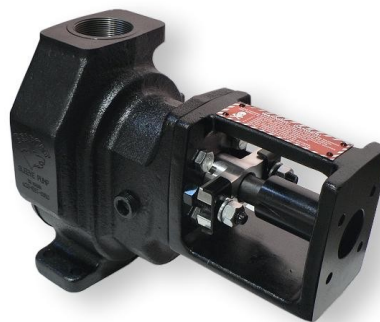


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## **INTRODUCTION**

This manual deals exclusively with the 110/170 series Product Pumps. Included in this manual are most general issues pertaining to this pump. For special applications not covered in the manual, please refer to the factory or authorized service personnel.

### **DANGER**

Before servicing the Pump liquid chamber or Relief Valve ensure that:

- Pressure inside pump has been completely vented through appropriate openings or connections.
- The drive system has been locked out so that it cannot be started while work is being done on the pump.
- Sufficient time has expired for the liquid to cool sufficiently inside the pump. Observe any Material Safety Data Sheets (MSDS) for the liquid to be sure these precautions are understood.

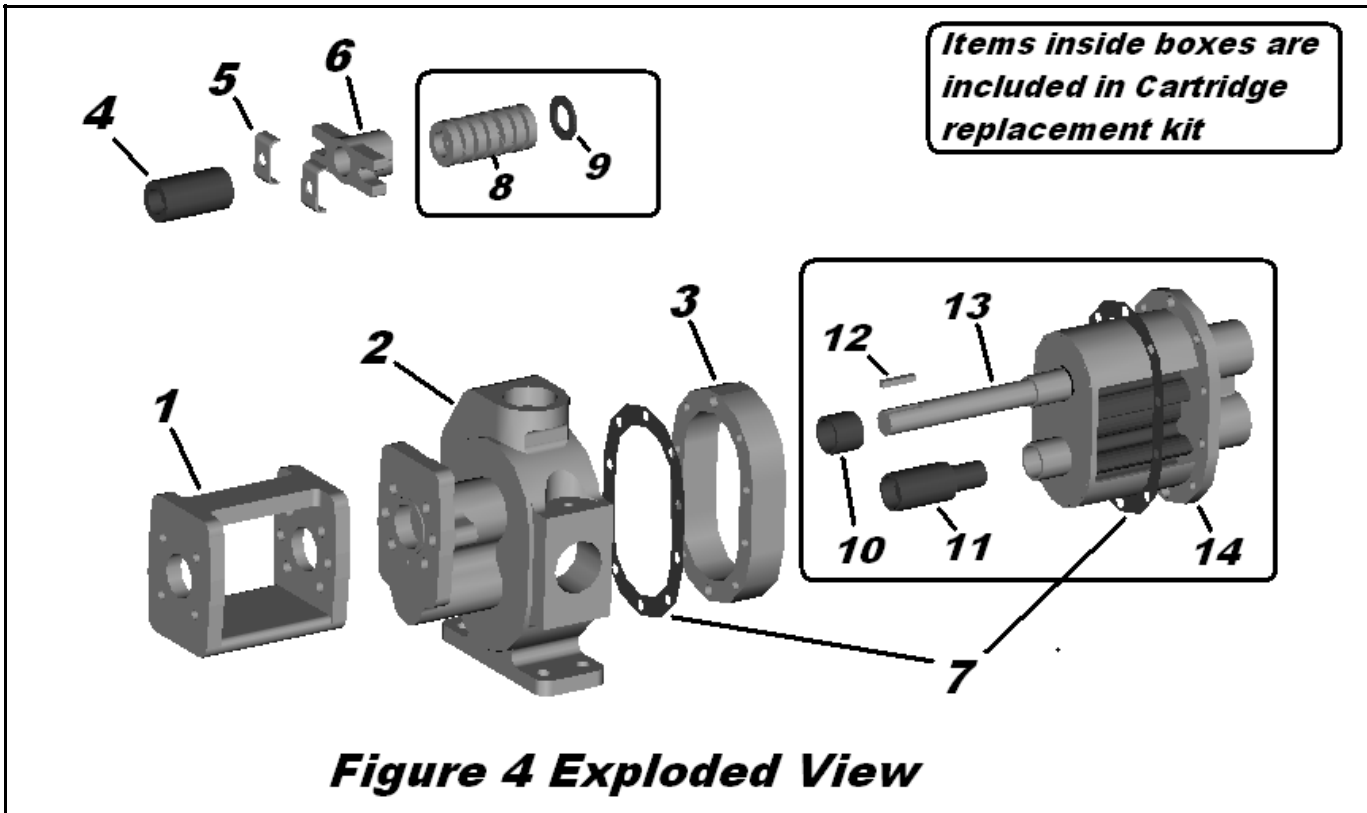
Failure to follow the above listed precautionary measures may result in injury or death.

