-00 | 4261-170-00 | 4261-170-00 | 1 |
| KIT | Seal Kit - Buna N (standard Cast Iron) | 3156-300-94 | 3156-300-94 | 3150-300-94 | 3150-300-94 | 3150-300-94 | 1 |
| | Seal Kit - Buna N & Sil. Carb. (optional) | 3156-300-93 | 3156-300-93 | 3150-300-93 | 3150-300-93 | 3150-300-93 | 1 |
| | Seal Kit - Viton (standard Stainless Steel) | 3156-300-91 | 3156-300-91 | 3150-300-91 | 3150-300-91 | 3150-300-91 | 1 |
| | Seal Kit - Viton & Sil. Carb. (optional) | 3156-300-92 | 3156-300-92 | 3150-300-92 | 3150-300-92 | 3150-300-92 | 1 |
| | Seal Kit - EPR-EPDM (optional) (includes Ref. Nos. 8, 9 and 10) | - | - | 3150-300-96 | 3150-300-96 | 3150-300-96 | 1 |

(*) Standard hardware item, available locally.

## Repair Parts List

| Ref. No. | Description | Part Number for Models: 4264 4260 7.5HP | 4242 4240 7.5HP | 4265 4261 10HP | 4253 4250 10HP | 4251 15HP | Qty. |
|---|---|---|---|---|---|---|---|
| 1 | Motor - 1 Phase TEFC | 1626-079-00 | 1626-079-00 | 1626-080-00 | 1626-080-00 | - | 1 |
| | Motor - 3 Phase TEFC | 1627-353-00 | 1627-353-00 | 1627-354-00 | 1627-354-00 | 1627-355-00 | |
| 2 | Slinger Washer | 1470-093-00 | 1470-093-00 | 1470-093-00 | 1470-093-00 | 1470-093-00 | 1 |
| 3 | Adapter | 3150-033-00 | 4252-033-00 | 3150-033-00 | 4252-033-00 | 4252-033-00 | 1 |
| 4 | Washer | * | * | * | * | * | 4 |
| 5 | Fastener | * | * | * | * | * | 4 |
| 6 | Fastener | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | 4 |
| 7 | Washer | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | 4 |
| 8 | O-Ring | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | 1 |
| 9,10 | Shaft Seal Assembly | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | Incl. w/ Ref KIT | 1 |
| 11 | Impeller Shim Kit | 1664-000-90 | 1664-000-90 | 1664-000-90 | 1664-000-90 | 1664-000-90 | 1 |
| 12 | Impeller | 4260-013-00 | 4240-013-00 | 4261-013-00 | 4250-013-00 | 4251-013-00 | 1 |
| 13 | Impeller Fastener | 1761-002-00 | 1759-003-00 | 1761-002-00 | 1759-003-00 | 1757-005-00 | 1 |
| 14 | Casing - Cast Iron | 4260-001-95 | 4240-001-95 | 4260-001-95 | 4250-001-95 | 4250-001-95 | 1 |
| | Casing - Stainless Steel (includes Ref. Nos. 6, 7 14 and 15) | 4260-003-98 | 4240-003-98 | 4260-003-98 | 4250-003-98 | 4250-003-98 | |
| 15 | Pipe Plug | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | Incl. w/ Ref 14 | 4 |
| 17 | Shaft Sleeve | 1555-142-00 | 1555-142-00 | 1555-142-00 | 1555-142-00 | 1555-142-00 | 1 |
| 18 | Casing Cover - Cast Iron | 3150-025-09 | 4240-025-00 | 3150-025-09 | 4240-025-00 | 4240-025-00 | 1 |
| | Casing Cover - Stainless Steel | 3150-023-09 | 4240-023-00 | 3150-023-09 | 4240-023-00 | 4240-023-00 | |
| 19 | Impeller Key | 1471-030-00 | 1471-030-00 | 1471-030-00 | 1471-030-00 | 1471-030-00 | 1 |
| 20 | Pipe Plug (optional for seal wash) | * | * | * | * | * | 1 |
| 21 | Hose (optional for pumps w/ seal wash) | 4261-170-00 | 4261-170-00 | 4261-170-00 | 4261-170-00 | 4261-170-00 | 1 |
| KIT | Seal Kit - Buna N (standard Cast Iron) | 3150-300-94 | 4240-300-94 | 3150-300-94 | 4240-300-94 | 4240-300-94 | 1 |
| | Seal Kit - Buna N & Sil. Carb. (optional) | 3150-300-93 | 4240-300-93 | 3150-300-93 | 4240-300-93 | 4240-300-93 | 1 |
| | Seal Kit - Viton (standard Stainless Steel) | 3150-300-91 | 4240-300-91 | 3150-300-91 | 4240-300-91 | 4240-300-91 | 1 |
| | Seal Kit - Viton & Sil. Carb. (optional) | 3150-300-92 | 4240-300-92 | 3150-300-92 | 4240-300-92 | 4240-300-92 | 1 |
| | Seal Kit - EPR-EPDM (optional) (includes Ref. Nos. 8, 9 and 10) | 3150-300-96 | - | 3150-300-96 | - | - | 1 |

(*) Standard hardware item, available locally.

**NOTES:**

A Gorman-Rupp Company

**AMT Pump Company**
**(herein "AMT")**
**400 Spring Street**
**Royersford, PA 19468**
**Phone: (610) 948-3800**
**Fax: (610) 948-5300**
**www.amtpump.com**

BY GORMAN-RUPP®

## 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:** AMT Pump Company (herein "AMT") or IPT Pumps by Gorman-Rupp (herein "IPT") or Gorman-Rupp Industries Division of the 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:

1. **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.
2. To obtain the above remedy:
   A. 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.
   B. 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.
   C. **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.

3. **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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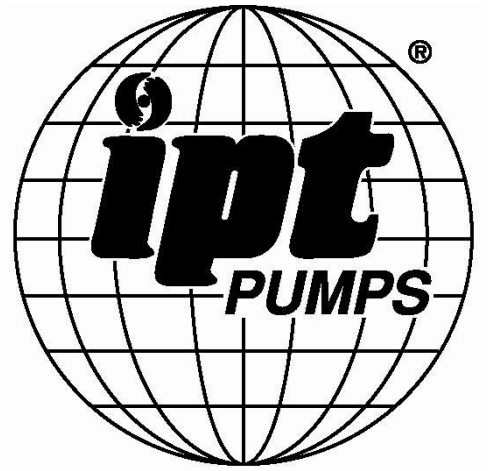


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