Pear Roll Orientor

Installation, Operation, and Maintenance

7590.0093 April 13, 2026, Rev. -

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About This Manual

Warranty Language: The contents of this manual, whether in whole or in part, do not constitute any express or implied warrant with respect to any products of Atlas Pacific.

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Intended Use

The Pear Roll Orientor is intended to be use with the Standard Pear Machine in feeding, orienting, peeling, coring, and slicing fresh pears in a cannery plant environment. Any use other than specified is not recommended. Such use could injure workers and damage the machine.

EC Declaration of Conformity

(According to Annex II A of the Machinery Directive)

We: Atlas Pacific
7304 South Joliet St.
Suite #300
Centennial, Co. 80112 USA

declare, under sole responsibility, that the following products:

Model	Designation
2023.8000.50	Pear Roll Orientor 50Hz
2023.8000.60	Pear Roll Orientor 60Hx
Product Description	A system that feeds, orients, peels, cores, and slices pears.

to which this declaration refers, meet the essential health and safety requirements put forth in Annex I of Directive 2006/42/EC, Low Voltage Directive 2006/95/EC, and in the requirements of EMC Directive 2014/108/EC.

The following harmonized standards were used to ensure full implementation of the above directives:

EN ISO 12100:2010	Safety of machinery – general principles for design – Risk assessment and risk reduction
EN 60204-1:2006 + AC:2010 + AI:2009	Safety of machinery – Electrical equipment of machinery – Part 1, General requirements.
EN ISO 14120	Safety of machinery – Guards – general requirements for the design, construction and selection of fixed and movable guards
IEC EN 61000-4-2	Electrostatic discharge
IEC EN 61000-4-3	Radiated RF immunity
IEC EN 61000-4-4	Electrical fast transient/burst
IEC EN 61000-4-5	Surge immunity
IEC EN 61000-4-6	Conducted RF immunity
IEC EN 61000-4-8	Power frequency H-field immunity
IEC EN 61000-4-11	Voltage dips and interrupts

The CE marking has been affixed on the device according to article 16 of the EC Directive 2006/42/EC to indicate conformity to the standards listed above.

Representative authorized to compile the technical specification file:

Atlas Pacific
Via Gadames
Milan, Itlay
Attn: Managing Director

John Renz 05/21/2026

John Renz Date
Director of Engineering
Gulftech

Contacting Atlas

We are here to help. Contact us for any reason, including:

- To ask a question
- To get help with troubleshooting
- To report missing or damaged items
- To order OEM replacement parts

You can contact us through our website www.atlaspacific.com/contact-us.

Global Sales + Service	**Tel:** +1 720-750-6111 **Fax:** +1 720-389-5133 **Email:** sales@atlaspacific.com 7304 S. Joliet Street, Suite 300 Centennial, CO 80112 USA
Customer Service	**Tel:** +1 720-750-6111 ext-710 **Email:** AtlasOrdersMailbox@atlaspacific.com

Service and Support

Atlas Pacific Engineering leases the pear orienting equipment. As a part of the leasing contract, you may request Atlas Pacific to provide personnel to support start-up.

The sales and service representative can support members of your plant operations and maintenance team during the initial layout, installation, and start-up of the equipment. As part of your negotiated service contract, the service representative will coordinate with plant personnel to ensure maximum efficiency and safe operations of equipment provided by Atlas Pacific.

The service representative can assist in installing new equipment, installation inspections, and training plant personnel. The service representative can also assist supervisors and mechanics in troubleshooting, making repairs, conducting off-season refurbishing, and ordering replacement parts.

WARNING
Read and understand the Safety (page 10) guideline section of this manual before you attempt to operate or maintain the Pear Roll Orientor (PRO). Failure to do so may result in personal injury.

Installation and Inspection

The service representative can support the initial installation, inspection, and adjustment of the equipment. Thereafter, a daily visual inspection is required and is conducted by the designated plant personnel.

Training

The service representative can assist in training operations and plant personnel who work on the Pear Roll Orientor (PRO) equipment.

Shift Mechanic

The shift mechanic performs maintenance and repair of the PRO may include:

- Providing troubleshooting and required repairs, maintenance, or adjustments.
- Refurbishing parts and cutting mechanisms.
- Conducting preventive maintenance during the off-season.
- Tracking spare parts.

Shift mechanics should receive thorough training in machine service techniques as provided in the Atlas Pacific Engineering Operations and Service documentation. Mechanics may also have special training and certification in electrical maintenance and repair. Most repairs and adjustments to the PRO should be conducted only by trained mechanics or an Atlas Pacific Engineering Service Representative.

- Any electronic repairs or adjustments should be completed under Atlas Pacific service supervision.

WARNING
Read and understand the Safety (page 10) guidelines section of this manual before you attempt to operate or maintain the Pear Roll Orientor (PRO). Failure to do so may result in personal injury.

Shift Operator

The shift operator must be trained to monitor operations of the PRO and report equipment or process problems. In some instances, after receiving the appropriate training, the operator may be required to fix the problem. These instances may include:

- Check and reset emergency stop or guard devices in the event of a shut down or if the PRO does not start.
- Clear blockages at times when the shaker pan lanes overflow or when lanes are blocked.
- Shut down the equipment if orientation deficiency occurs or if an emergency exists.

WARNING
Do not attempt to clear a blockage while the machine is running. **SHUT DOWN** the machine first before clearing any blockages. **Failure to do so may result in personnel injury**.

The shift operator also supports the sanitation and lubrication crews by ensuring proper start-up and shut-down status during their operations.

General

Introduction
The Atlas Pacific Engineering Pear Roll Orientor (PRO) is designed for efficient automatic feeding of the standard pear peeling machine. The PRO is mounted directly above and is driven by the pear machine. All appropriate safety covers and devices are provided to ensure the protection of operating and maintenance personnel. Simplicity of design and use of non-lubricated bearing materials have been combined to provide our customers with an extremely reliable, low maintenance, automatic feeding system.

This manual covers all the necessary information required for safe operation, field installation, and maintenance.

PRO Pear Feed Requirements

For optimum PRO feeding efficiency to the pear peeler, it is essential that an adequate quantity of pears be available when required. The delivery of pears into the shaker feeder pan is covered in the Adjustments (page 42) section of this manual.

When a common pear feed conveyor, (merry-go-round) system is employed for a line a pear peeler the quantity of pears supplied to the conveyor should be established as follows:

- 66 pears per minute times the number of machines in line plus 10% additional security.

IMPORTANT
Overfeeding of the conveyor will result in an excessive flow of pears into the shaker pan and can cause double feeding from the shaker trough to the orienting rollers.

A feed belt speed of 70 feet per minute is ideal for shearing pears off of the conveyor and delivering them into the center of the shaker pan. The feed conveyor discharge chute to the shaker pan should be located approximately 3" off center of the pan (towards feed end of conveyor). The return belt should be traveling approximately twice the speed of the feed belt (140 feet per minute) to avoid pear blockage at the transfer from the end of the feed belt to the return belt. Recommended belt widths are:

- 10" feed, 8" return

IMPORTANT
Excessive feed belt speed can also cause overfeeding of the shaker pan.

Atlas Pacific recommends installation of an automatic pear sensing control system, such as an automatic feed gate, for starting and stopping the supply of pears to the feed conveyor. For optimum pear feed peeler performance, it is essential that the feed conveyor belt is NOT to be over or under supplied which is a common problem with manual control systems.

Safety

Because of the inherent dangers associated with the fruit peeling and slicing processes, Atlas Pacific Engineering recommends that operators and mechanics receive appropriate initial and recurring training to ensure safe and correct operation of the machine.

The PRO is supplied with industry standard safety features. The machine incorporates guards, mechanical and electrical lock-outs, placards, and other safety devices that, when used properly, minimize the chance of contact with moving parts or cutting surfaces. The safety guards are designed to protect the employees who use and maintain the machine. To ensure a safe workplace, it is essential that each employee is provided thorough personal safety training and that all safety devices are in place.

WARNING
Guards are NOT pre-installed. Mechanics and operators must verify all guards are present and properly installed per instructions in the Guard Installation (page 72) chapter prior to operating machine.

Every employee who will operate or perform maintenance of any type on this machine must be thoroughly familiar with the steps required to make the machine safe for maintenance. Atlas Pacific Engineering recommends that training and testing on the procedures be provided periodically to ensure familiarity.

Atlas Pacific provides a standard set of machine guards.

Conventions Used in this Manual

This section describes how information is presented, organized, and referenced within this manual.

Safety Notices

This manual uses these symbols and standards to identify conditions related to safety hazards and equipment damage.

DANGER
Indicates an imminent hazard which, if not avoided, will result in death.

WARNING
Indicates a hazard which, if not avoided, could result in serious personal injury or death.

CAUTION
Indicates a hazard which, if not avoided, could result in minor or moderate personal injury.

NOTICE
Indicates a situation that can result in equipment or property damage but poses no risk of personal injury.

Information Notices

This manual uses these symbols to emphasize certain types of information that are not related to safety.

NOTE
Indicates general information that provides additional context or guidance.

IMPORTANT
Indicates information that requires you to pay special attention.

TIP
Indicates information that can help you perform a task more efficiently.

Warning Labels

Atlas Pacific Engineering's Pear Roll Orientor (PRO) has warning labels affixed to the machine. Below are examples of the warning labels, the part number for each label, and the locations of the warning labels on the machine.

Figure 1.

Figure 2.

Warning Labels Locations

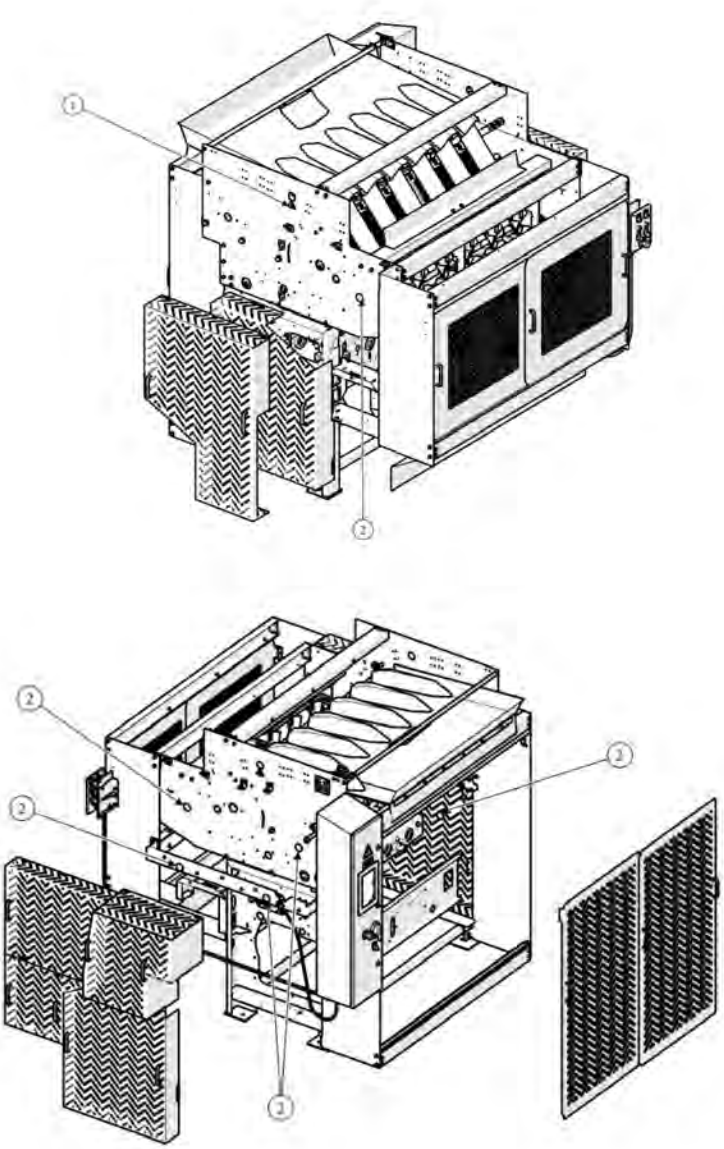


Table 1. AY, LABELS PRO - 2023.8016

Item	Part Number	Description	Quantity
1	7590.0635	LABEL,PINCH POINT CE	2
2	7590.0631	LABEL,DO NOT OP W/O GUARD GEAR	6

Hazards

This chapter describes potential hazards associated with operation and maintenance of the machine and provides recommendations and safety measures to reduce such hazards. This information is important for trainers, foremen, operators, mechanics, sanitation workers, and others who work near this equipment.

As with all operations involving moving parts, electrical supplies, and cutting mechanisms, potential hazards exist when operating the Pear Roll Orientor with the Standard Pear Machine:

- Strict adherence to safety procedures and recommended maintenance routines, in combination with the pear machine's built-in safety features, promotes worker health and safety. Use measures discussed in this chapter to prevent accidents and maintain a safe work environment.
- The locations of hazards are described below. If the machine cannot be installed using a recommended layout provided by Atlas Pacific during installation, it will be the customer's responsibility to install additional guards and warnings and to provide personnel protection as required by local codes and regulations.

If you have further questions regarding safe operation or maintenance of the pear machine, contact your Atlas Pacific service representative.

Mechanical Hazards

Mechanical hazards include those associated with moving parts and cutting surfaces. Factory-installed guard devices protect personnel from mechanical hazards. When guards are not present, operator safety depends on the use of recommended procedures and tools.

The machine contains mechanical parts that can inflict injury during operation. When the machine is properly installed, operated and maintained, and all safety procedures are followed, there should be minimal risk of hazards caused by mechanical parts.

WARNING
Crushing and Entanglement: During machine run, areas containing gears/chains and timing pulleys/ belts can cause risk of entanglement and crushing injuries. It is vital to ensure the machine is properly maintained with all guards in place before operation.

Crushing Hazards

The following are areas where pinch points exist and can cause crushing injuries to limbs when the machine is running.

- Between the transfer assembly and orientor assembly.
- Orientor chains.
- Slides, linear motion bars, and levers in rear of machine.

Drawing In Hazards

There is potential for entangling long hair, loose clothing or jewelry, fingers, and hands. Factory installed guards protect personnel from areas containing moving parts that might entangle. It is recommended that all personnel working on or near the machine wear hair and beard nets. If guards are not present, there is a potential for entanglement in the orientor assembly shafts and sprocket chains.

Ejection of Parts

All areas contain moving parts and processed materials that may be ejected if guard devices are not present or the machine is not maintained properly.

Ergonomic

When lifting guards, machine parts, and performing regular maintenance, especially if the motion is repetitive, there is risk of ergonomic injury.

Thermal

Motors and shaker eccentrics can cause a thermal risk during and immediately following machine operation.

Slip, Trip, and Fall Hazards

Food processing equipment typically uses water and food grade lubricants to clean and lubricate parts and materials. The use of water and lubricants, along with the presence of processed fruit products around the machine, creates an environment that can be wet and slippery

Preventing Mechanical Hazards

To prevent injuries that may occur when working near moving parts and cutting surfaces, follow these procedures:

- Install equipment according to the manufacturer's recommendations. Refer to Work Zone Clearances in the Installation (page 24) chapter.
- Turn equipment "OFF" and lock out/tag out prior to reaching into the machine for any reason. Never attempt to clear blockages, remove product, or repair or adjust parts while the machine is running. Unless specified by the procedures, do not adjust the machine while it is running.
- Use caution when operating the machine in the jog mode. Ensure that all personnel are away from moving parts and that the jog switch is under your control. Only trained and authorized personnel should use the jog switches.
- In the event of an emergency, use the emergency stop (E-STOP) button(s) to shut down the machine. For normal operations, use the manual shutdown. For information on how to operate these switches, see the Operations (page 80) chapter.
- Wear recommended protective gear such as:
  - Hair and beard nets to prevent entangling long hair in conveyors and belts.
  - Cut-resistant gloves to protect hands from cuts and abrasions.
  - Safety glasses or a face shield to guard against injury from processed materials or equipment parts that can be accidentally ejected from the machine.
  - Nonslip boots to guard against falling in a slippery environment.
  - Elastic sleeve guards or close-fitting work clothes to avoid entangling clothing in machinery.
  - Hearing protection to avoid hearing impairment.
  - Bump caps or hard hats to safeguard against head injuries.
  - Avoid wearing loose clothing and jewelry or long scarves that may become entangled or trapped in equipment parts.
- Use caution when working near peeling blades, knives, and slicers.

- Never disable a guard device or interlock. These devices are built-in protection against potential hazards such as peeling blades, conveyor belts and chains, and water splash-back that may contain processed material.
- Observe warning labels and signs that alert you to areas of potential hazards.
- Do not stand on or lean into machine parts or guards.
- Follow recommended procedures for operations and maintenance.
- Use recommended or specified tools when repairing or adjusting equipment.
- Never operate equipment without guards in place.

Electrical Hazards

The pear machine is designed to run on nominal 220 V or 460 V, 50/60 cycle, three-phase, AC power. The voltage used within a particular facility will be determined by customer-supplied power. The high voltages required for the machine present significant hazards in spite of the electrical enclosures and other safeguards. As with any such installation, high voltage hazards are present with electrical cabling to the controller and motor. The main electrical panel and controls present hazards when open for maintenance.

High voltage exists inside the motors and electrical control boxes. Areas marked with a lightning bolt symbol house electrical component. Use caution while working in these areas as there is a risk of electrical shock. Locking mechanisms for electrical control boxes reduce the risk of accidental contact with electrical wiring and components. Refer to the Electrical Installation (page 61) chapter for instructions on operating the Electrical Control Box.

WARNING
All electrical repairs or adjustments on the machine must be performed by trained personnel and in accordance with local, national, and international regulations.

WARNING
Disconnect the control equipment from power sources before maintaining or repairing electrical parts and to avoid hazards of electrical shock or unintended machine start-up.

Electric Motors

The installed Pear Roll Orientor uses one drive motor, a primary drive motor.

- MOTOR LINC 1HP T145(F) 7/8S (0005.1055)

The Standard Pear machine uses two motors:

- MOTOR, 1.5HP 184T TEFC 1200 60 (0005.1060)
- MOTOR 1/4 HP TENV (0005.1030)

Main Electrical Control Box

The main electrical control box, located at the rear of the machine; and the operator’s control panel, located at the front of the machine, contain wiring components that operate the machine and provide electrical power to the drive motors.

Preventing Electrical Hazards

Use proper procedures whenever you work near high voltage areas.

- Observe warning labels and signs that point out areas containing high voltages, cutting hazards, or other potential hazards.
- Disconnect and lock out/tag out equipment from power sources before performing maintenance or repairs to avoid electrical shock or unintended machine start-up.
- Keep electrical control boxes locked at all times except during repair or maintenance to prevent access by untrained personnel.
- Read and understand procedures before attempting repairs or adjustments. Some adjustments and repairs require that machine electrical supplies are turned “ON”. Use caution when making such repairs.

Noise Hazards

Continuous exposure to noise levels above 80 decibels (dB) can cause loss of hearing acuteness, and in extreme cases, fatigue, stress, or loss of balance.

In a system environment, with many machines running, noise will reach decibel levels that cause hearing impairment. In this type of environment, spoken communication with other workers may also be difficult and result in misunderstanding.

Guarding Against Noise Hazards

To guard against noise hazards:

- Wear hearing protection that is sufficient to guard against hearing loss in an environment of 80 dB or more.
- Verify that you understand verbal instructions or warnings. Repeat instructions to the speaker to ensure understanding.

Ergonomic Considerations

Areas of ergonomic concern include:

- Availability of suitable personal protection equipment.
- Correct installation and use of equipment according to the manufacturer’s recommended layout and safe operating guidelines.
- Adequate lighting in work areas.

Preventing Ergonomic Hazards

Ergonomic hazards exist which are outside the area of machine design. Guarding against such hazards is the responsibility of both cannery management and the individual worker.

To promote a safe and healthy work environment, management should provide:

- Personnel training in the specified operations and maintenance responsibilities of the worker and in overall plant safety.
- Training documentation and performance verification for employees.

- Personal protection equipment which includes hearing and eye protection, hairnets, gloves, hard hats, etc.
- Adequate lighting in the workplace to be at least the minimum lumens required by local codes and regulations.

Personnel who operate, maintain, repair, clean, and lubricate the machine are responsible for:

- Participation in training to the extent that they are able to perform job functions safely and effectively.
- Demonstrating performance capability as required to meet the training documentation criteria and verification standards of the factory.
- Using personal protection equipment as specified.
- Working in accordance with established procedures.
- Maintaining an alert mental state to minimize potential for human error.
- Communicating the status of operations and any problems to co-workers and management.
- Using equipment only for the purpose intended.

