

INSTALLATION, OPERATION AND MAINTENANCE MANUAL



MODEL NO(S). PH-48 & PH-72 PREHULLER

**BEELER
INDUSTRIES**

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IMPORTANT SAFETY INFORMATION

Before installing, operating or maintaining this machine you must **read** and **understand** the contents of this manual. Failure to do so may result in equipment damage, injury or death.

Antes de la instalación, funcionamiento o mantenimiento de este equipo debe **leer y comprender** el contenido de este manual. El no hacerlo puede resultar en daño al equipo, lesiones o la muerte.

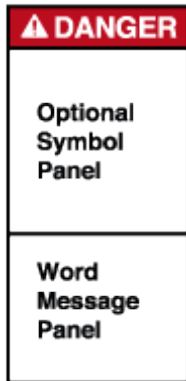
Safety Labels

Throughout this manual and on the machine, safety labels have been placed to bring attention to characteristics of this equipment that warrant particular awareness. There are potential hazards on any device and care should be exercised whenever installing, operating or maintaining any equipment.

Ensure that all original labels are maintained in good condition. In the event that labels are rendered illegible contact Beeler Industries for replacement labels.

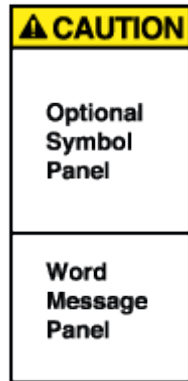
Lock Out / Tag Out

It is the user's responsibility to ensure that proper LOCK OUT / TAG OUT procedures are implemented throughout the facility. **Follow your facilities Lock Out/Tag Out procedures.** Prior to any maintenance, service or cleaning of any equipment it should be locked out and tagged out from all potential sources of energy (electrical, pneumatic, hydraulic, mechanical, etc.) Failure to do so will endanger the user and others and may lead to damage, severe injury or even death.



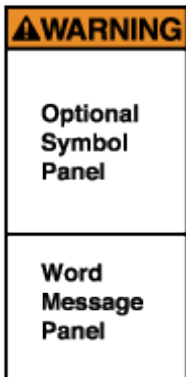
Danger:

Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.



Caution:

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



Warning:

Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

**Take the time to
be safe!**

TABLE OF CONTENTS

SECTION 1 - GENERAL INFORMATION

- 1-1 Introduction
- 1-2 Contacting Beeler Industries
- 1-3 Purpose and Scope
- 1-4 Receipt of Product
- 1-5 Precautions of Use and Installation

SECTION 2 - OPERATION AND MAINTENANCE

- 2-1 Operation and Adjustments
- 2-2 Lubrication

SECTION 3 - VIEWS AND PARTS LIST

- 3-1 Serial Number Location
- 3-2 Parts Location Drawing
- 3-3 Maintenance Record Sheet

SECTION 1

GENERAL INFORMATION

1-1 Introduction

Thank you for purchasing an LMC Prehuller. Your new prehuller is built to the highest industry standards. Great care has been taken to design and manufacture a high quality, low maintenance product that is economical to use and maintain.

This manual is intended to assist in the installation, operation and maintenance of your prehuller. The instructions in this manual are general in nature and apply to a variety of models. Each situation dictates the need for any special precautions, and it is the user's responsibility to ensure that adequate safety measures are employed in installation, operation and maintenance. As always, follow good safety practices around all equipment.

1-2 Contacting Beeler Industries

Beeler Industries, Incorporated

Mail: P.O. Box 380

Physical: 4664 Kiernan Court
Salida CA 95368

Main Office: (209) 545-0740

Sales: (209) 613-0407

Parts: (209) 545-0740

Service: (209) 613-0407

Fax: (209) 545-0768

email: customer@beelerindustries.com

Website: www.beelerindustries.com

1-3 Purpose and Scope

This manual provides installation, operation and maintenance procedures for standard prehuller. Due to variations in design and manufacture for unique customer needs, not all prehullers might be covered. For special assistance, please contact Beeler Industries Service for additional information.