### **PACKING**

Periodic service of the packing seal can improve pump performance as well as extend service life.

#### Packing Replacement:

1. Remove Clips and Gland.
2. Remove old packing. (Use a packing hook, or T-handle cork screw tool). Be sure to remove ALL packing.
3. Install new packing one at a time. Stagger the split of each ring at 180° intervals. Lubricate the rings with oil or grease to aid in assembly. A length of pipe or tubing will help in seating the packing rings.
4. Install the Packing Gland and Nuts. The gland must enter the stuffing box at least one-eighth of an inch after tightening the Packing Gland Nuts. Be sure the glands are tightened evenly. Tighten Packing Nuts to about 1-1/2 turns past figure tight. DO NOT over tighten; further adjustment should be done while pump is operating.



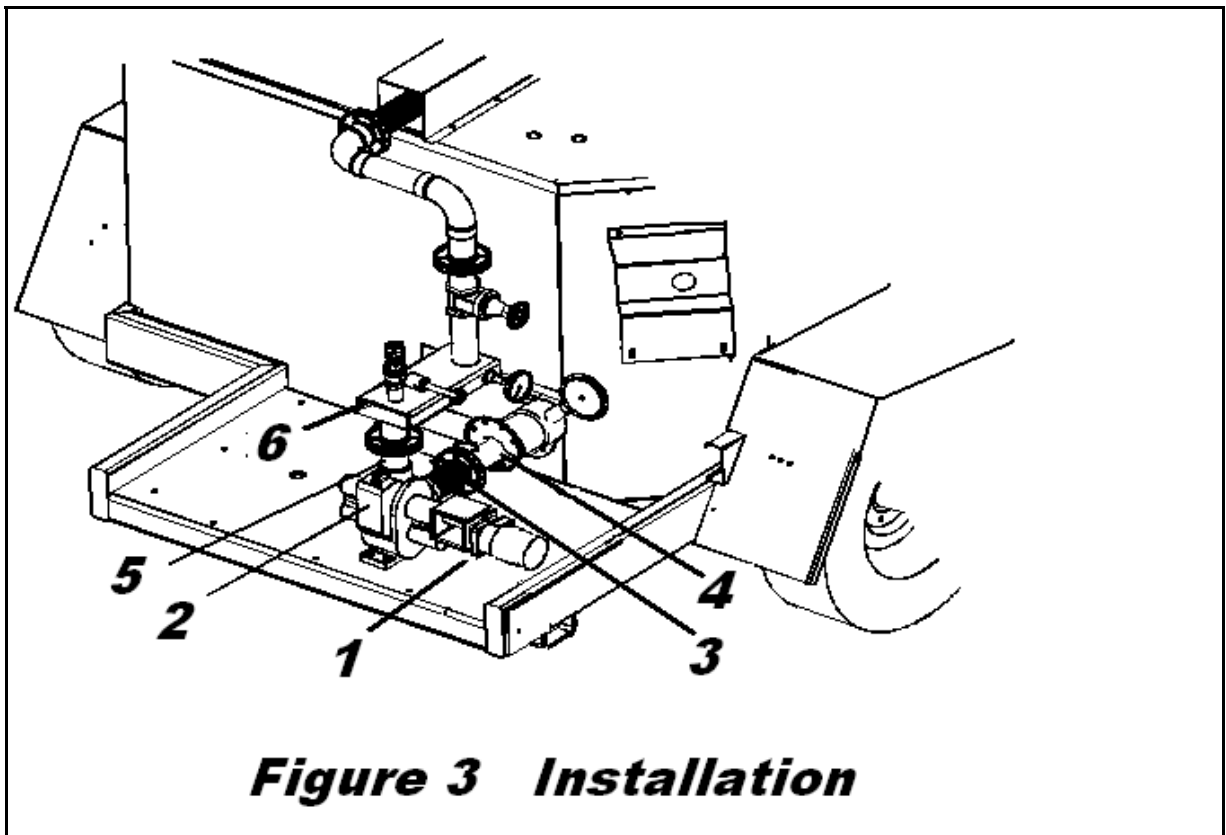
Note: The diagram above shows the cartridge version. A standard version pump will not include the cartridge sleeve as shown in the diagram.