Functional Disorders

Failure of equipment or parts can cause injury to cannery personnel. While the machine includes many features to reduce potential for failure, functional disorders can occur due to errors of fitting, inadequate maintenance, or incorrect placement of guard devices.

Certain hazards exist due to unexpected ejection of processed materials and fluids. Use of a daily inspection routine will verify that guards are in place and that there is no undue wear on machine parts. Your Atlas Pacific service representative can assist you in ensuring proper installation and function of your machine.

Preventing Functional Disorders

To prevent accidents caused by equipment failure:

- Ensure that all guards and interlocks (if equipped) are in place and functioning at the beginning of each shift and before operating the machine.
- Stop the machine immediately in the event of abnormal operation.
- Wear recommended personal protection equipment.
- Perform preventive maintenance regularly.
- When making repairs or adjustments, use the special tools that are provided by Atlas Pacific where applicable. When using off the- shelf tools, ensure that they are the correct tools for the task.
- Refer frequently to the Atlas Pacific service documentation for current repair and maintenance information.

Improper Use of Safety Measures

If operating personnel disables or removes safety signs, signals, shielding devices, or fail to observe safety warnings and procedures, potential exists for bodily injury or health problems.

Once you read and understand the safety procedures and receive thorough training, you will be able to identify proper procedures and actions for a safe working environment. If you notice unsafe situations or practices, take steps to correct them.

Preventing Improper Use of Safety Measures

The PRO arrives at the plant equipped with safety devices that are required to promote safe operation. To operate the PRO in the safe manner intended by the manufacturer, please read and understand the operation procedures and provide thorough training to facility employees.

Lock-Out/Tag-Out Procedure

Atlas Pacific strongly recommends that each customer develop a standardized lock-out/tag-out procedure and require each employee to use it to make the machine safe for maintenance. The following requirements should be considered the minimum necessary to create a safe operating and maintenance environment:

- Employees must be trained to determine if the machine is safe for maintenance.
- Provide a positive means for removing power from the electrical circuit to the machine at the power distribution box from the plant’s supplied power. The switch on this distribution box must be equipped with a positive means of locking it in the OFF position.
- Provide tags that indicate who locked the machine out, when, and why. Also provide the device used to lock the electrical switch. Establish a system that allows multiple locks so that more than one employee can lock the machine out for service or maintenance.
- Employees who operate and perform maintenance on the machine must receive initial and recurring training on how to lockout electrical power to the machine. This training should also cover the proper sequence to shut down the machine, including turning off water, and air.

Safety Training

Recurring safety training for operators and mechanics is extremely important. The training must address the use of lock-out/tag-out procedures, and supervisors must enforce all safety rules. Safety training will encourage operating personnel not to disable, ignore, or remove safety signs, shielding devices or fail to observe safety warnings and procedures.

Emphasis on Safety

Safety must receive a special emphasis from managers and supervisors. Supervisors must always be on the alert to detect and correct any unsafe behavior. Safety training and active enforcement of rules outlined in this section will help prevent accidents. Atlas Pacific Engineering recommends that these rules are followed:

- Install, operate and maintain the machines in accordance with the manufacturer's requirements outlined in this manual.
- Use lock-out/tag-out procedures to make machines safe before clearing blockages or performing any kind of maintenance or adjustment.
- **NEVER** attempt to clear blockages, repair or adjust parts, or remove material while machine is on and running.
- Wear recommended gear such as:

  - Safety glasses or face shields.
  - Hearing protection.
  - Nonskid boots to guard against falling in slippery environment.
  - Elastic sleeve guards and/or close-fitting work clothes to avoid entanglement.
  - Gloves to protect hands from cuts and abrasions.
  - Hard hat to safeguard against head injury.
  - Avoid wearing loose clothing and jewelry.
  - Hair or beard nets to prevent entangling long hair or beards.
- Do not remove covers or other mechanical safety devices that cover belts, pulleys, gears, chains, and drive linkages except when required to perform maintenance.
- Never remove covers until the machine has been made safe for maintenance.
- Never operate the machines without the covers being properly reinstalled after maintenance.
- Always follow recommended procedures for machine operations, cleaning, and maintenance.
- When applicable, use specified tools or special tools that may be offered by the manufacturer, when repairing or adjusting the machine.

Overview

The PRO works with the Atlas Pacific Standard Pear Machine to automate the efficient peeling, coring, and slicing of pears with minimal skin removal to retain natural flavors and produce higher yields. The PRO is mounted directly above the pear machine. The PRO automatically singulates and orients the pears before transferring them to the Standard Pear Machine.

Features and Benefits

- Orientation and Feed - The PRO eliminates the need of an operator and provides maximum orientation increasing throughput and yield.
- Size Range Capabilities - The PRO can process fruit from 1.75" to 3.25" diameter.
- Corrosive Resistant and Sanitary - Sanitation is greatly improved through the extensive use of non-corrosive materials such as stainless steel and plastics.
- Safety - Atlas Pacific provides guarding to comply with local government standards and/or safety regulations.
- Emergency stop - E-STOP switches are provided in the front and rear of the machine.

Specification

Item	Specification
Model	2023.8000.50 2023.8000.60
Capacity	66 pears per minute
Size	82-3/4" long x 82" wide x 38" high (with transfer finger bar pivoted up for shipping)
Weight	950 lbs plus 50 lbs shipping frame = 1000 lbs
Crated Weight	1500 lbs
Electrical	460/480 VAC, 3-phase, 50/60 Hz, 30 A
Water requirement	20 PSI, 2 GPM
Air Requirement	55 PSI, 1.5 SCFM

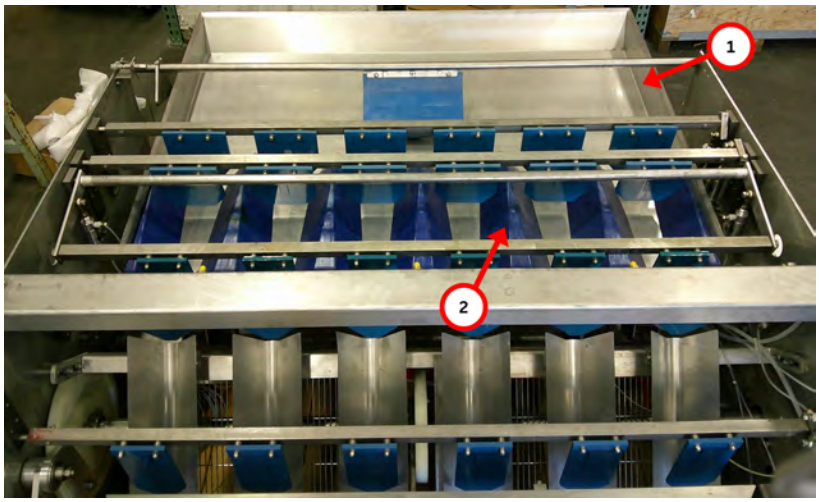
Sequence of Operations

Infeed & Level Control

Pears are directed into the machine’s short reservoir and support pan **[2010.9054]** by the paddles in the facility’s overhead conveyor system. When the feeder pan is filled, level sensors send a signal to the processor that closes the feed gates and stops the flow of pears to the machine. When the pear supply is sufficiently depleted, the level sensors open the feed gates and replenish the supply.

The pear machine's vibrating feeder pan causes the pears to move down the feeder pan toward the front of the machine where they encounter dividers. These dividers or canoes **[2010.3781.800]** separate the fruit into six individual lanes.

Figure 3.

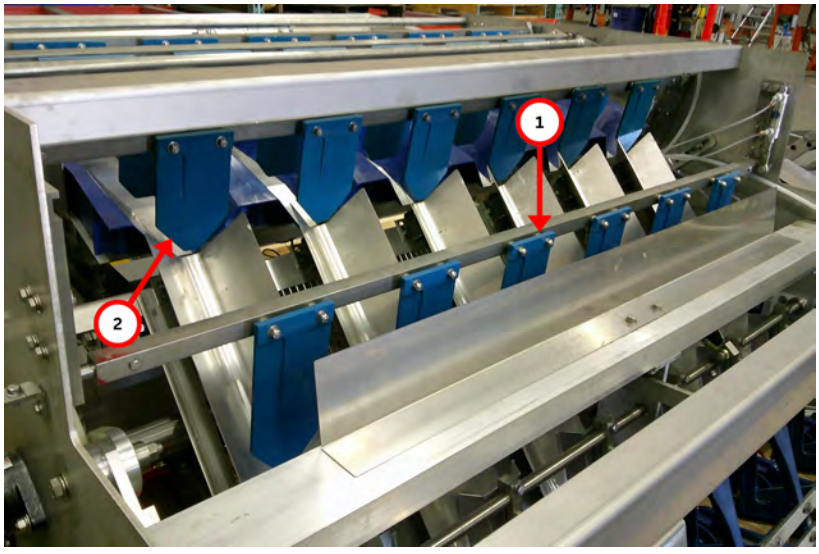


Item	Part Number	Description
1	2010.9054	RESERVOIR & SUPPORT AY,SHORT
2	2010.3781.800	CHUTE,FEEDER CANOE

Separation & Singulation

Each divider/canoe lane has a series of paddles that open and close in sequence to singulate a pear. Once singulation is achieved, the pear slides down a chute where it is stopped to allow the previous pear to clear the orienting rollers. This process of singulation is necessary to prevent multiple pears from entering the orientor at the same time.

Figure 4.

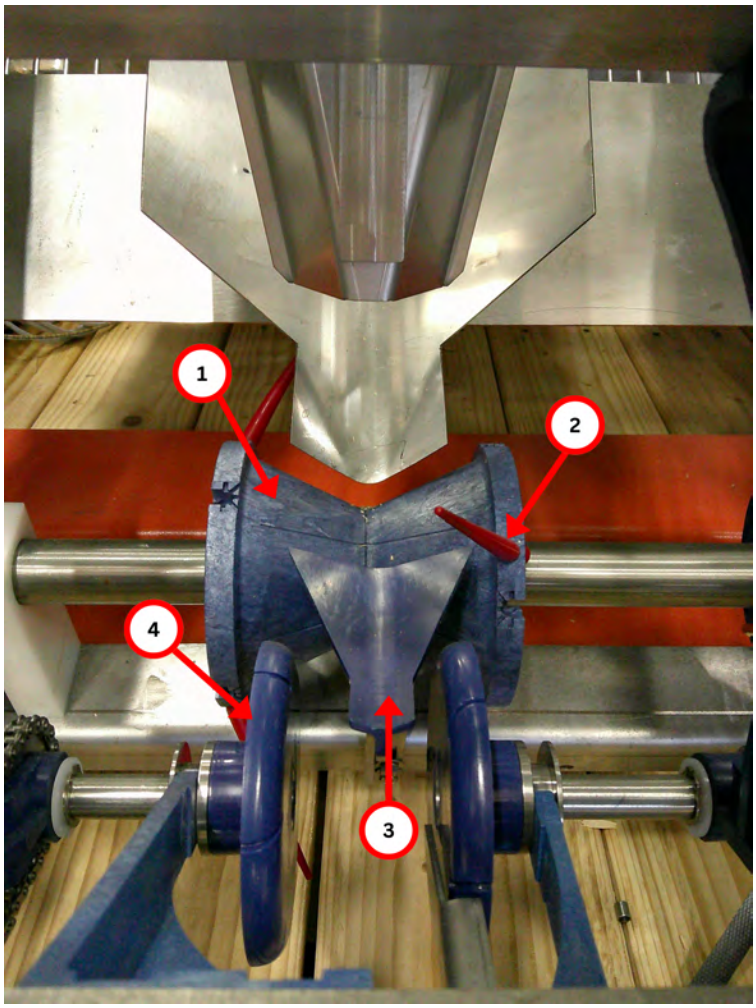


Item	Part Number	Description
1	2010.3815.001	PADDLE,6.88 x 4.12 RIBBED
2	2010.3816.001	PADDLE,4.88 x 4.12 RIBBED

Pears that become oriented in the proper stem down position during the singulation process will remain properly oriented and pass through the orientor for peeling. The pears that are not properly oriented must be re-positioned by the roll orientor.

The orientor consists of rollers and fingers that rotate the pear into a neck down position. The rotating rollers **[2010.9901]** have fingers **[2010.3370.002]** around the outer perimeter of the cone which push the neck of the pear toward the middle of the orientor. Then, a disk guides the pear neck down until it stops against the stop shoe where it is ready for transfer to the transfer cup.

Figure 5.



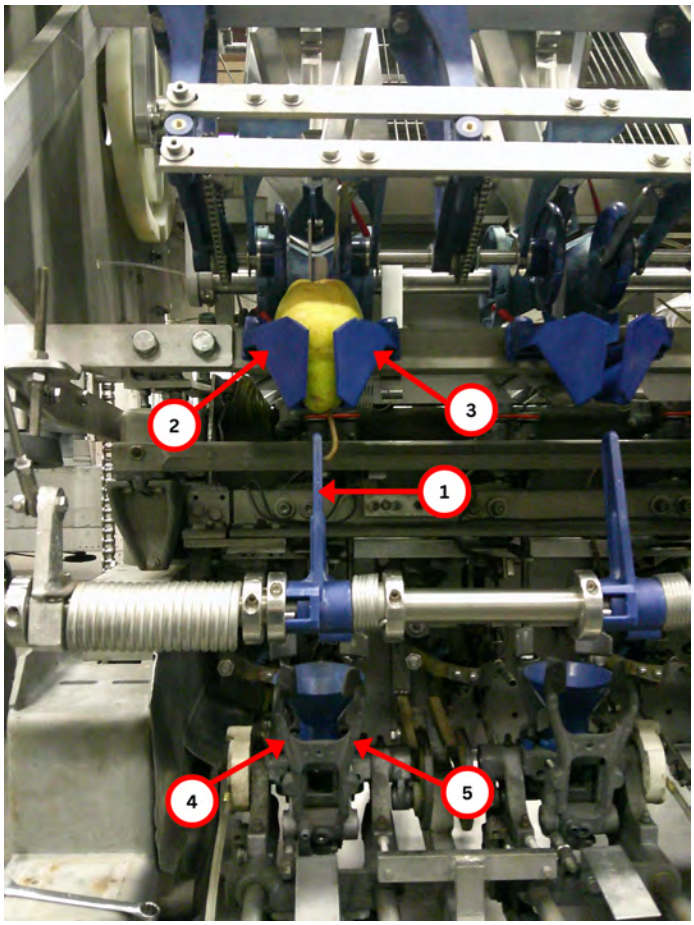
Item	Part Number	Description
1	2010.9901	ORIENT ROLLER
2	2010.3770.002	FINGER,ORIENTING

Item	Part Number	Description
3	2010.3684.800	SHOE,STOP
4	2010.3620.800	ROLL,FRONT ORIENTOR

Transfer

The roll open cam moves the orientor disks forward, releasing the pear to the transfer cup. The transfer cup lowers the fruit to a position directly over the feed cups. Then the pear fingers press the pear through the spring-loaded transfer cup into the self-adjusting feed cup located on the impale bar. Once the pear is transferred to the feed cup, the impale grabber assembly closes around the pear and holds it in the proper position to be impaled.

Figure 6.



Item	Part Number	Description
1	3370.1935	FINGER,TRANSFER PLASTIC
2	3370.1612.L	CUP,TRANSFER LH
3	3370.1612.R	CUP,TRANSFER RH
4	6500.0072.L	AY,AIR CUP-LH
5	6500.0072.R	AY,AIR CUP-RH

Installation

Lifting Points

PRO is installed from above using chains through holes in the side of frame.

WARNING
Use lifting equipment rated for a minimum of 1500lbs.

Figure 7.

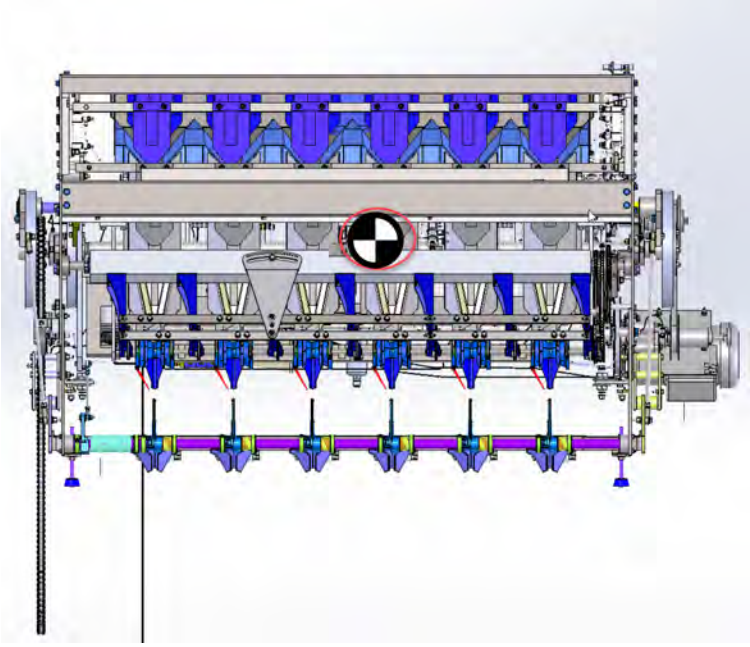
Right side of PRO.

Figure 8.

Left side of PRO.

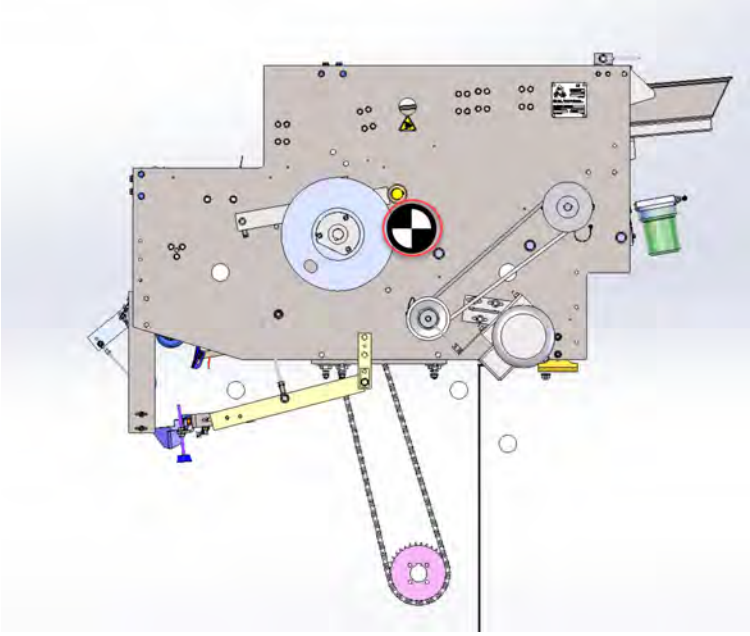
PRO Center of Gravity

Figure 9.



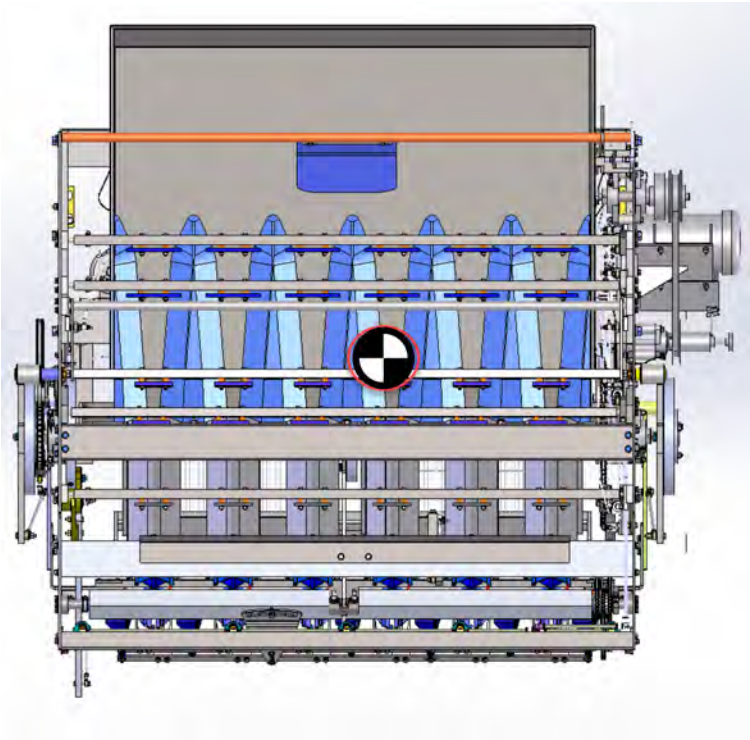
Center of gravity - front.

Figure 10.