1-4 Receipt of Product

All shipments should be immediately checked for proper product and quantity upon receipt and inspected for any visible defects or damage. Any discrepancies should immediately be reported to Beeler Industries and the freight provider. If installation is provided by Beeler Industries, this inspection may be performed by Beeler personnel.

1-5 Precautions of Use and Installation

1. Use only qualified personnel for installation and wiring of the prehuller. Personnel are required to be familiar with the general use of required tools for installation of this unit. Should you require assistance in the installation, Beeler Industries offers such a service. Please contact our Service Department for estimates and scheduling.
2. Lifting/moving/positioning: The prehuller may be lifted with a fork truck under the base angles. Secure prehuller to forks to prevent tipping. Move slowly and descend grades in reverse. When moving prehuller with crane use lifting straps and clevises on the four lift ears provided.
3. The standard motor specifications provided are listed in table 1.1 unless otherwise specified in the purchase contract. All wiring must be run in conduit and installed per local and state code by a qualified electrician. A manual electrical lock-out for maintenance must be provided by the owner prior to operation. Installations may include a customer provided variable frequency drive



MODEL	HP	V/F/PH	rpm
PH-48	15	230/460/60/3	1200
PH-72	20	230/460/60/3	1200

TABLE 1.1 MOTOR SPECIFICATIONS

SECTION 2

OPERATION & MAINTENANCE

2-1 Operation and Adjustment

The prehuller removes loose hulls from in-shell by impacting the hull with a rotating beater bar assembly called the porcupine. Removable grates below the porcupine allow product to pass through as it is hulled. Dust aspiration is achieved by connecting the dust extraction hood to the customer supplied air system.

Adjustment

There are two adjustable features on the prehuller, the grates and the porcupine to grate clearance.

Grates

The grates are available in three spacings and two styles. (see figure 2.1) To change grates follow these steps:

1. Lock out power per your facilities lock out tag out procedure.
2. Remove the grate access cover by flipping the red handled over-center clamps outward until the hold down bolt clears the cover edge. Grasp cover with both hands and slightly tip and pull back to slide the cover off of the grate support bars.
3. Grate support bars are held in position by the two levers on the sides of the machine near the grate access end. (see figure 2.3) These levers, depending on their adjustment, may bind the tops of the grate and hinder the grates movement. If this is the case, then push on the lever and lift the catch hook. Slowly remove pressure from lever allowing the support bar to sag.
4. The grates are approximately 24" long and are heavy. Slide the first grate outward approximately 18" (see figure 2.3) and with the help of an assistant lift the grate and pull out the remaining portion. Repeat for remaining grate(s). To access the second or third grate use rod with a hooked end to slide toward opening. Note that there is a spacer between the grate approximately 3/4" wide. (see figure 2.4) This spacer should be used between all grates and on both support bars.