| Item | Description          | Part Number | Item | Description            | Part Number |
|------|----------------------|-------------|------|------------------------|-------------|
| 1    | Motor Mount          | BRK-74015   | 9    | Packing Washer         | BRK-74020   |
| 2    | Housing              | HSG-74050   | 10   | Thru Bushing           | *Kit        |
| 3    | Extension Housing    | HSG-74950   | 11   | Fixed Bushing          | *Kit        |
| 4    | Coupling             | PTM-74017   | 12   | ½ SQ Drive Key         | N/A         |
| 5    | Clips, Gland         | BRK-74016   | 13   | Drive Shaft, Extended  | *Kit        |
| 6    | Packing Gland        | BRK-74013   | 14   | Cartridge              | *Kit        |
| 7    | Gasket, End Plate    | *RNG-79992  | 15   | Cartridge Kit Assembly | CART-120855 |
| 8    | Packing Set (7-Ring) | *SET-72059  |      |                        |             |

Part Numbers with (\*) are included as a kit with item (15)

## INSTALLATION PROCEDURE

1. Disconnect hydraulic motor (1) from Pump (2). Hydraulic hoses do not need to be removed. Set assembly aside.
2. Inside the cabinet, unbolt flex hose (3) from outlet tee (4). And then unbolt flange adapter (5) from plumbing manifold (6).
3. After unbolting the material pump (2) from the cabinet floor, the pump should be loose and come out of the cabinet. Remove flex hose (3) and flange adapter (5) from existing pump and reinstall on new pump.
4. Older machines may have a hydraulic motor mount plate welded to the frame. If this is the case, remove by using a cutting torch or hacksaw, making sure that there are no sharp edges left on the frame side of the melter.
5. Bolt the new pump to the cabinet floor and reconnect to the outlet tee (4) and plumbing manifold (6).
6. The pump hydraulic motor (1) will bolt to the material pump adapter. Make sure the key lines up with the coupling in the pump.



## Trouble Shooting

### Pump will not turn:

- Material is too cold - allow machine to heat longer. It is not uncommon that a machine heat one hour or more before pump will turn.
- Foreign debris locking gears - Reverse pump momentarily, resume forward. Repeat if necessary. If problem remains, the object will need to be removed by other methods - consult with factory
- Hydraulic failure - consult with factory

### Pumps turns but will not prime:

- Material is too cold - allow machine to heat.
- Line blocked - Inlet or outlet could be the cause. Reverse pump momentarily, resume forward. Repeat if necessary. If problem remains, the object will need to be removed by other methods - consult with factory
- Wore out pump - Replace.

### Packing leaks:

- Tighten packing until it leaks one drop per minute. DO NOT OVER TIGHTEN. Too tight will cause shaft seizure. A small material leak is necessary for lubrication.
- Gland is bottomed: Add packing ring. (Consult manufacturer for recommended packing).
- None of the above fix problem: Replace packing - Over time (6-12 months), the packing dries out and will need to be replaced.

### Pump wears prematurely:

- Operator control: There is a balance between good production and back pressure to the pump that is controlled by closing the “re-circulation” valve. The more this valve is closed down, the more volume and pressure will flow from the wand. Consequently, more pressure is imposed upon the pump. More pressure results in more wear. It is the operators’ responsibility to regulate this balance.
- Wand valve regulating: One method of production that has been used in the field is “Wand valve regulating” This is when an operator closes the “re-circulation valve” almost completely, and then controls the wand flow by partially opening his wand valve. It is a method that is NOT recommended or taught by the factory. It will place an abnormal amount of pressure on the pump.
- Set the “re-circulation valve”. Then open the wand valve **completely** when applying material.
- Application line blocked: If a practical partially blocks at some point in the application line, most likely the operator will compensate by further closing the “re-circulating” valve. The consequence is undue pressure to the pump to compensate for the line restriction. Reverse pump momentarily (with re-circulating valve closed and application valve open), resume forward. Repeat if necessary. If problem remains, the object will need to be removed by other methods - consult with factory
- Material: There can be a number of problems related to material that can cause premature pump wear.
  - Cheap material: Tends to have cheap filler such as tire rubber, silica (sand), etc.
  - Heated too long: Material filler can settle if it is heated too long or on consecutive days causing increase in viscosity and ultimately higher pumping pressure.
  - Storage: Storing material out of its box on the ground: Material will cure itself to rocks and debris which will then get tossed into tank.