Center of gravity - side.

Figure 11.



Center of gravity - top.

Accepting Delivery

Facility Requirements

Electrical: 460/480 VAC, 3-phase, 50/60 Hz, 30 A

Air: 55 PSI, 1.5 SCFM

All peeler functions require - clean (min. 40-micron filtration), dry, regulated air. To help assure ongoing performance and component longevity, we recommend the use of an air lubrication system. Air lubrication system: actual specifications vary in relation to machinery arrangement and air manifolding system.

Water: 20 PSI, 2 GPM

Customer should supply pressure regulator to maintain constant pressure with minimum water usage.

Feed: 66 pears per minute

A feed belt speed of 70 feet per minute is ideal for shearing pears off of the conveyor and delivering them into the center of the shaker pan. The feed conveyor discharge chute to the shaker pan should be located approximately 3" off center of the pan (towards feed end of conveyor). The return belt should be traveling approximately twice the speed of the feed belt (140 feet per minute) to avoid pear blockage at the transfer from the end of the feed belt to the return belt. Recommended belt widths are: 10" feed, 8" return

IMPORTANT
Excessive feed belt speed can also cause overfeeding of the shaker pan.

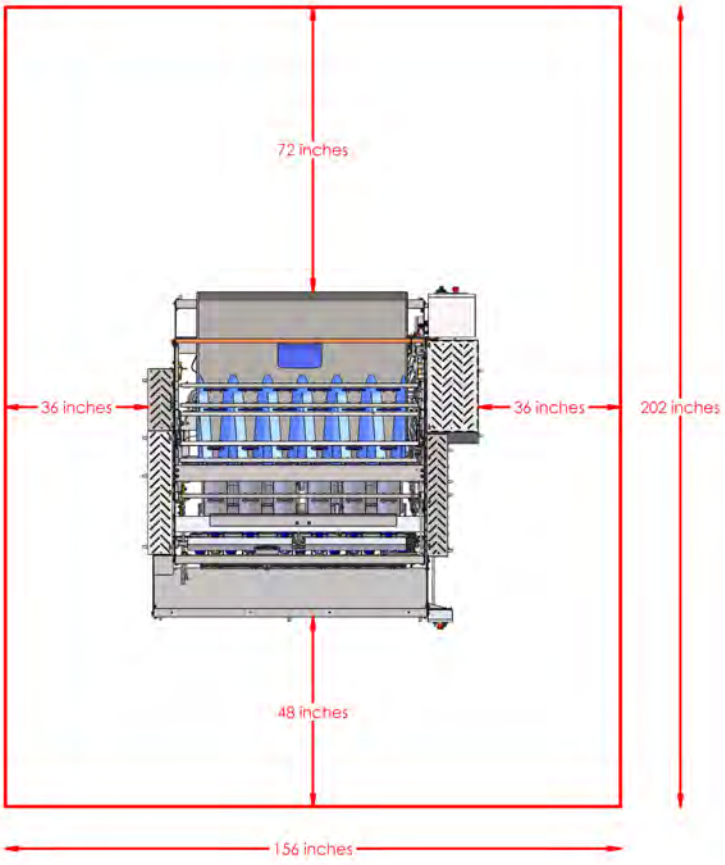
Atlas Pacific recommends installation of an automatic pear sensing control system for starting and stopping the supply of pears to the feed conveyor. For optimum pear feeder and peeler performance, it is essential that the feed conveyor belt NOT be over or under supplied which is a common problem with manual feed control systems.

Work Zone

For adequate maintenance access, Atlas Pacific suggests the pear peelers be positioned with 40" spacing between side frames, 36" is the absolute minimum.

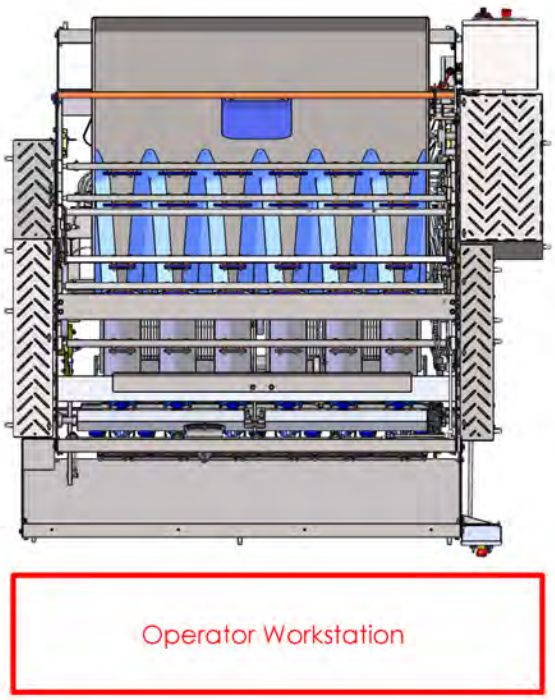
NOTE
Access in the front of the machine should be a minimum of 48" and the rear of 72".

Figure 12.



Work Zone Clearances.

Figure 13.



Operator Workstation.

Initial Installation

Uncrating the PRO machine:

NOTE
Guard Installation (page 72) section can be found at the end of the Installation chapter.

Figure 14.

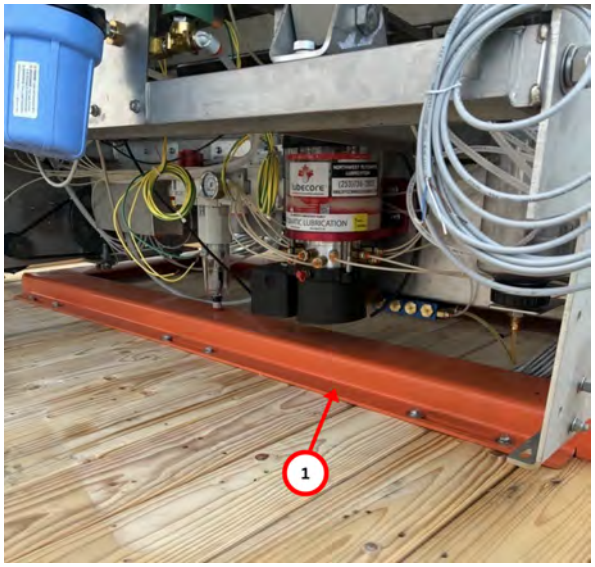
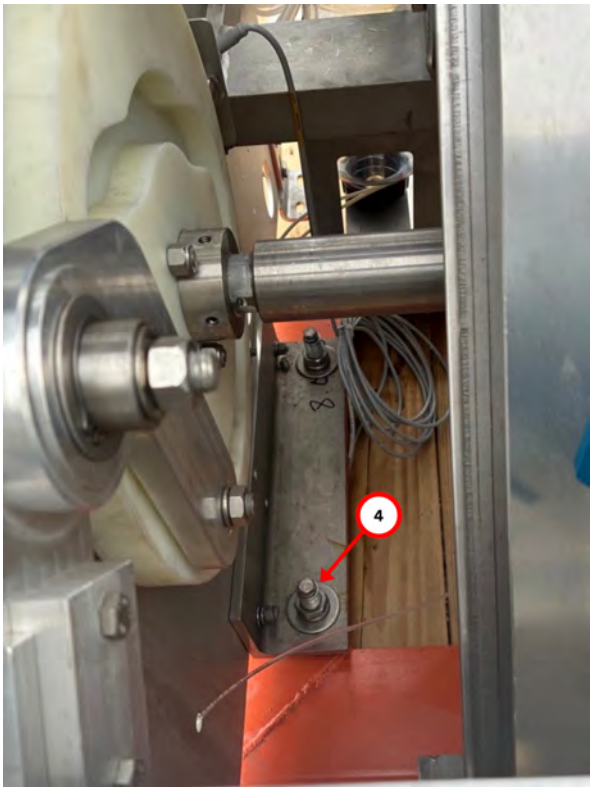


Figure 15.



Item	Instruction
1	Remove the PRO from base frame weldment crate/skid **[3370.3013]**.
2	Attach strap/chain through the lifting points **[Fig. 14 & 15]**.
3	Lift PRO using hoist/crane.
4	Remove orange shipping frame by removing the 4 hex nuts **[0001.5640]**.

WARNING
All 4-pear machine leg mounting screws must be tight.

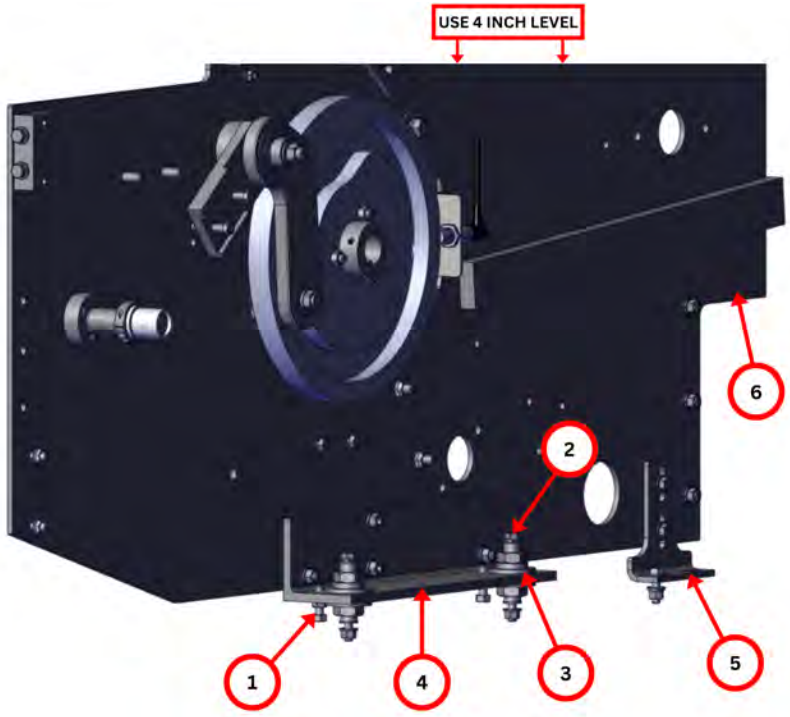
Installation of PRO

When lowering orientor onto the pear machine, make sure the unit rests on all four jacking screws **[0001.0600]**. Install mounting screws **[0001.0748.1]** finger tight. Use 3/8 flat washers **[0001.4604]** both on top and bottom of slots in pear machine frame.

Check level at top of the orientor stainless steel side frames (R & L hand). Adjust jacking screws as required to obtain for and after level position.

Adjust mounting screws down against the top of pear machine frame to take-up orientor weight (supporting directly under R & L side frames). Loosen jack screws so orientor is seated directly on the mounting plates.

Figure 16.



Set jacking screws to 1" height.

NOTE
Frame/side plate should sit flush on the frame by tightening the jacking screws.

Item	Part Number	Description
1	0001.0600	SCR,HCS 3/8-16 x 1 1/4 SS
2	0001.0748.1	SCR,HCS 3/8-16 x 3 1/2 SS
3	0001.4604	WSHR,FLT .812 x 2.0 x.177 SS
4	3370.3069	BRACKET,MOUNT SIDE PLATE-LH
5	3370.3030	BRKT,SIDE PLATE SUPPORT
6	2010.9014	PLATE,FRAME LH SIDE

NOTE
Pear machine should be reasonably level in before and aft direction (approximately 1/2 bubble out is permissible). Check with spirit level on top of cup feed track bar. Shim under legs as required.

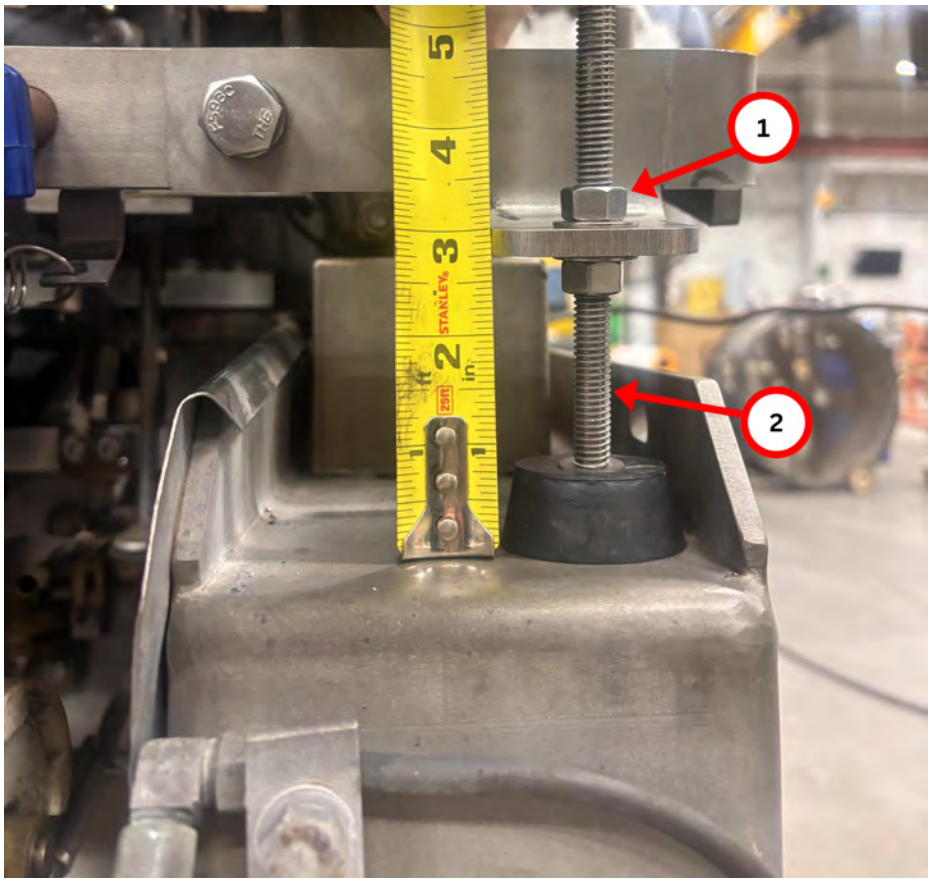
Timing

Timing the PRO to pear machine

Step 1

Adjust left-hand/right-hand transfer stop cup **[3370.1938]** stops at 2 3/4" from the top of the base to the bottom of the transfer stop cup bracket. Then, tighten the two lock nuts **[0001.5220]**.

Figure 17.

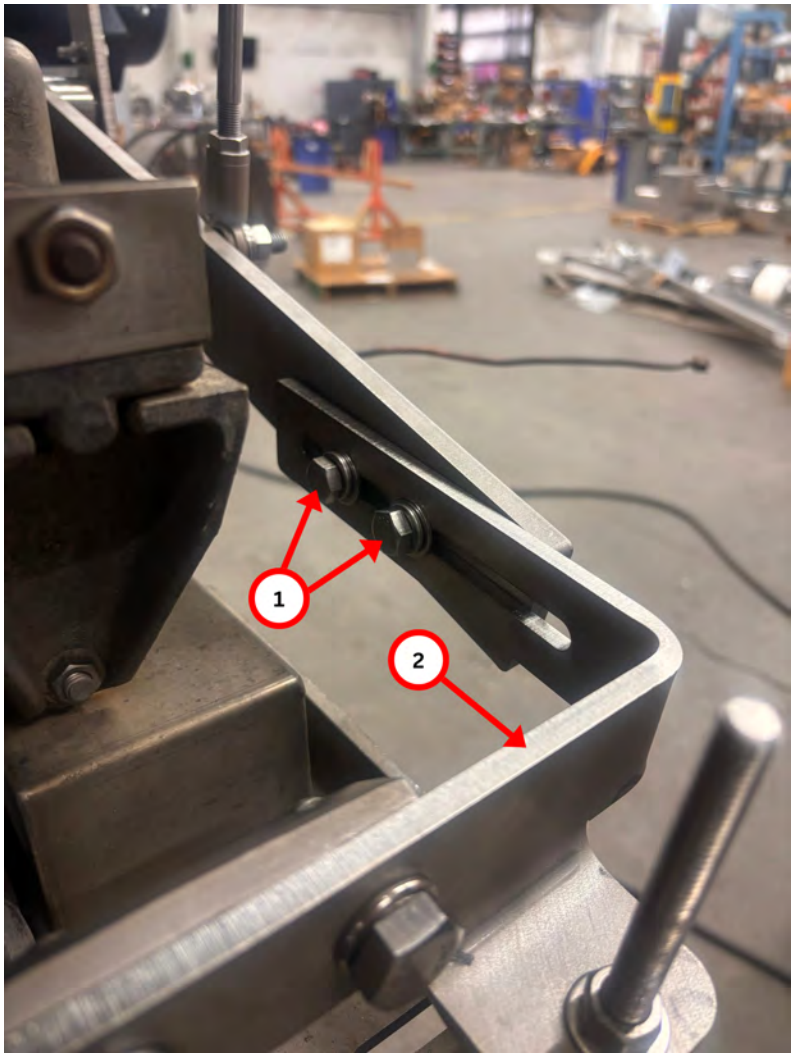


Item	Part Number	Description
1	0001.5220	NUT,HX 3/8-16 x 9/16 SS
2	3370.1938	CUP,TRANSFER STOP

Step 2

Loosen the four lifting bar screws **[0001.0540]** to allow the transfer cup bar assembly **[3370.1711]** to move more freely.

Figure 18.

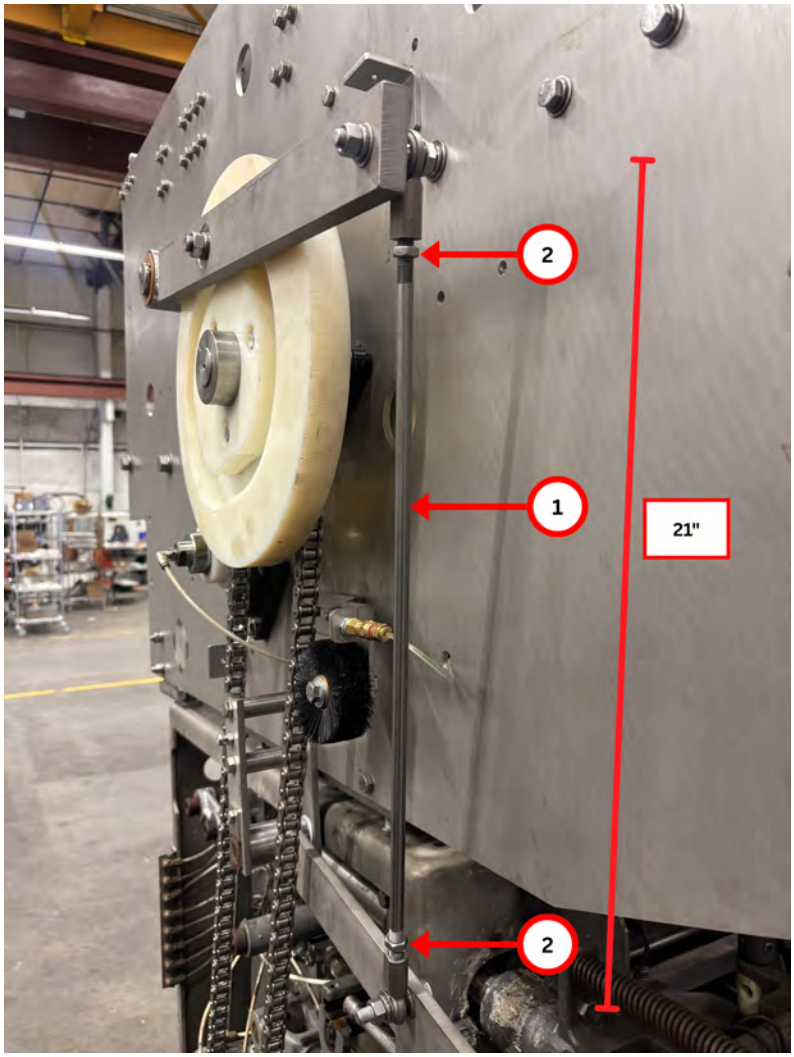


Item	Part Number	Description
1	0001.0540	SCR,HCS 3/8-16 x 3/4 SS
2	3370.1711	CUPS,TRANSFER & MECHANISM

Step 3

Loosen upper and lower lock nuts **[0001.5530]** to transfer cup assembly rod **[3370.1936]**. Adjust the transfer cup assembly rod to 21". Leave nuts loose for now.

Figure 19.