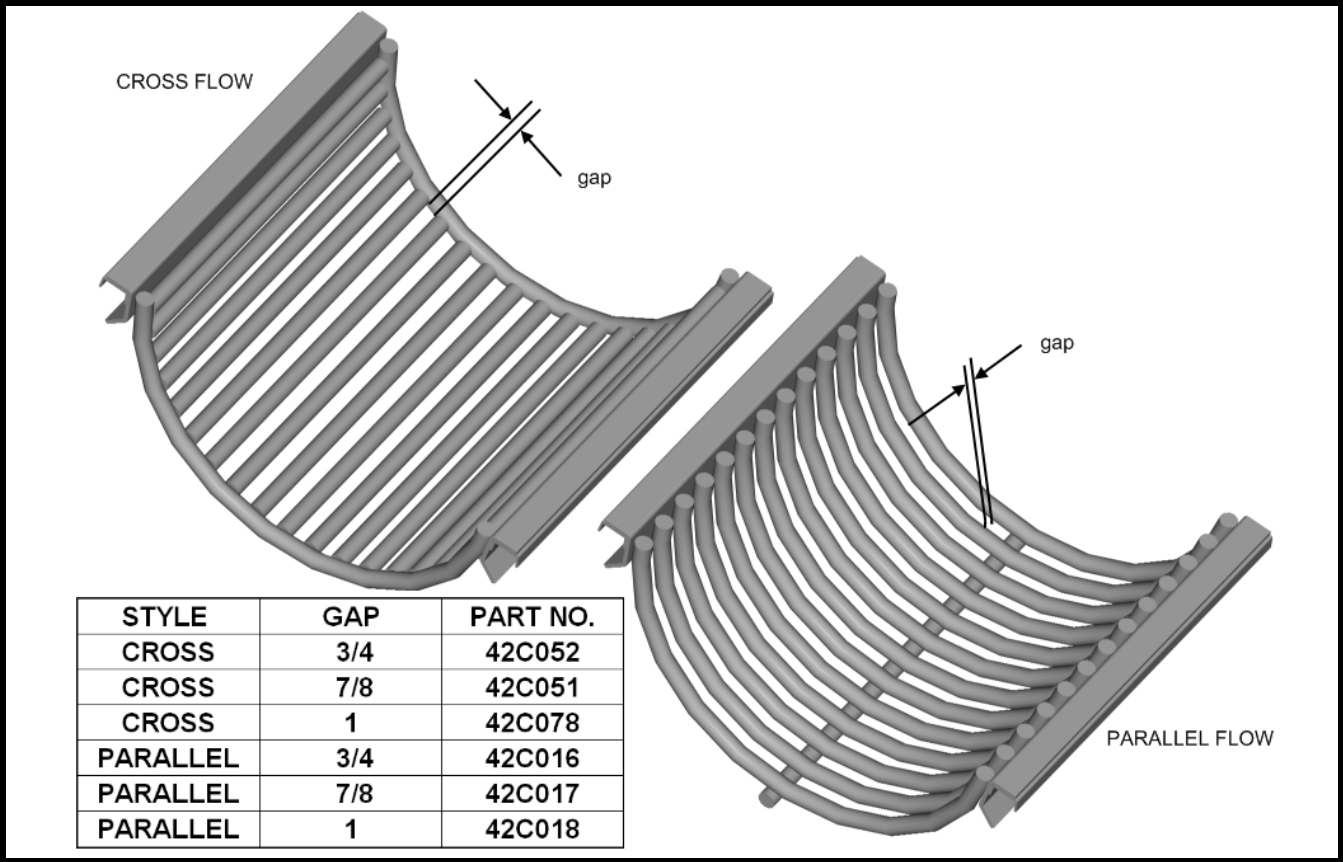


FIGURE 2.1 PREHULLER GRATES

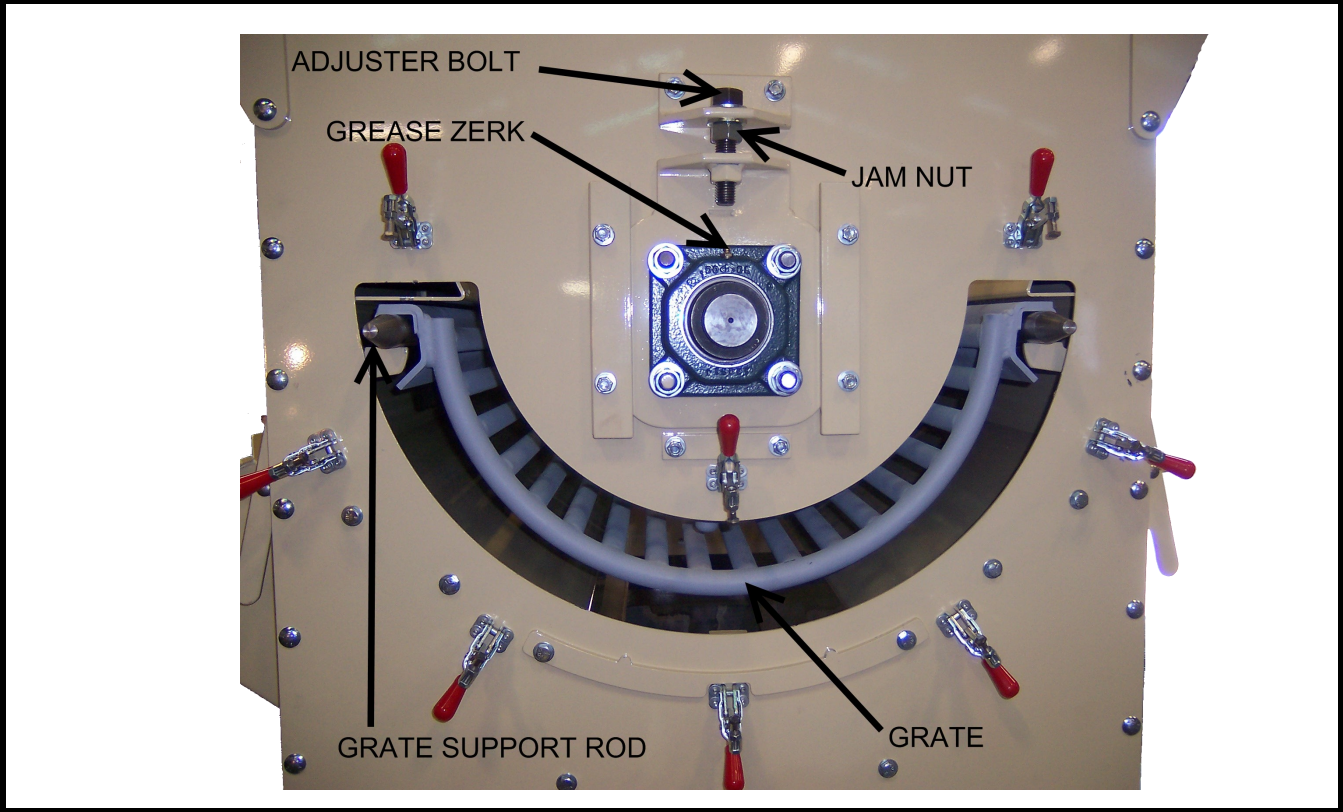


FIGURE 2.2 PREHULLER END WITH ACCESS COVER REMOVED



FIGURE 2.3 PREHULLER GRATE PARTIALLY REMOVED

Porcupine clearance

1. Lock out and tag out per your facilities procedure.
2. Remove belt guard cover on drive end.
3. Loosen four (4) motor mount nuts.
4. Turn motor adjuster bolts clockwise to loosen v-belts.
5. Remove v-belts.
6. Mark the location of the face of the driven sheave bushing on the porcupine shaft with a felt marker or scribe. This mark will be used to relocate the bushing during reassembly.
7. Remove 3 bolts in driven sheave bushing and screw them into the three threaded holes in the bushing. Once bolt ends make contact with sheave turn each bolt 1/2-1 turn alternately so that even pressure is applied to the bushing. This will extract the bushing from the sheave.
8. Remove bushing and sheave.
9. Repeat steps 6-8 for drive sheave.
10. Remove 5 belt guard backing plate retaining bolts and remove backing plate
11. Loosen 3/4" jam nut on bearing adjusters at each end of the