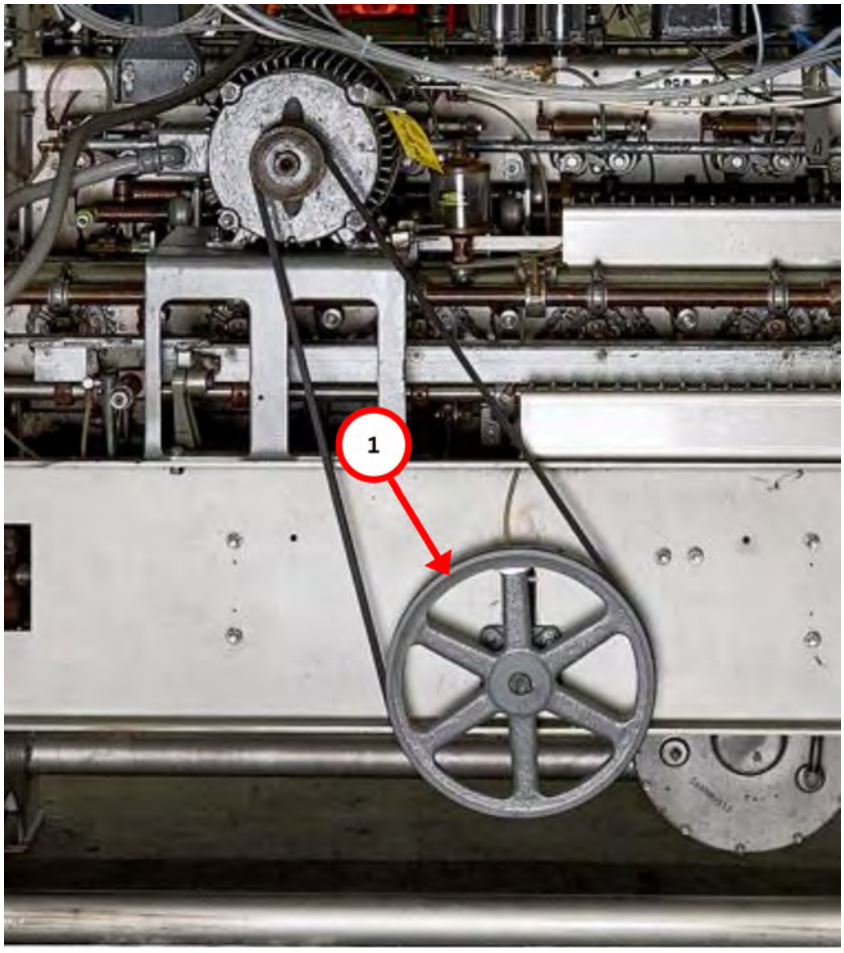


Item	Part Number	Description
1	0001.5530	NUT,HJX 3/8-24 x 9/16 SS LH
2	3370.1936	ASSY,ROD CONN TRANS CUP

Step 4

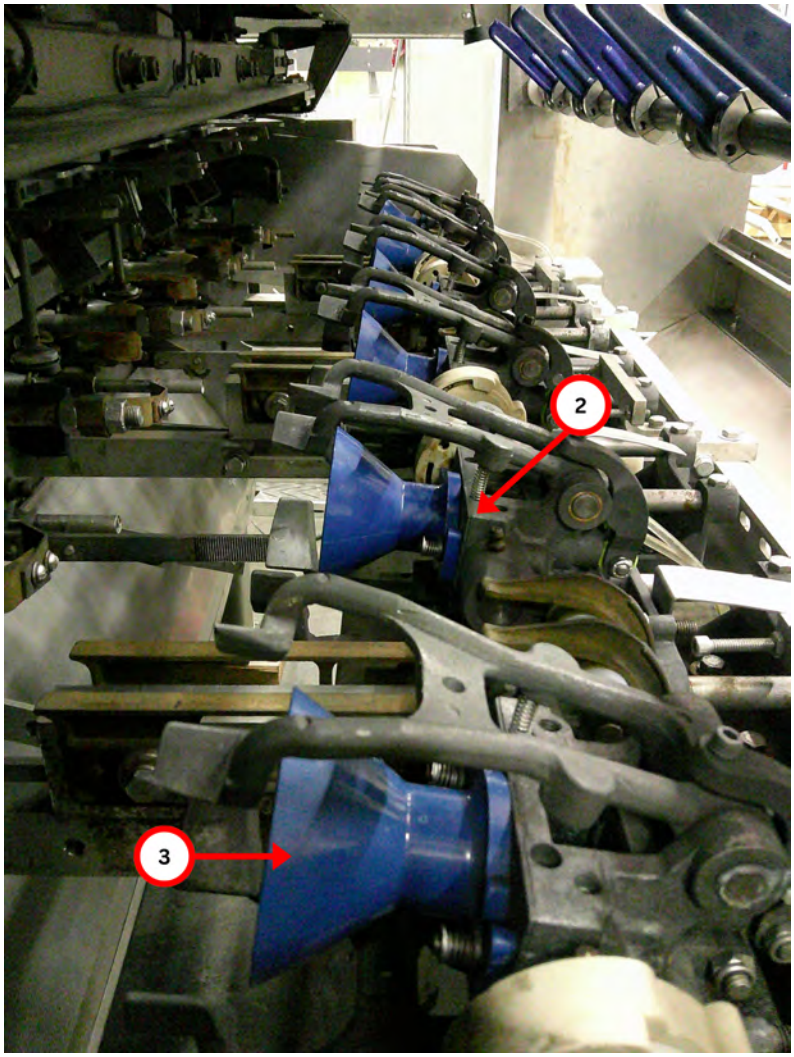
Hand rotate pear machine jack shaft **[3370.2005]** forward until cups in the air cup assembly **[6500.0072.L]** are at the point in the cycle to where they are just about to rotate up to their vertical positions Refer to **[Fig. 20]** below. Sprocket key should be set a to 135 degrees **[Fig. 22]**.

Figure 20.



Hand rotate pear jack shaft.

Figure 21.



*Cups **[5800.0120]** in the air cup assembly are about to rotate up.*

Figure 22.

Sprocket key is at 135 degrees.

Item	Part Number	Description
1	3370.2005	SHEAVE,JACK SHAFT
2	6500.0072.L	AY,AIR CUP-LH
3	5800.0120	CUP,MEDIUM

Step 5

Hand rotate the PRO machine until the cam is at its vertical position. The cam roller should be visible through the cam on the right side of the machine. Refer to **[Fig. 23 & 24]** below.

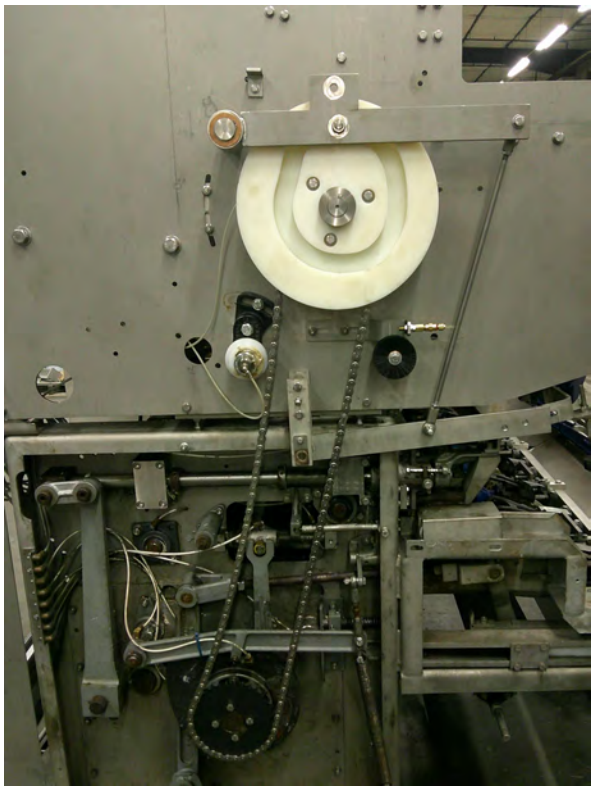
Figure 23.

Right side of PRO machine - cam follower is in vertical position.

Step 6

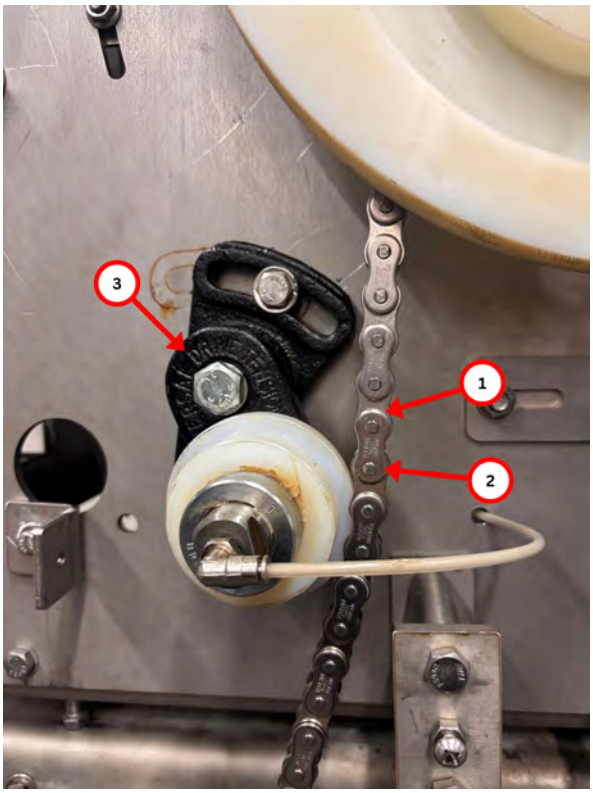
Install the #50 drive chain and tighten the chain tensioner. The tensioner is used to attach and tighten the drive chain.

Figure 24.



Left side of PRO machine - cam follower is in vertical position.

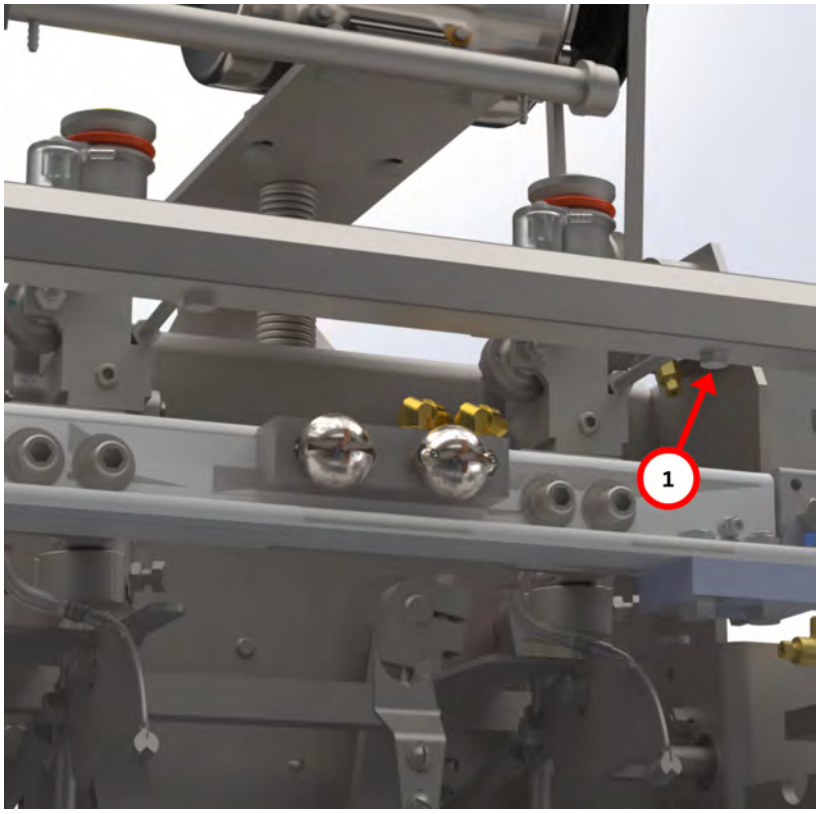
Figure 25.



Item	Part Number	Description
1	0006.0026.1	CHAIN,RC50 SS
2	0006.0094	CHAIN,ML RC50 CLIP PIN
3	0006.1501	BASE,DRIVE TENS.-UNIV. #SM

WARNING
Be sure the mounting screws **[0001.0748.1]** for the peeling connection links on the front angle are installed with the hex down. Reference **[Fig. 26]** below.

Figure 26.



Item	Part Number	Description
1	0001.0748.1	SCR,HCS 3/8-16 X 3 1/2 SS

NOTE
Pear machine feed cups should have book cams adjusted to obtain a minimum measurement of 15-1/4" between the front lip to the front plate.

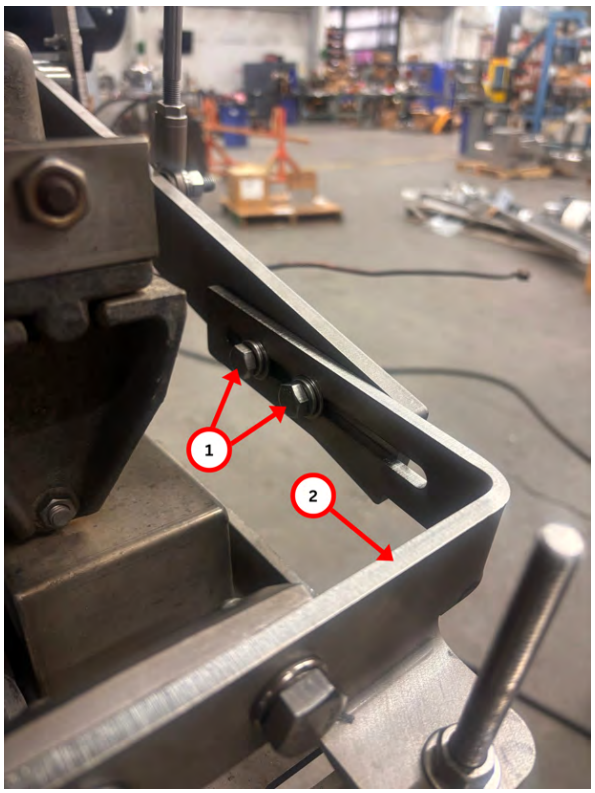
WARNING
Shaker must be running/operational in order to perform adjustments to the PRO machine.

Step 7

Hand rotate the base pear machine until the transfer cup bar assembly **[3370.1711]** and the base pear transfer bar **[6700.0052]**until they are at their closest position.

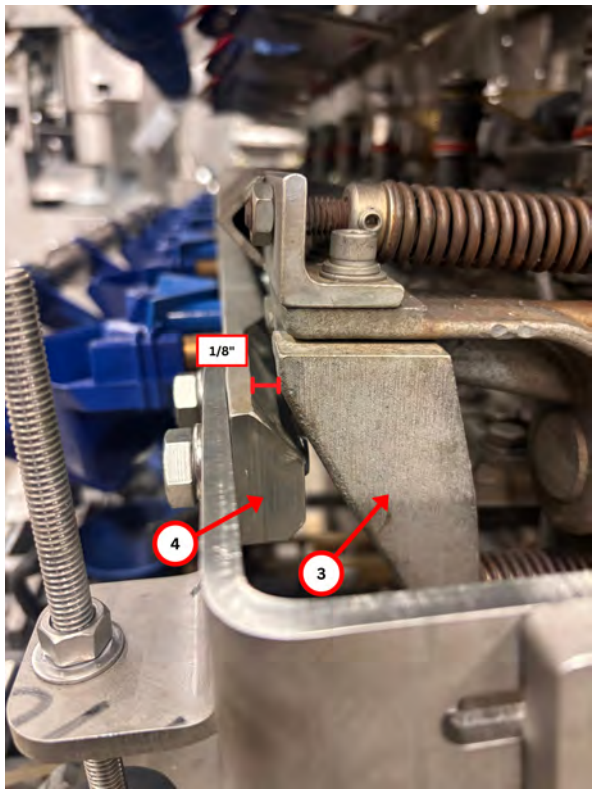
Adjust the transfer cup bar bracket **[3370.3028]** until it is 1/8" away from base pear transfer bar **[6700.0052]** on the left and right-hand side of the transfer cup bar. Tighten the two adjusted screws **[0001.0540]** attached to the transfer cup bar carrier bracket **[3370.3028]** on both sides of the PRO machine.

Figure 27.



Transfer cup bar can move forward/backwards once adjusted screwed are loosened.

Figure 28.



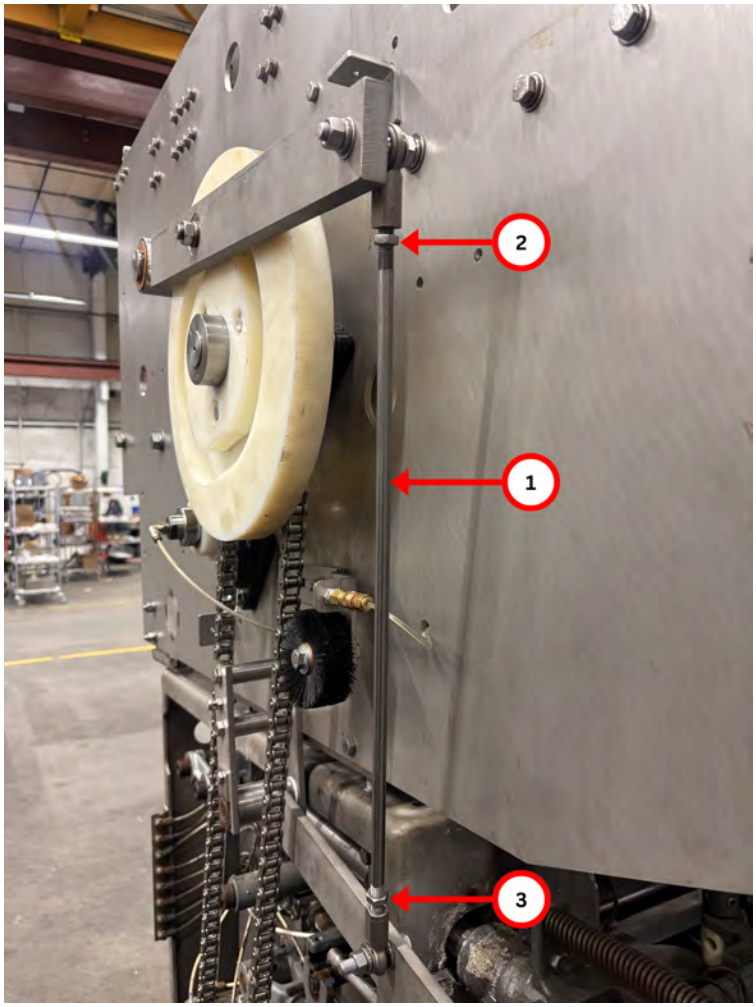
*Transfer cup bar needs to be at 1/8" clearance from bracket **[6700.0052]**.*

Item	Part Number	Description
1	0001.0540	SCR,HCS 3/8-16 x 3/4 SS
2	3370.3028	BRKT,RH TRANSFER BAR CARRIER
3	6700.0052	BRACKET
4	3370.1711	TRANSFER CUP BAR ASSY

Step 8

Adjust transfer cup assembly rod **[3370.1936]** clockwise or counterclockwise until there is no tension between the cam and the cam roller by loosening the lock nuts **[0001.5220 & 0001.5530]**. The bar should not be tight. Once in correct position, tighten lock nuts again.

Figure 29.