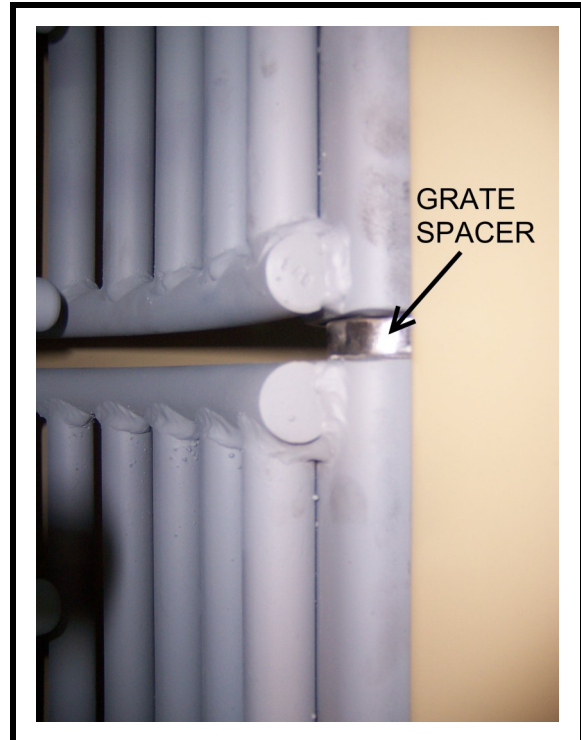
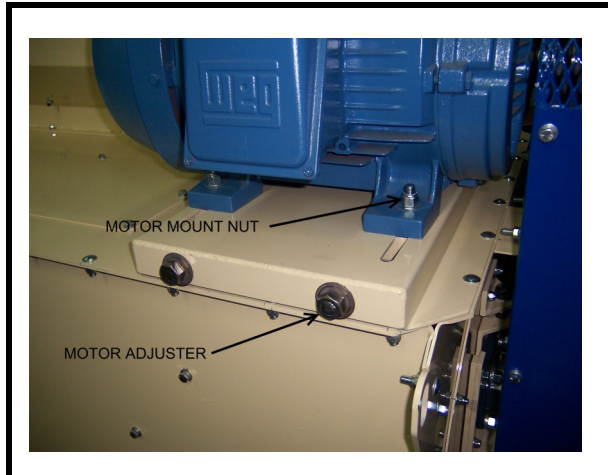
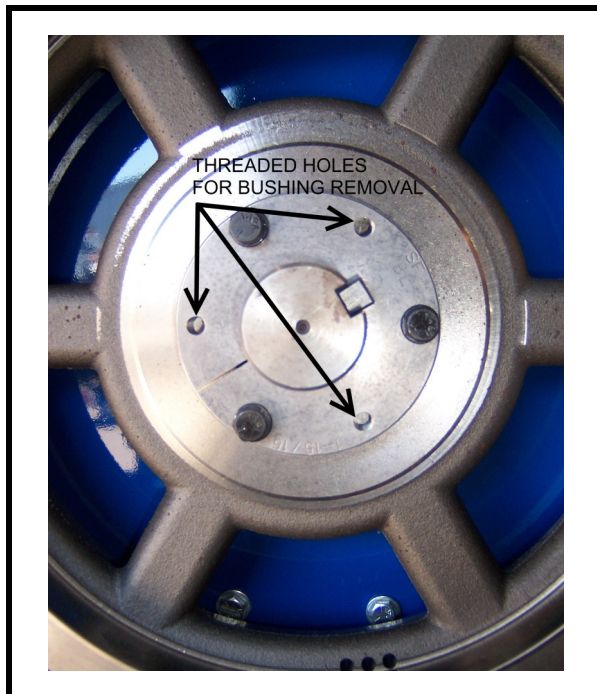
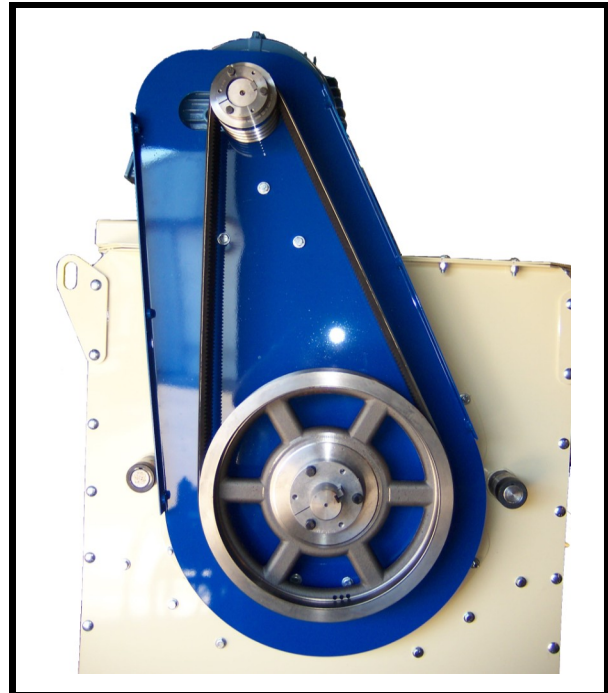