Item	Part Number	Description
1	3370.1936	ASSY,ROD CONN TRANS CUP
2	0001.5520	NUT,HXJ 3/8-24 x 9/16 SS
3	0001.5530	NUT,HXJ 3/8-24 x 9/16 SS LH

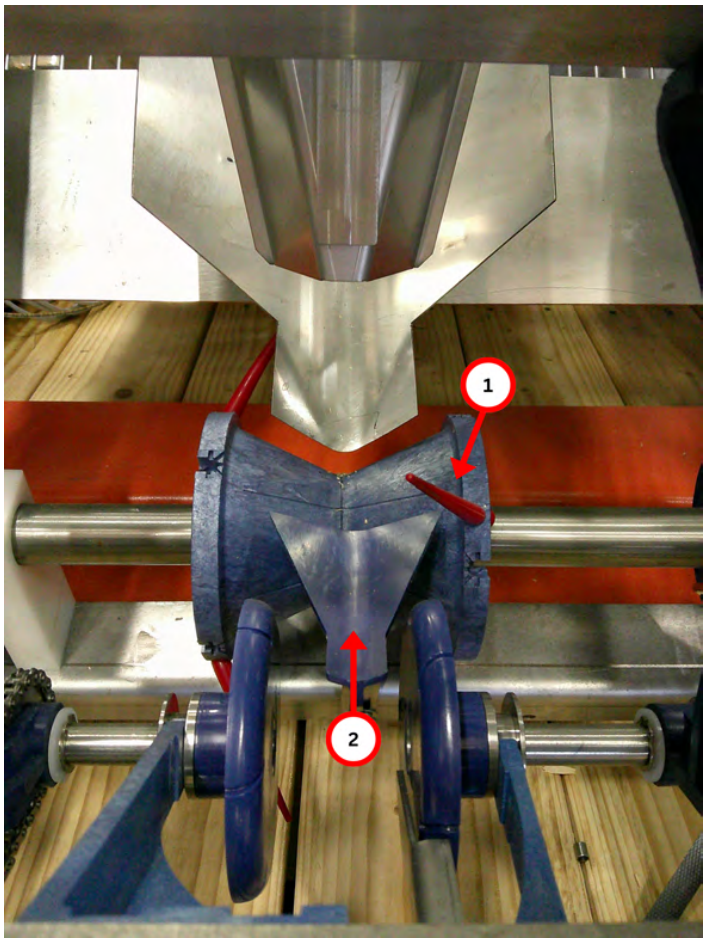
Adjustments

Orienting Fingers

The orientor puts pears in a vertical, stem down position before they are delivered to the transfer cups. It does this by rotating the pear between the orient rolls and the front rolls. The orientor rolls have orienting fingers **[2010.5559]** mounted on them that dislodge the pear if it is in a horizontal position. A pear stop shoe is mounted below the orient rolls. It stops the pear from rotating once the pear is in the correct position. The orientor roll fingers should be point in, toward the pear, on a 45 degree angle, away from the direction of rotation. Using pliers, pull the fingers in the correct position. The angle of the pear stop shoes **[2010.3684.800]** may be adjusted.

WARNING
Lock-out and tag-out the machine before performing any maintenance or services. Failure to do so may cause serious bodily injury.

Figure 30.



Item	Part Number	Description
1	2010.5559	FINGER,ORIENTING
2	2010.3684.800	SHOE,STOP

Orientor Roller

The orienting roller **2010.9901]** should be adjusted so that it is centered to the chute **[2010.3579]** and front orienting roll **[2010.3620.800]**. Loosen the two screws **[0001.1101]** that hold the orienting roller in place, then move the orienting roller left or right to center the chute. Re-tighten the same set of screws.

Figure 31.

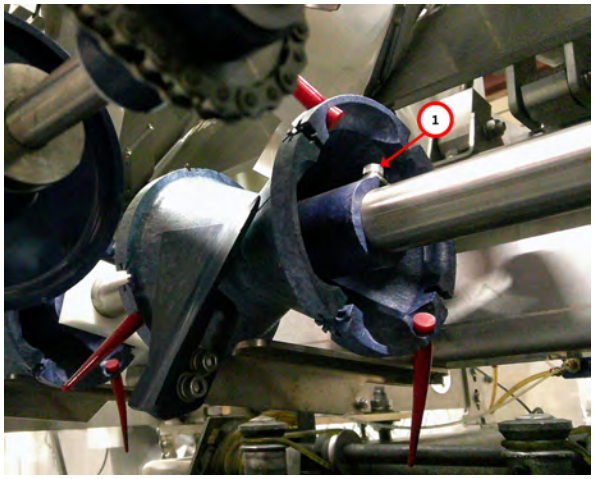
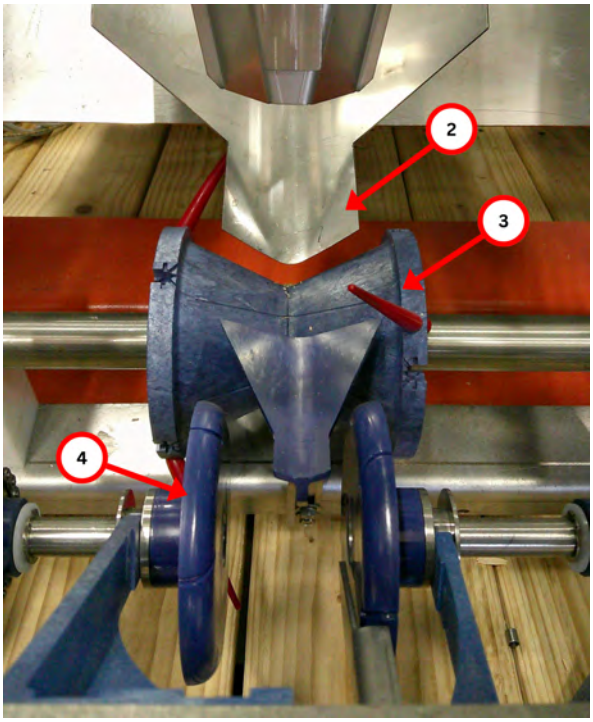


Figure 32.

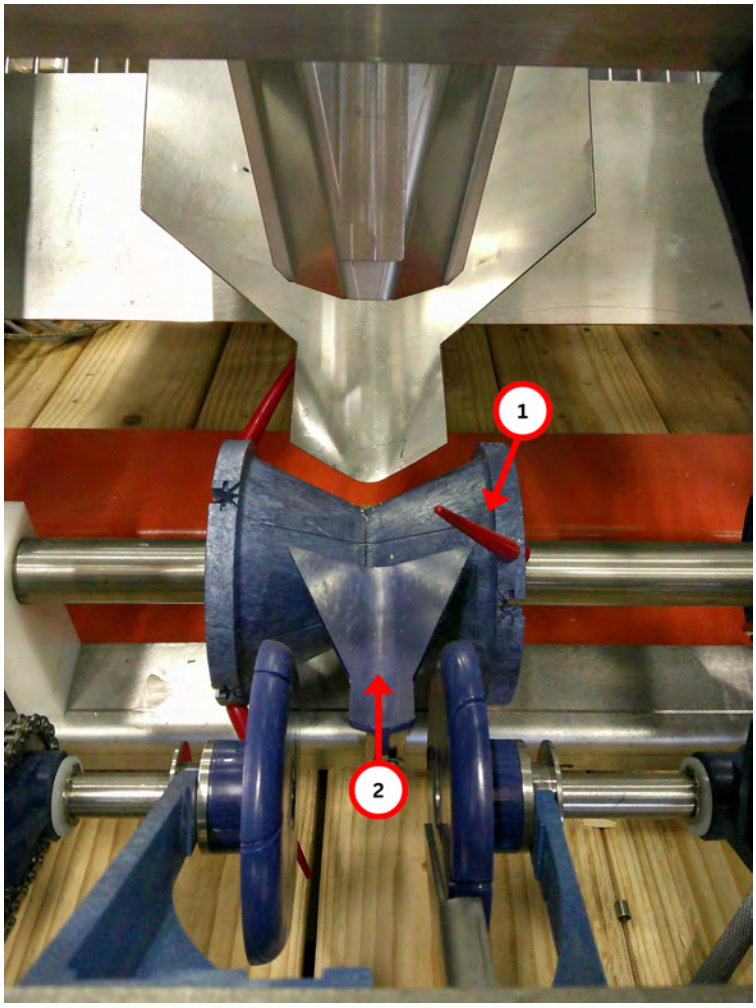


Item	Part Number	Description
1	0001.1101	SCR,SCS10-32 x 1/2 SS
2	2010.3759	CHUTE
3	2010.9901	ORIENT ROLLER
4	2010.3620.800	ROLL, FRONT ORIENTOR

Pear Shoe Stop

The pear stop shoe **[2010.3684.800]** can be adjusted in the X, Y, and Z direction. The pear stop shoe should be positioned so that it is centered to the orienting roll.

Figure 33.



Item	Part Number	Description
1	2010.9901	ORIENT ROLLER
2	2010.3684.800	ROLL, FRONT ORIENTOR

To adjust the pear stop shoe in the vertical position, adjust the pear stop shoe support bar **[3370.3024]**. Loosen the two nuts **[0001.5440, 0001.5440.001]** securing the stop shoe linkage **[2010.9066]**.

Figure 34.

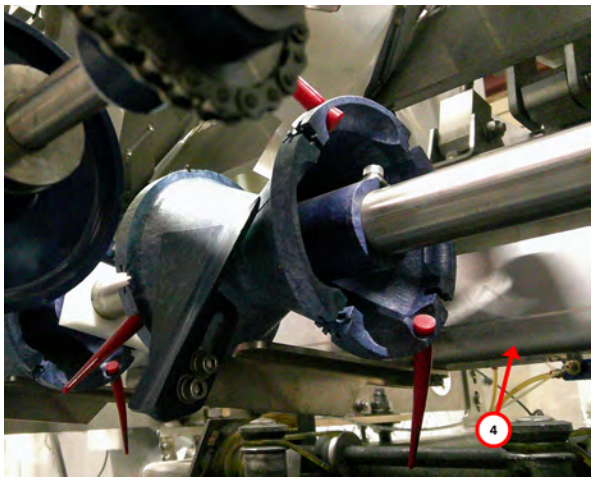
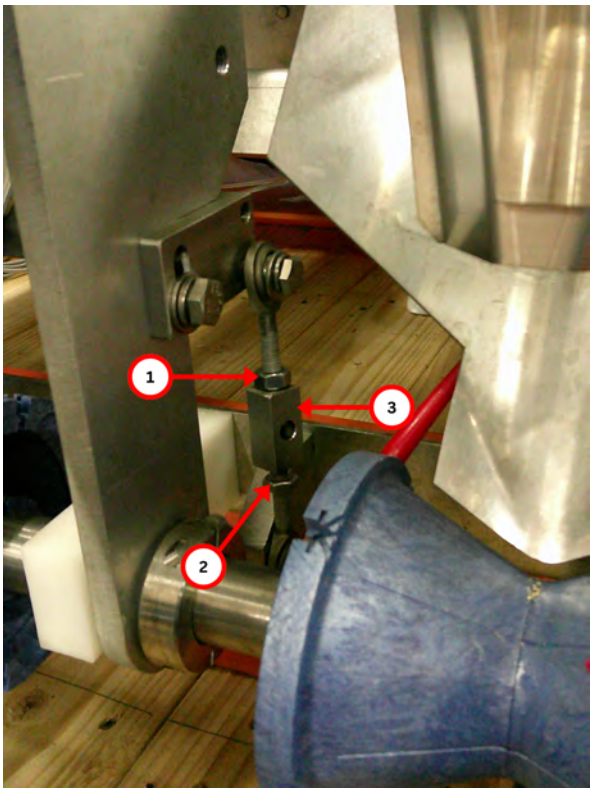


Figure 35.



Item	Part Number	Description
1	0001.5440	NUT,HXJ 1/4-28 x 7/16 SS
2	0001.5440.001	NUT,HXJ 1/4-28 x 7/16 LH SS
3	2010.9066	LINK,ADJUST STOP SHOE
4	3370.3024	BAR,SHOE STOP SUPPORT

Loosen the two hex screws **[143.514]** to adjust the stop shoe support bar **[2010.3685]**. The top of each stop shoe should be in the center of, and riding against, its orientor spool. The top of the stop shoe must be on the center line of the spool. Loosen the socket cap screws **[0001.1090]** fastening to the stop shoe support bar. Slide each stop shoe into position and tighten the screws.

Figure 36.

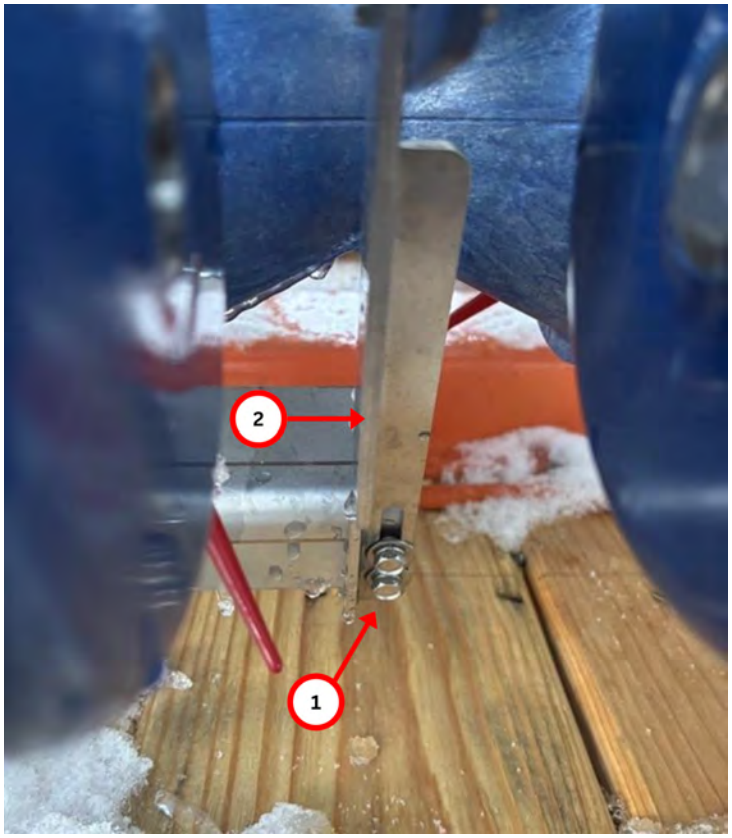


Figure 37.

Item	Part Number	Description
1	143.514	SCR,HCS 10-24 x 3/8 SS
2	2010.3685	SUPT,PEAR STOP SHOE
3	0001.1090	SCR,SCR 10-32 x 3/8 SS

Adjust the PRO Front Rollers Height & Width

The distance between the orient rolls and the front rolls can be adjusted. The front roll assembly is attached to the front roll open fork **[2010.9086]** with front roll open adjustment **[2010.9021]** attached to the front roll support bar **[3370.3007]**. Loosen the 3/8-16 screw **[0001.0610]** at the top of the adjustment block and screw the 3/8-16 screw **[0001.0730.1]** in the front of the adjustment block in or out.

Tighten both of the top bolts. The ideal starting location for a medium sized pear is a .75" gap between the stop shoe adjustment link and front roll support bar. A larger gap is required for bigger pears, and a smaller gap is required for small pears. Refer to **[Fig. 39]** within this same section.

Figure 38.

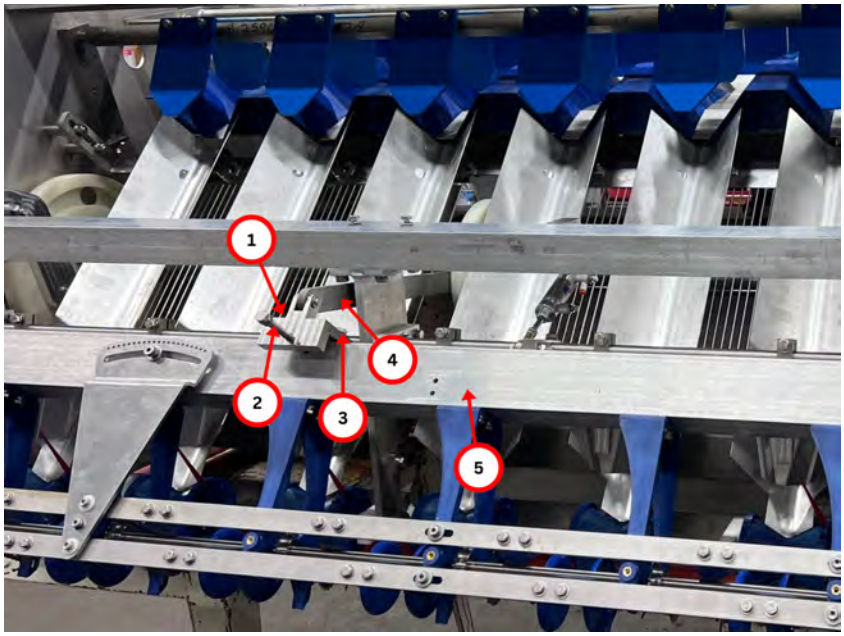
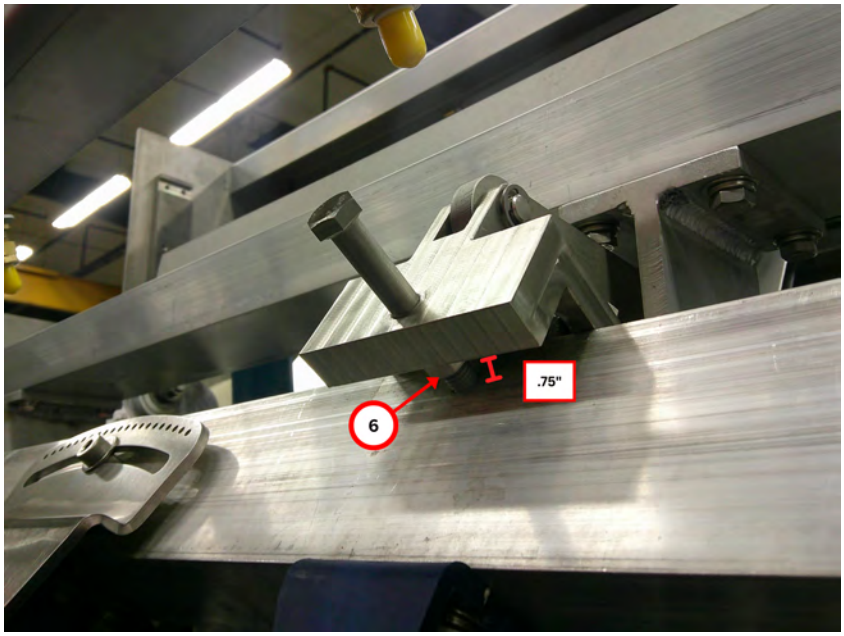


Figure 39.



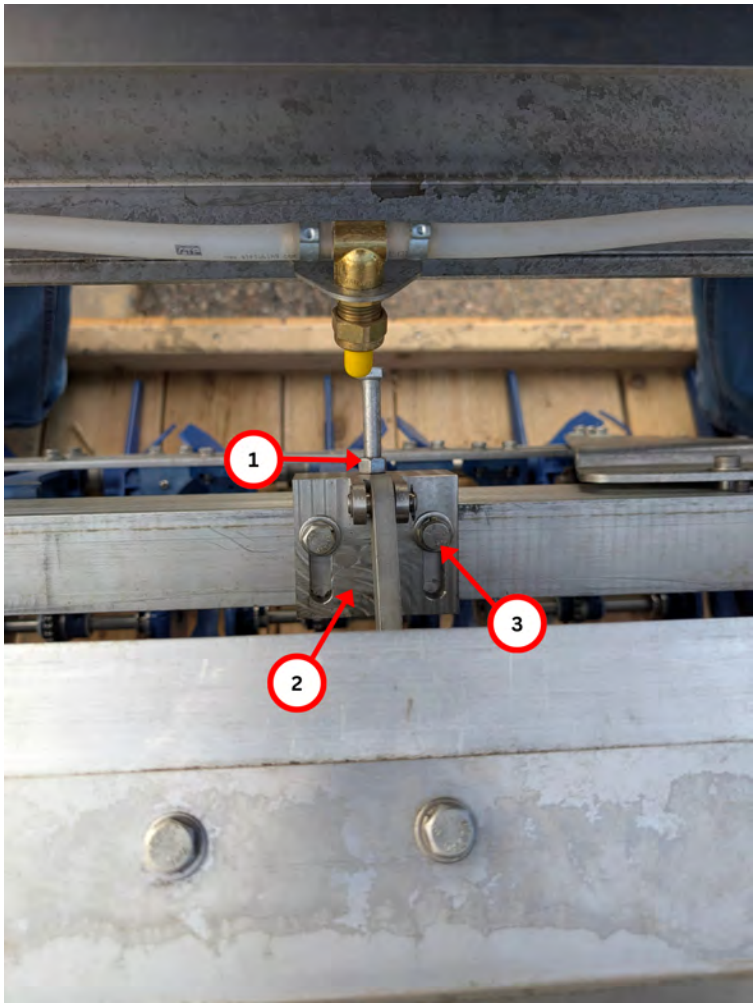
Item	Part Number	Description
1	2010.9021	ADJ,ROLL OPEN
2	0001.0730.1	SCR,HCS 3/8-16 x 2 3/4 SS *
3	0001.0610	SCR,HCS 3/8-16 x 1 1/4 SS *
4	2010.9086	ARM,FRONT ROLL OPEN SHORT PAN
5	3370.3007	SUPPORT,FRONT ROLL
6	0001.5220	NUT,HX 3/8-16 x 9/16 SS

Roll Open Adjustment

Jog the machine until the transfer cups move to the full up position. The roll open should be closed at this point. Hand crank the machine until the transfer cups just begin to move down.

At this point, the front and rear orienting rolls **[2010.3620.800 & 2010.3784.1]** should just begin to open. If they do not, loosen hex nut **[0001.5220]** and two hex screws **[0001.0610]**. Adjust roll open bracket **[2010.9021]**. Then, re-tighten the two screws and hex nut. Reference **[Fig. 39]** from the previous section on adjusting the PRO front rollers width and height.