FIGURE 2.4 GRATE SPACER

machine.

12. Turn adjuster bolt clockwise to increase gap and counter clockwise to decrease gap. Measure gap from porcupine beater bar end pointing down to the grate surface. Ensure that the adjuster bolt is fully engaged in the nut welded to the bearing adjuster plate.
13. Check gap between bearing adjuster plate and adjuster bolt bracket on grate access end. Ensure that the gap on the drive end is the same.
14. Tighten jam nuts
15. Reinstall components in reverse order. Adjust v-belts so that approximately 3/8" deflection is achieved mid way between the sheaves by applying 10-12 lbs of force perpendicular to the belt.

**FIGURE 2.5 MOTOR MOUNT****FIGURE 2.6 BUSHING REMOVAL****FIGURE 2.7 V-BELT DRIVE**

2-2 Lubrication

1. Ball bearings equipped with grease (zerk) fittings should be manually lubricated with one half ($\frac{1}{2}$) pump of Food Grade NLGI 2 grease every one hundred twenty (120) hours of operation. Bearings without fittings should be replaced after five thousand (5000) hours of operation.

2-3 Repair Parts

Necessary repair and maintenance parts can be obtained through Beeler Industries directly by contacting our Parts Department at (209) 545-0740 or through your Beeler Sales representative. When ordering, please supply the nameplate serial number information located on the Beeler red tag secured to the frame of the Shear roll/cracker.

Refer to section 3-2 for part identifying / locating and for common part listing and order identification number. Contact our service department for required parts not identified on those pages.

3.1 SERIAL NUMBER LOCATION

It is important to have the serial number information when contacting Beeler Industries regarding service information or parts ordering. The number is stamped on the identification plate located per the illustration below.