Figure 40.



Item	Part Number	Description
1	0001.5220	NUT,HX 3/8-16 x 9/16 SS
2	2010.9012	SUPT,PEAR ORIENT ROLL
3	0001.0610	SCR,HCS 3/8-16 x 1 1/4 SS*

Orientor Alignment

Use the front roll adjustment width lever **[2010.3694]** to set proper per pear size. Adjust width of disks in or out by loosening the middle nut **[0001.0330]** then move the adjustment lever left to right. Center the adjustment lever for medium pear intake. Move the adjustment lever to the left for large pears. Move the adjustment lever to the right for smaller pears.

The distance between the front orientor rolls **[2010.3620.800]** may be adjusted by sliding the front roll adjustment lever back and forth to open or close this gap. Larger pears may need the front rolls more open and smaller pears may need the front roll less open. Ideal starting point for medium sized pears will be in the center of the adjustment range.

Figure 41.

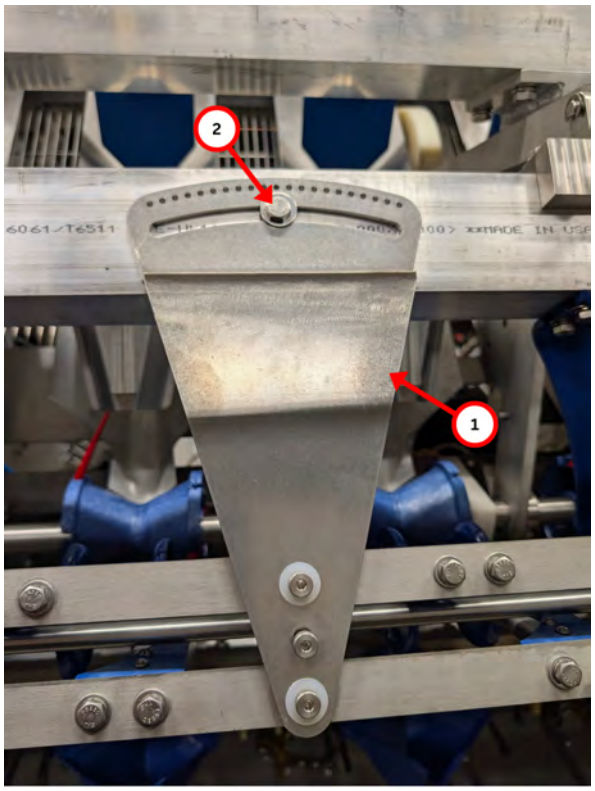
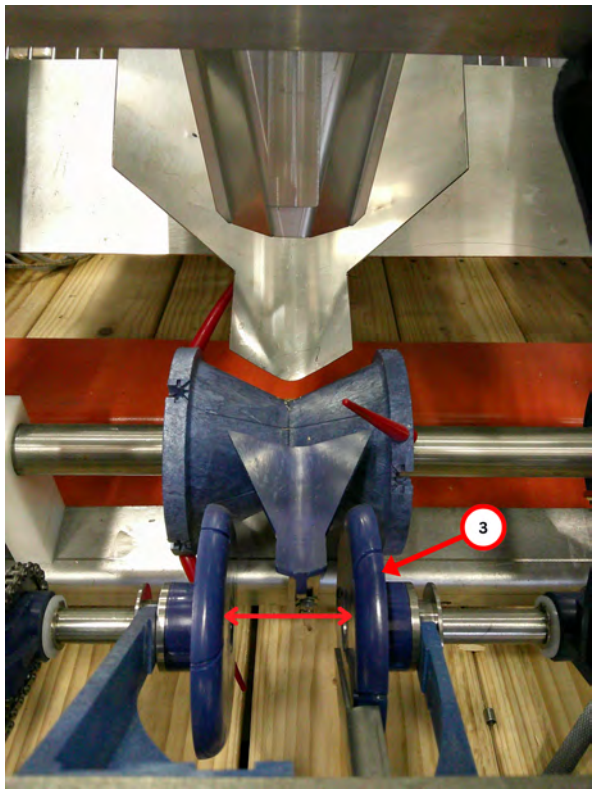


Figure 42.



Item	Part Number	Description
1	2010.3694	LEVER,FRONT ROLL ADJ WIDTH
2	0001.0330	SCR,HCS 5/16-18 x 1 SS
3	2010.3620.800	ROLL,FRONT ORIENTOR

Orientor Synchronization

Adjustment of the transfer position at the end of the down stroke is accomplished by loosening the clamping screw **[0001.3781]** in the transfer finger collar **[3370.1978]**. Rotate the shaft assembly while holding the finger collar in contact with the transfer finger **[3370.1521]**.

When the corrected down position of all (6) six transfer fingers **[3370.1935]** has been established, tighten clamp screw. Check safety torsion spring load by pushing down on the fingers to rotate the shaft in the stationary actuating lever. When down pressure on the fingers is released, the shaft should just rotate back freely until the lever contacts the stop collar bracket **[3370.1984]**. To correct safety spring loading, adjust stop collar **[3370.1978].**

The transfer finger linkage **[3370.1881]** needs to be adjusted vertically by loosening the transfer finger collar and the clamping screws, shifting the finger shaft bar **[3370.1522]** left or right.

Figure 43.

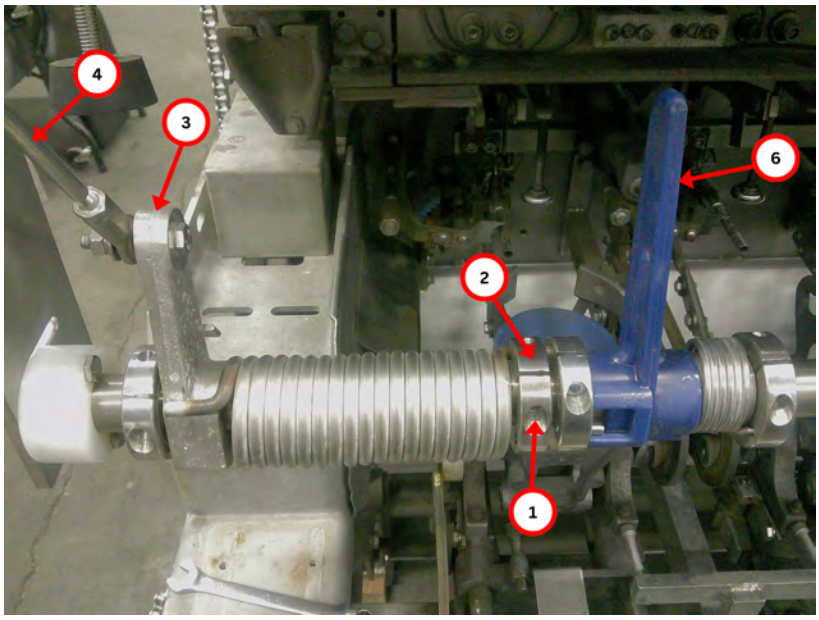
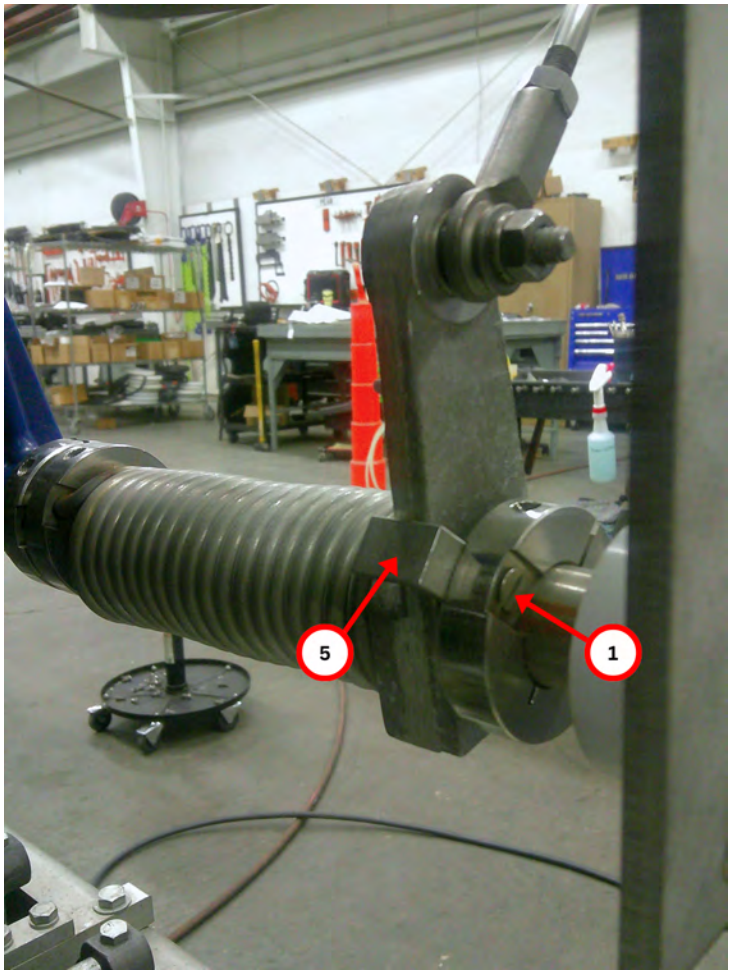


Figure 44.



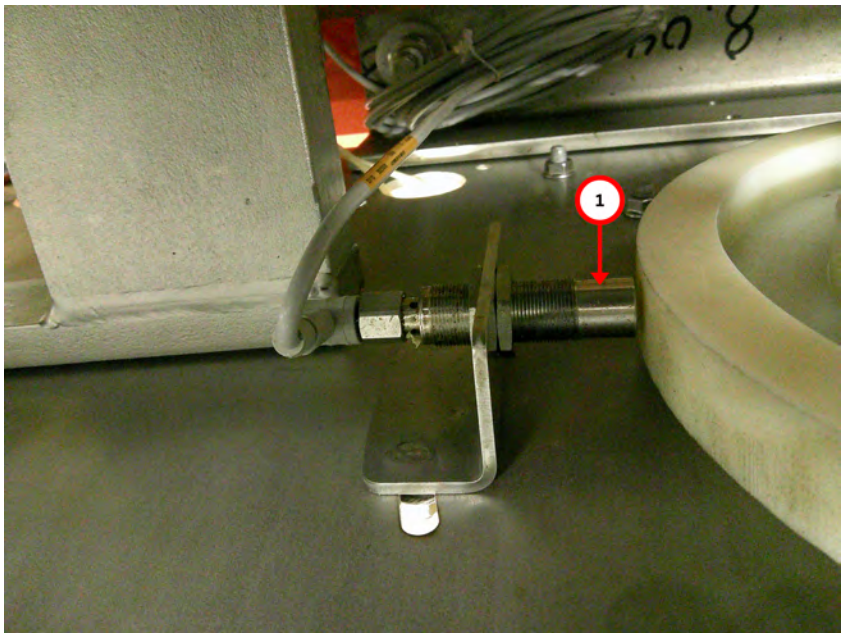
Item	Part Number	Description
1	0001.3781	SCR,FHMS 10-23 x 5/8 SS
2	3370.1978	COLLAR,TRANSFER FINGER REF
3	3370.1521	LEVER ASSY,TRANSFER FINGER
4	3370.1881	LINKAGE,TRANSFER FINGER
5	3370.1984	BRACKET,STOP-TRAN FINGR YIELD
6	3370.1935	FINGER, TRANSFER PLASTIC

Individual finger adjustments should only be made to obtain uniform, parallel positioning with the other finger assemblies on the shaft and to maintain uniform finger torsion spring tension. Finger spring load can be determined by hand, actuating each finger for comparison loading. Correct those that are too light or too heavily loaded, when compared with the average working tension. The finger pressure on the pear should be strong enough to push it through the transfer cups down into the peeler feed cup, but light enough for the finger to rotate on the shaft without damaging the pear at the bottom of the transfer stroke.

NOTE
For optimum pear transfer efficiency to the pear peeler, correct positioning of the peeler feed cups must be maintained. Proper selection to cup inserts for the size of pears being processed is also essential.

If the drive sprocket, drive cam and chain have been installed in the correct positions, the induct sensor **[9502.8151]** will be correctly timed.

Figure 45.



Item	Part Number	Description
1	9502.8151	SENSOR,INDUCT 3 OR 2W QD

Orientor Alignment

The orientor must be aligned so that the feed cups, transfer cups **[3370.1612.L and 3370.1612.R]** and orient rollers **[2010.3784.1]** are all in a vertical line. This will give each pear a straight-line travel to its feed cup. Jog the machine until the transfer bar is at its highest position. Next, adjust the front rolls as close as possible together by sliding the front roll adjustment lever **[2010.3694]** all the way to the right. Reference **[Fig. 42]**.

The front rolls should be centered on the transfer cups. To adjust the front and orient roll side to side position, loosen the set collars **[0001.7706]**, on either side of the orientor-mounting shaft. Loosen the two set screws **[0001.2138]** fastening the orientor drive gear. Slide the entire orientor side to side until the front rolls are centered on the transfer cups. Tighten the set collars and drive gear mounting set screws.

Figure 46.

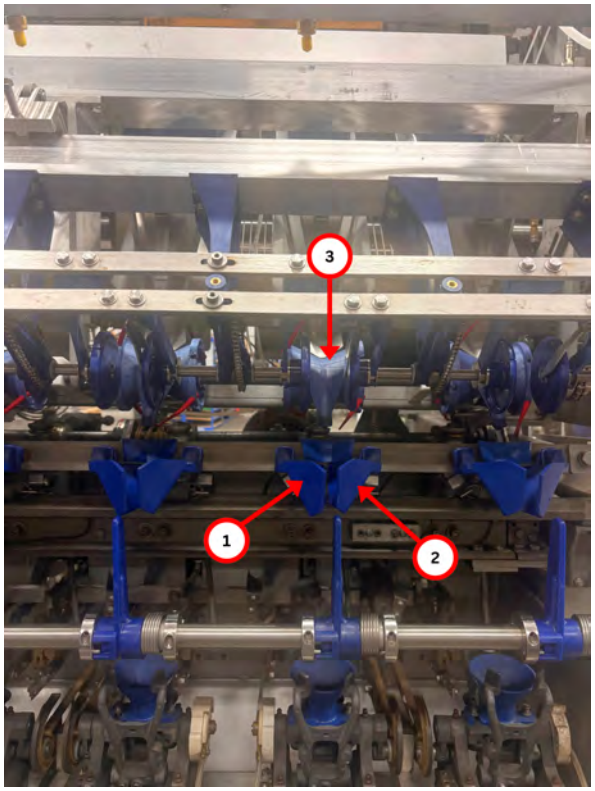
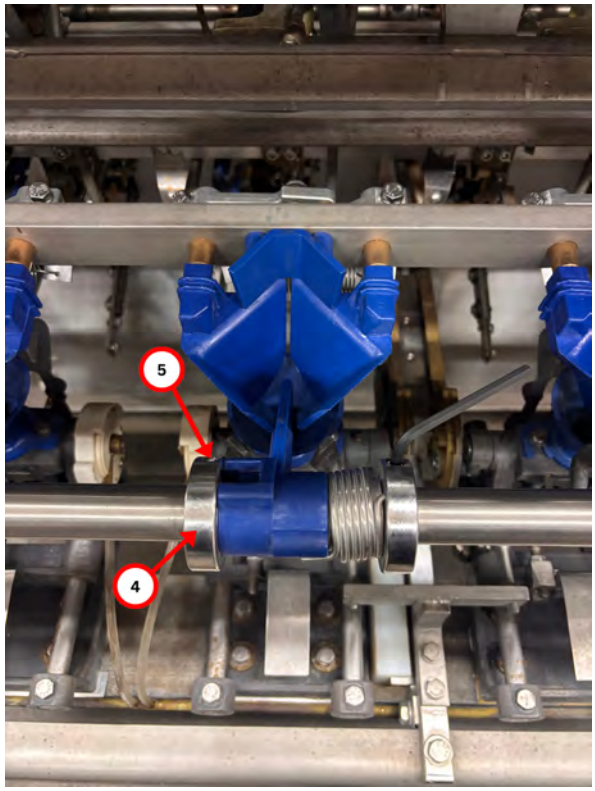


Figure 47.

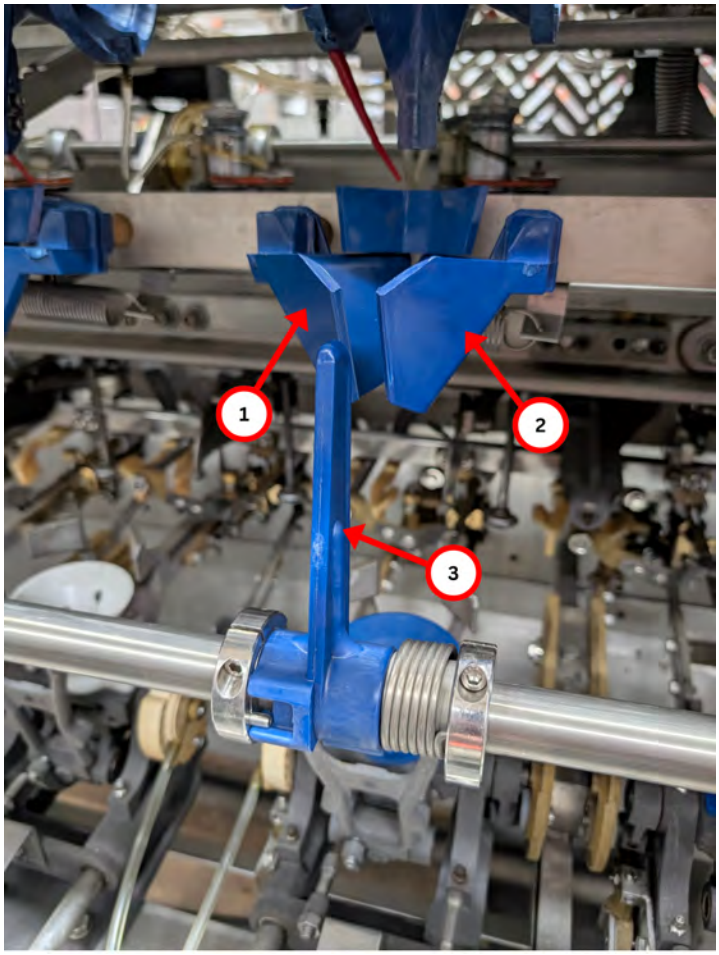


Item	Part Number	Description
1	3370.1612.L	CUP,TRANSFER LH
2	3370.1612.R	CUP,TRANSFER RH
3	2010.3784.1	ROLLER,ORIENT
4	0001.7706	CLR,DBLSPLIT 1x 1 3/4 SS
5	0001.2138	SCR,SSS 10-32 x 1/2 SS

Transfer Fingers

Adjustment of the transfer finger bar **[3370.1881] [Fig. 42]** will vary, depending on the size of the pears and length of the stems. Pears with long stems will require finger pressure at the end of the transfer motion into the pear peeler feed cups. A long stem can force a pear out of alignment if it is not held down in the feed cups until the cup "clamping" fingers maintain control. A long soft pear will require a different adjustment that will not exert pressure at the end of the transfer stroke. The transfer finger stroke is fixed. To change finger contact angle and pressure on the pear it is necessary to select the proper shaft pivot bearing mounting slots.

Figure 48.



Item	Part Number	Description
1	3370.1612.L	CUP,TRANSFER LH
2	3370.1612.R	CUP,TRANSFER RH
3	3370.1935	FINGER,TRANSFER PLASTIC

NOTE
Please refer to the Timing (page 31) instructions in the Installation (page 24) chapter. When the lower set of mounting slots are used (required for medium to small pears) the connecting link mounting screw **[0001.0785]** should be installed in the lower, lever mounting hole.