FIG. 3J SERIAL PLATE LOCATIONS

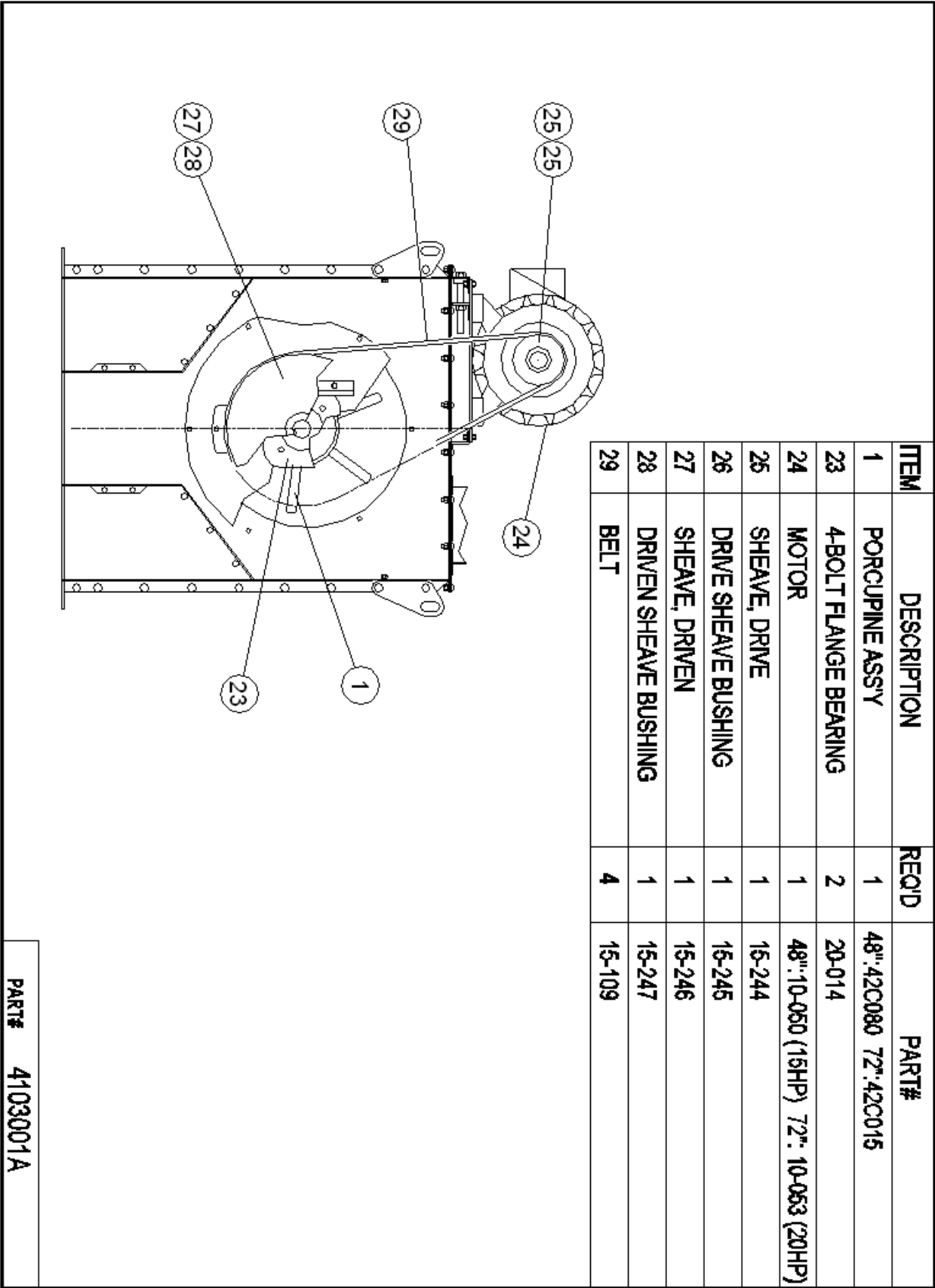


FIG. 3.2 PREHULLER ASSEMBLY

NOTES

[illegible]

Non-Liability

The information contained in this manual has been compiled by Beeler Industries with high diligence to ensure correct information.

Beeler Industries does not assume liability for eventually wrong conclusions and results arising from this. The notes given in the manual describe the most common fault reasons. But often there are further reasons for existing faults, which cannot be listed here, or there are further sources of error, which are unknown yet. Beeler Industries does not assume liability for failed or unnecessary repair work. Beeler Industries does not assume liability for appliance of data and information, which either turn out as wrong, were incorrectly described or faults, which by mistake appeared during data compilation. Without restriction of the above mentioned facts, Beeler Industries does not assume liability for any loss regarding profits, company value or any other, also economic, loss arising from this.

No matter which legal justifications are present, Beeler Industries is liable for compensation only in case of intention, gross negligence and in warranty of assured quality. Warranties of assured qualities require the explicit written statement.

Liability according to product liability law shall remain unaffected. Beeler Industries reserves the right of user's contributory negligence argument. Beeler Industries is not liable to pay compensation for damages, which arise from misuse of the subject matter of the contract, even if Beeler Industries has been informed on the possibility of this damage. The liability of Beeler Industries is confined to the real price paid for the product. Beeler Industries takes no liability for damage or operating troubles arising from non-compliance of this user manual and the special safety precautions mentioned there. The burden of proof is on the user of the device, that he has paid attention to technical explanations, notes on operation, equipment care as well as maintenance and safety without exception. This non-liability does not hold, if any damage from

injuries of body or health is based on deliberate or careless delinquency of Beeler Industries.