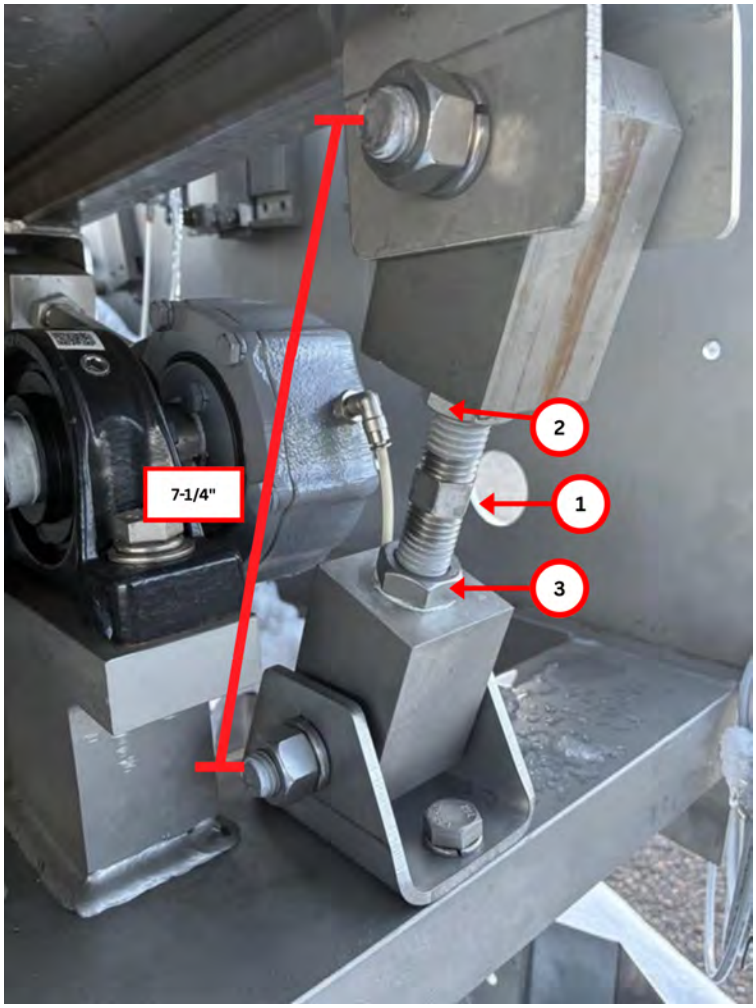
Shaker Pan Pitch

Loosen the two upper and lower nuts **[0001.5631.2 & 0001.5633]** to adjust the angle of the shaker feed pan, moving it up or down. Pears grown in different areas sometimes have different surface and shape characteristics that effect their movement or flow through the shaker troughs. To help control a possible tendency of over-feed, it may be desirable to lower the pitch of the shaker pan.

The forward, down pitch of the shaker pan also influences the flow of pears into the troughs. For the average pear feed, a standard pitch of 5 degrees has been established with the centered adjustable link **[3370.3056]** set at 7-1/4" centers.

A minimum setting of approximately 4 degrees is obtainable by adjusting the rear hangers to 6-3/4" centers. Once the optimum average pitch setting has been established, it should not have to be changed. The variable speed pulley will provide you with the necessary quick adjustment to compensate for the day-to-day pear changes that occur. Do not go below the 6-3/4" minimum pitch adjustment. The shaker pan assembly will contact the stationary frame.

Figure 49.



Item	Part Number	Description
1	3370.3056	LINK,4 IN ECCENTRIC DRIVE
2	0001.5633	NUT,HXJ 3/4-10 x 1 1/8 SS
3	0001.5631.2	NUT,HXJ 3/4-10 x 1 1/8 SS LH

Infeed System

Feeder Shaker Pan - Automatic Feeder Only

The feeder delivers pears to the Orientor. The level of pears in the shaker pan is controlled by setting the trip bracket **[2010.3720]** that rotates in front of the proximity sensor on the right side of the pan. The four sets of paddles **[2010.3816.001 & 2010.3814.001]** guide and move the pears into the feeder lanes. The last two sets of paddles, in the front of the Pear Roll Orientor, cingulate the pears into the orienting chutes so they can be fed through the orientor, one at a time.

WARNING
Lock-out and tag-out the machine before performing and maintenance or service. Failure to do so may cause serious bodily injury.

WARNING
Read and understand the Safety (page 10) procedures before attempting to operate or maintain the machine. Failure to do so may result in serious bodily injury.

Set the feeder pear level by first rotating the sensor support shaft **[3370.3004]** until the sensor plate **[2010.3744.800]** is about one medium pear diameter or approximately 2.5" (64 mm) from the feed reservoir **[2010.9054]**. A block or similar item may need to be put in place to hold the shaft in this position.

Adjust the sensor shaft support/control target **[3370.3004]** by loosening the two socket caps **[0001.1101]** located on the trip bracket **2010.3720**. Adjust the bracket so that it sits 1/4" below the induct sensor **[9502.8151]**.

Figure 50.

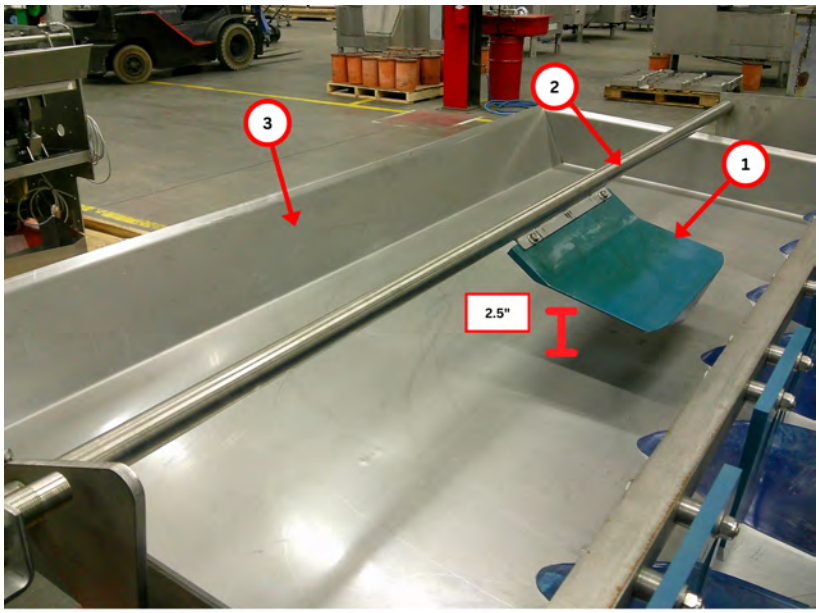
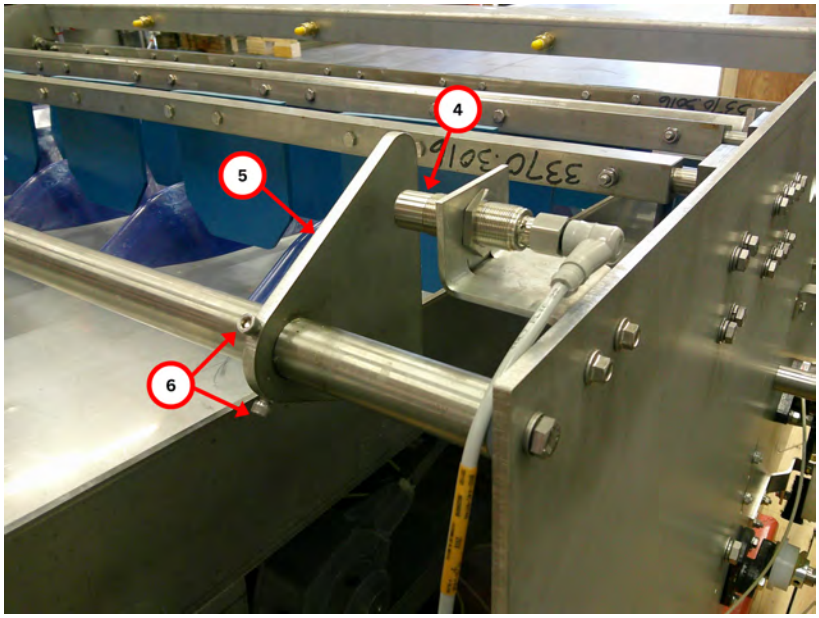


Figure 51.



Item	Part Number	Description
1	2010.3744.800	PLATE,PLASTIC SENSOR
2	3370.3004	SUPPORT,SENSOR SHAFT
3	2010.9054	RESERVOIR & SUPPORT AY,SHORT
4	9502.8151	SENSOR,INDUCT 3 OR 2W QD
5	2010.3720	BRKT,TRIP
6	0001.1101	SCR,SCS 10-32 x 1/2 SS

NOTE
For optimal feed efficiency, the pear level in the shaker pan should be a single layer of pears covering around 90% of the pan.

Arrange the angle of the pear control shafts **[3370.3016 & 3370.3017]** so the paddles are at their highest point, where a pear can easily move under it. To do this you must loosen the 5/16-18 x 1 lock screw **[0001.0330]** that clamp down the air cylinder levers **[2010.3723.1]** attached to the control bars.

Next, set the position of the two front sets of paddles to singulate one pear between the paddles. To accomplish this, set the #4 set of paddles at the edge of the shaker pan when it is down or in the closed position. Loosen the lock screw on the air cylinder of the machine that mount the #3 paddle assembly. Entire paddle assembly can move front to back in the machine to set a gap between #4 paddle and #3 paddle to be approximately one pear length.

Figure 52.

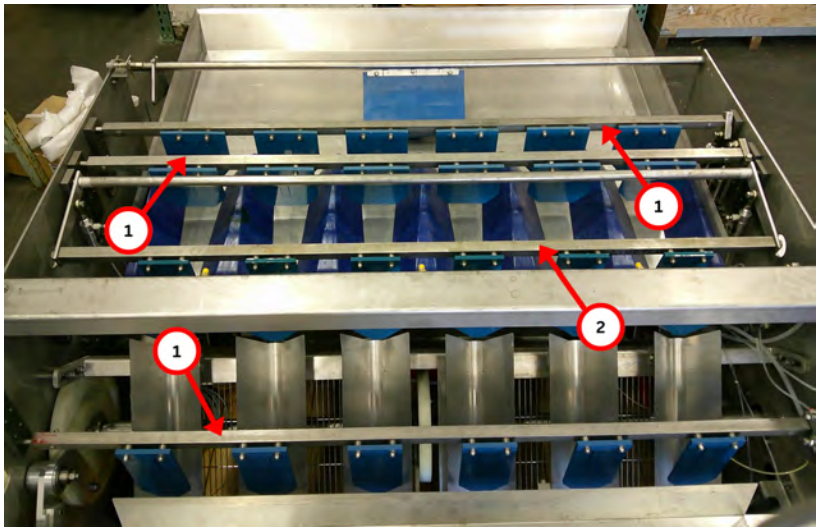
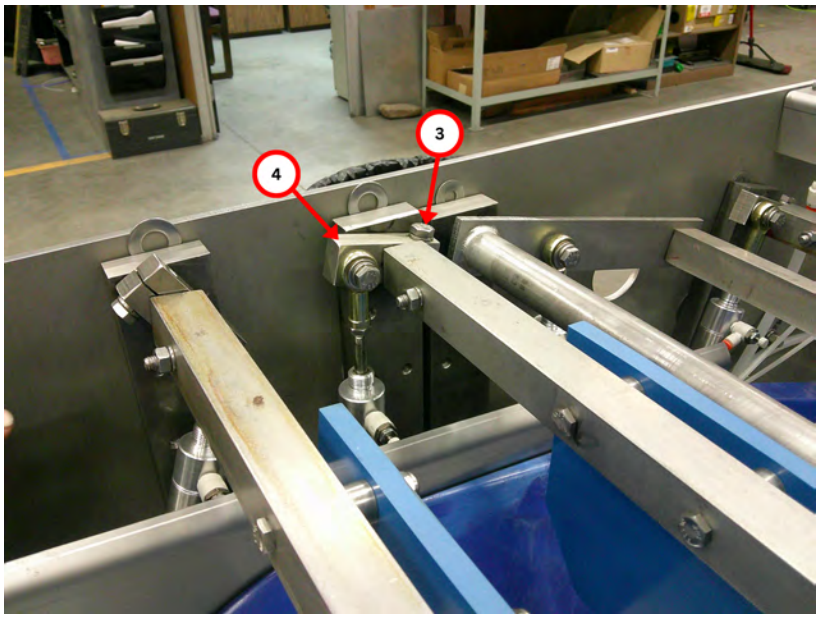


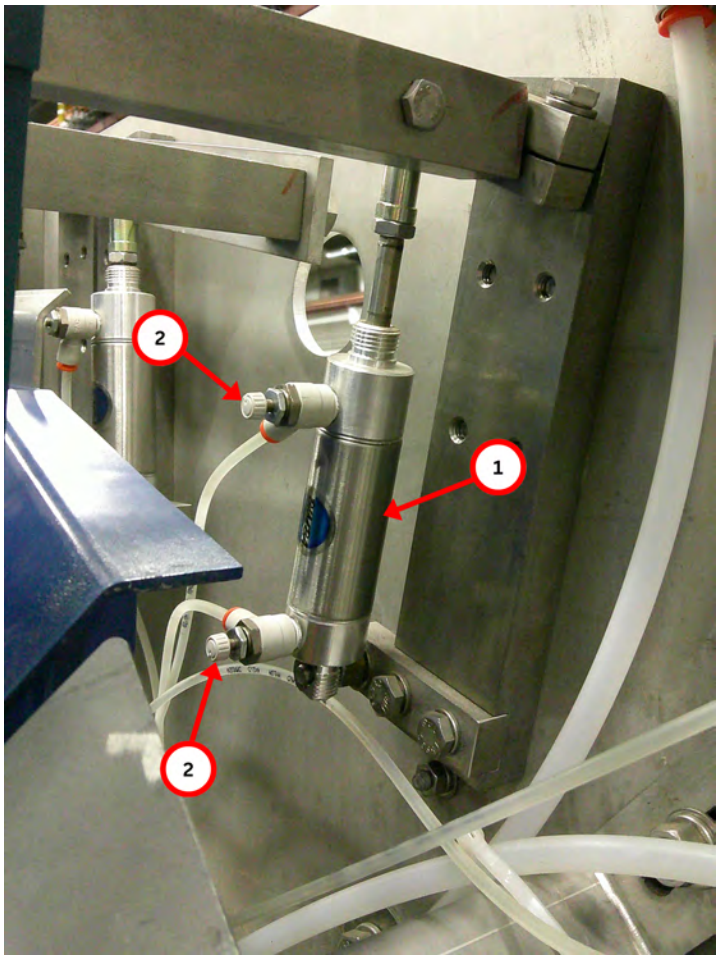
Figure 53.



Item	Part Number	Description
1	3370.3016	SHAFT,PEAR CONTROL
2	3370.3017	SHAFT,PEAR CONTROL MID
3	0001.0330	SCR,HCS 5/16-18 x 1 SS
4	2010.3723.1	LEVER,1 1/4 5/16-18 SS

Set the air flow control valves **[0007.2005]** on the air cylinder **[0007.4325.2]** for each paddle set to allow the paddles to move at a speed that allows pear movement, singulation, and smooth operation. **Do not allow the paddle set to bang against the air cylinders**.

Figure 54.



Item	Part Number	Description
1	0007.4325.2	BIMBA,AIR CYL 1.06D x 1.05
2	0007.2005	FTG,PAEN 2MPT x 2.5TUQR * FLOW

NOTE
Air cylinder speed is regulated by the air flow control valves on the exhaust side of the air cylinder.

Electrical Installation

WARNING
While the machine is powered on and the user is following all national and local electrical codes for working on a live panel (480VAC), refer to control panel featured throughout this section.

Electrical installation Power Input: 460-480VAC, 3-phase, 50/60Hz, 30A Service use cable that can handle power requirements

- 460/480VAC
- 3-phase, 50/60Hz
- 30A service use cable that can handle power requirements.

Machine FLA: 4.6A

Figure 55.

Run power cable through the cable gland by undoing the bulkhead. Insert the cable through the bulkhead first, then run the cable through the bushing in the middle of cable gland, located within the bottom of the electrical control box.

Connect power to the EMI filter which is located inside the Electrical Control Box. Connect the input/output terminals of the three-phase EMI filter through the terminals and fasten them with the recommended torque below.

Programming the PRO

Limit the number of terminals to the same connection point to one.

The three-phase EMI filter's input/output terminal tightening recommended torque is 2 to 2.3 N - m. Once the power cord is attached, tighten the bulkhead of the cord grip to lock the power cable in place.

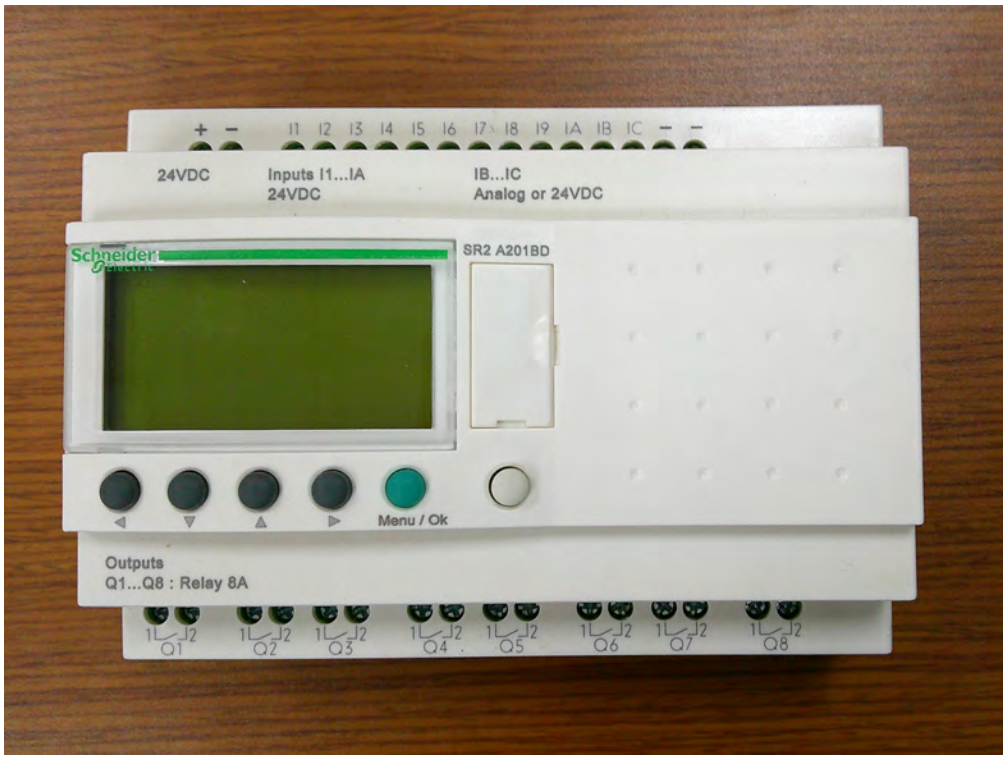
Figure 56.

Control panel located in PRO electrical box.

The control panel device is a programmable smart relay that controls the function of the PRO machine. Its main function is to control the timed sequence of the fruit flow to allow the fruit to be oriented and transferred seamlessly with the existing pear machine.

In addition, the unit controls the timing of the PRO's oil and grease systems.

Figure 57.



Control panel for PRO machine.

Step 1

To get to the menu tree from the home screen, press the green Menu/Ok button. From here, the panel will bring you to the following menu on the small green screen. Circled on the control panel is the green *Menu/Ok* button.

Figure 58.

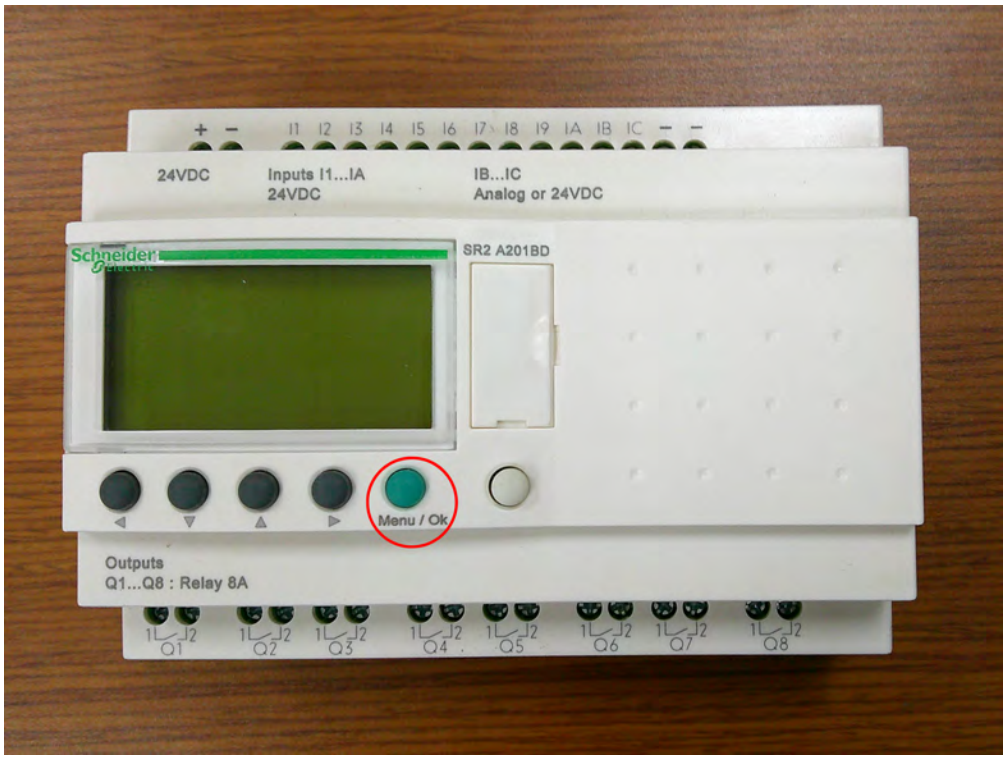


Figure 59.

Select "Parameter" option.

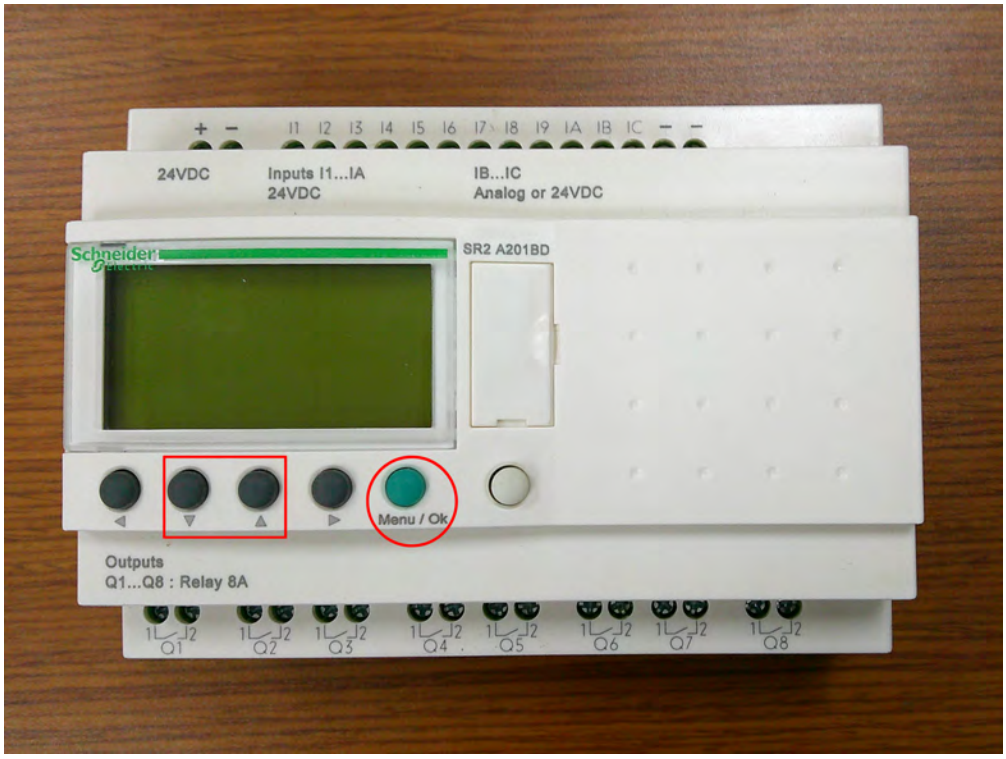
Step 2

Select Parameter by using the Up and Down arrows on the panel. After the user selects Parameter, it will begin to flash on the screen. Once the phrase begins to flash, press the green Menu/Ok button.

After pressing the Menu/Ok button, the small green screen with start to show a selection of variables for the user to choose from and change, as seen below.

From the variable settings screen, the user will see the variable name blinking. This means the user is changing the variable to select on the control panel.

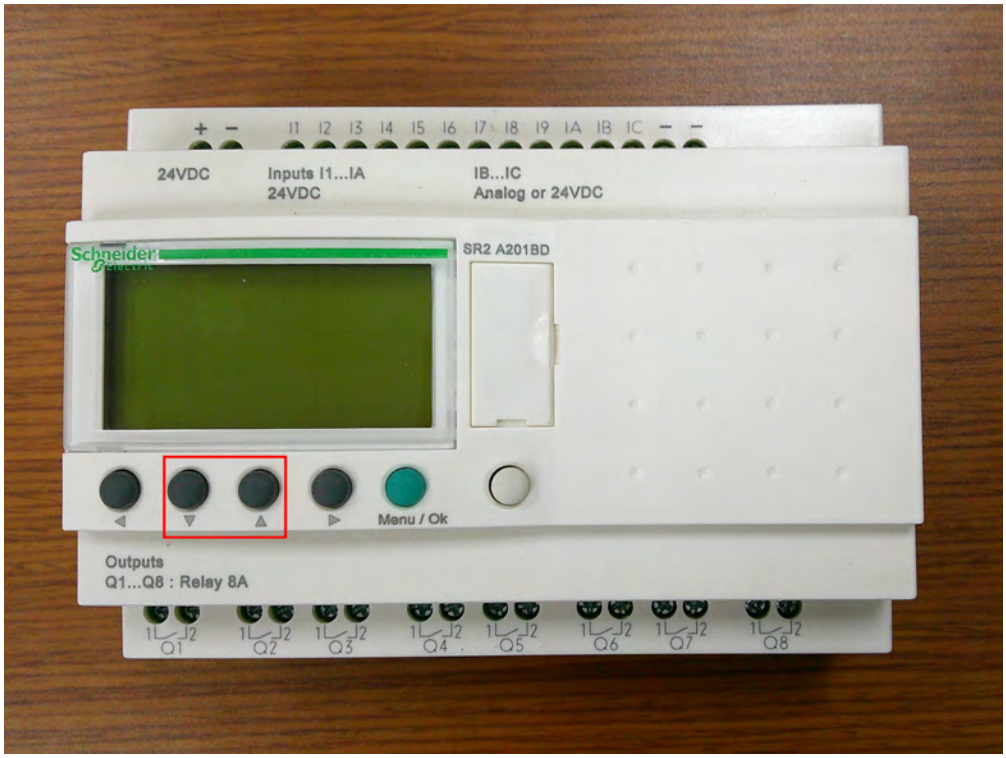
Figure 60.



Step 3

To select a variable, hit the up and down arrow button until the desired variable is found.

Figure 61.



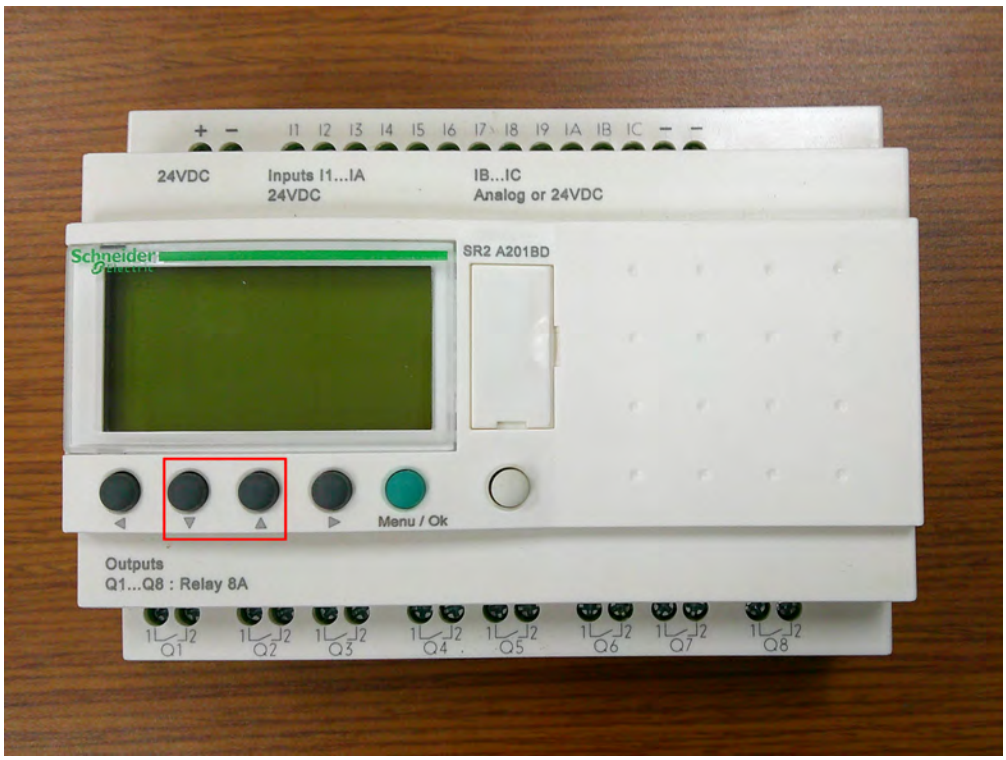
Use the up and down arrow buttons to select variables.

Step 4

Once the proper TT is located, press the right arrow button to select the timer.

This step will allow the time on the bottom left of the screen flash, meaning the user is now able to adjust the timing on the control panel.

Figure 62.



Reference the Relay Timer Chart below for setting guidance.

NOTE
The term "TT" is used to describe the timers that are programmed into the control panel, located in the electrical control box.

Table 2. Relay Timer Chart

Timer Name	Min Setting	Description
T3	001.6 Sec	Flap 1 & 3
T4	001.0 Sec	Flap 2 & 4
T5	000.6 Sec	Transfer 1 (Chute from Shaker)
T6	001.0 Sec	Transfer 2 (Chute to Orientor)
T8	00:01 H:M	Grease System
TA	00:01 H:M	Oil System

Step 5

Adjust the time with the up and down arrow buttons. Each time the user presses the buttons, the time will increase or decrease by a tenth of a second.

Figure 63.

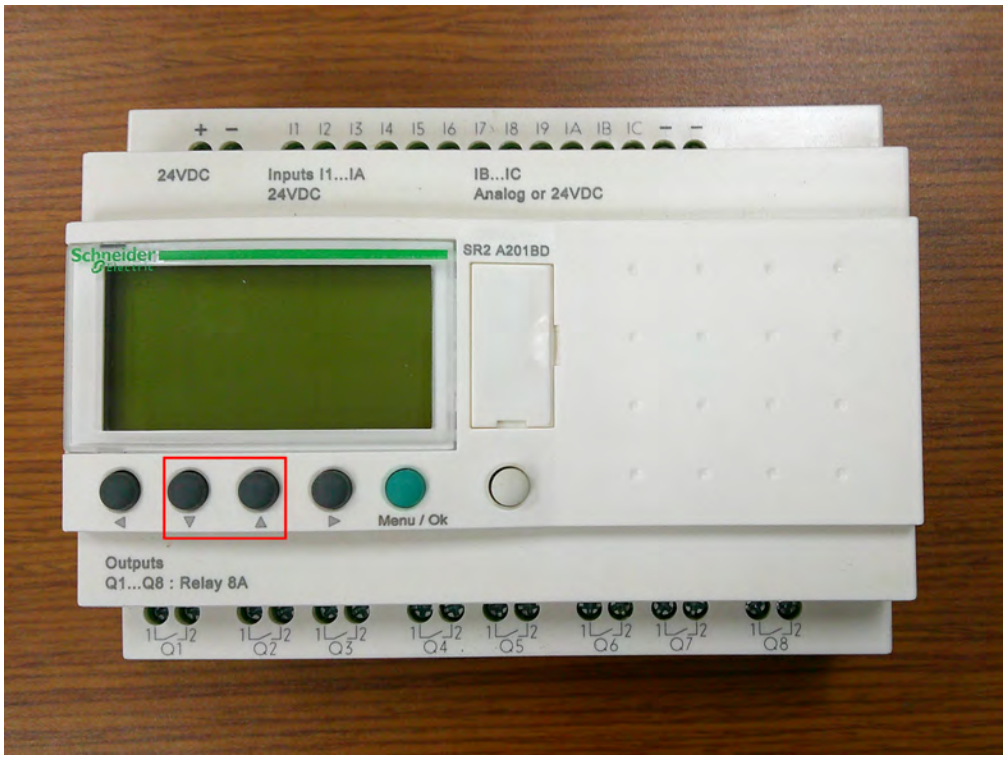


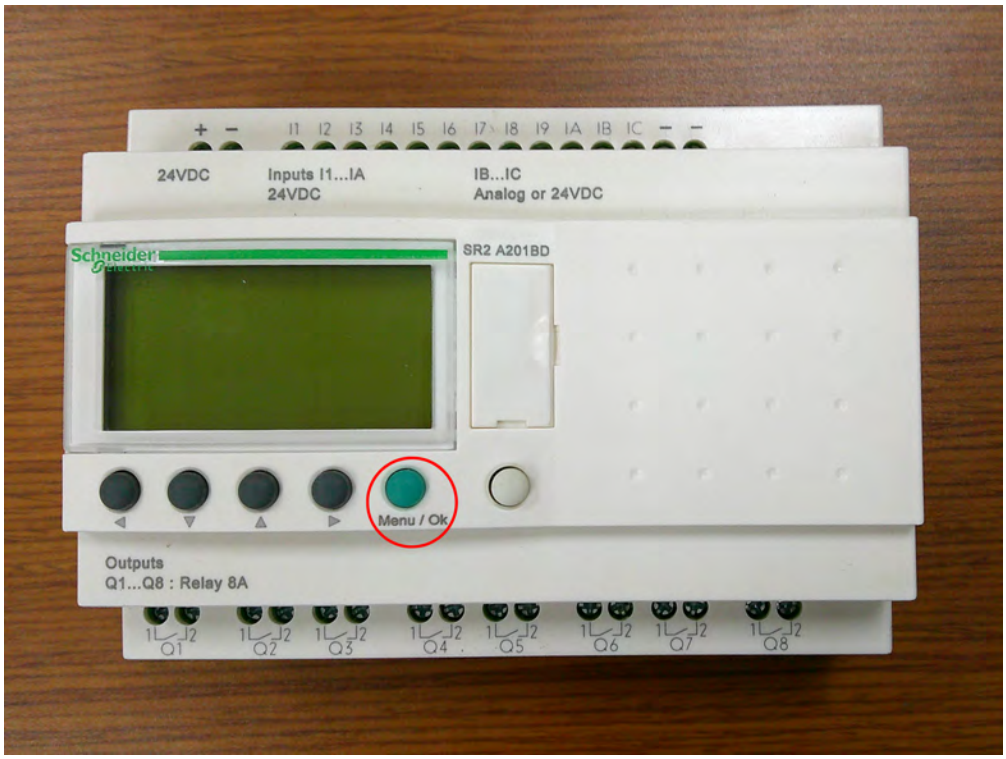
Figure 64.

Example of timer screen from control panel.

Step 6

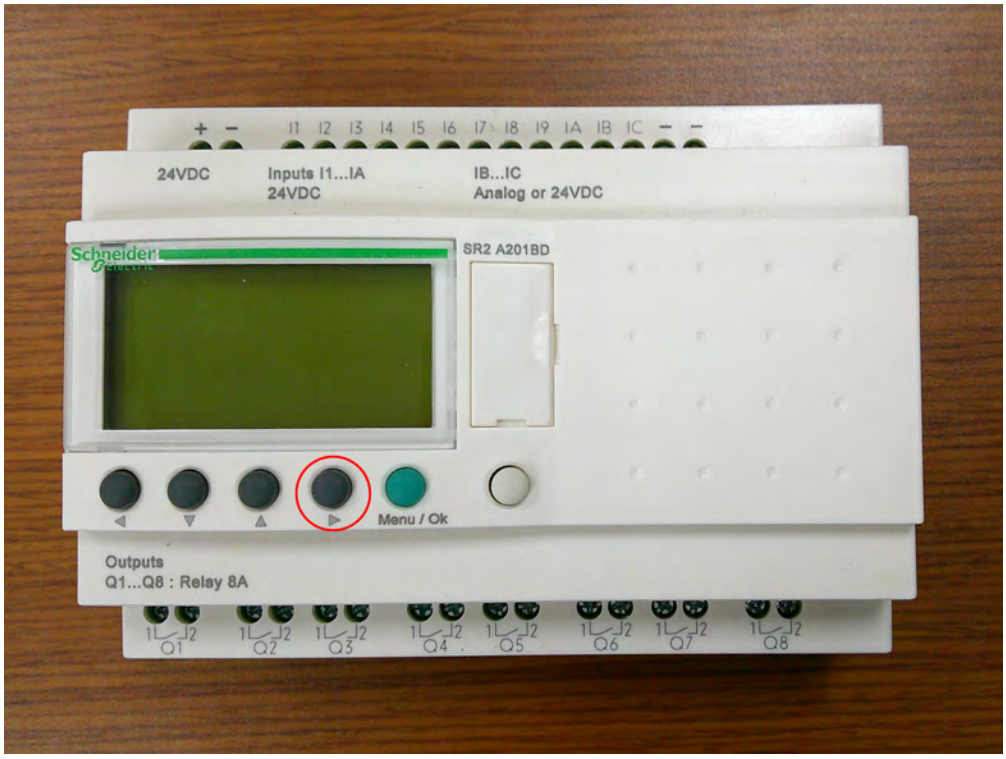
Once the user has adjusted the time needed, press the green Menu/Ok button. From there, the screen will prompt the user to confirm changes. Select desired answer by pressing the green button.

Figure 65.



Press the green Menu/Ok but to advance with the time changes on control panel box.

Figure 66.

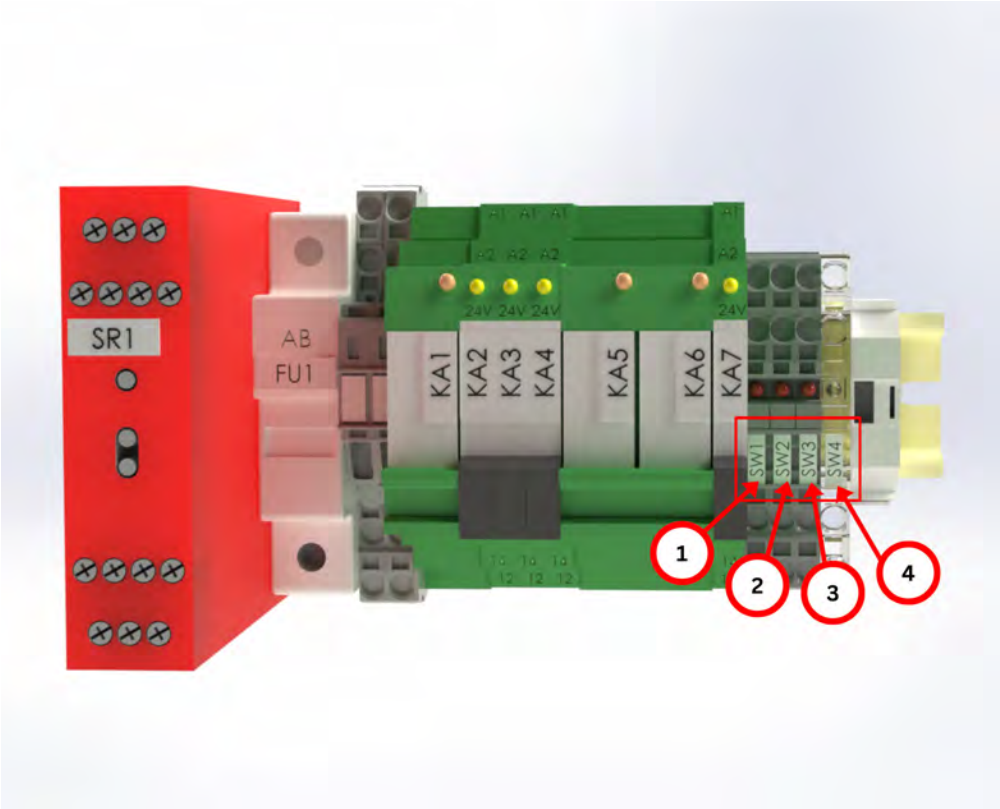


To change to another timer, press the right arrow button. This will select the variable to be changed instead of the time being changed.

NOTE
Repeat steps 1 through 6 above. When done making changes, hit the green Menu/Ok button to return to the home screen.

Indicator Lights for the Doors

Figure 67.



The door sensors are linked to the SW lights labeled 1 through 4:

Item	Label Scheme	Description
1	SW1	Left front door
2	SW2	Right front door
3	SW3	Left back door
4	SW4	Right back door

Figure 68.

Indicator lights are visible through the window of the main control box on the back side of the machine.

Guarding Installation

This section describes the doors and guards installed on the PRO machine to enhance safety and provide adequate access for maintenance and inspections.

Machine Doors & Guards

The PRO is equipped with sliding and removable doors and covers, as well as fixed guards. The following doors and guards are provided with the machine:

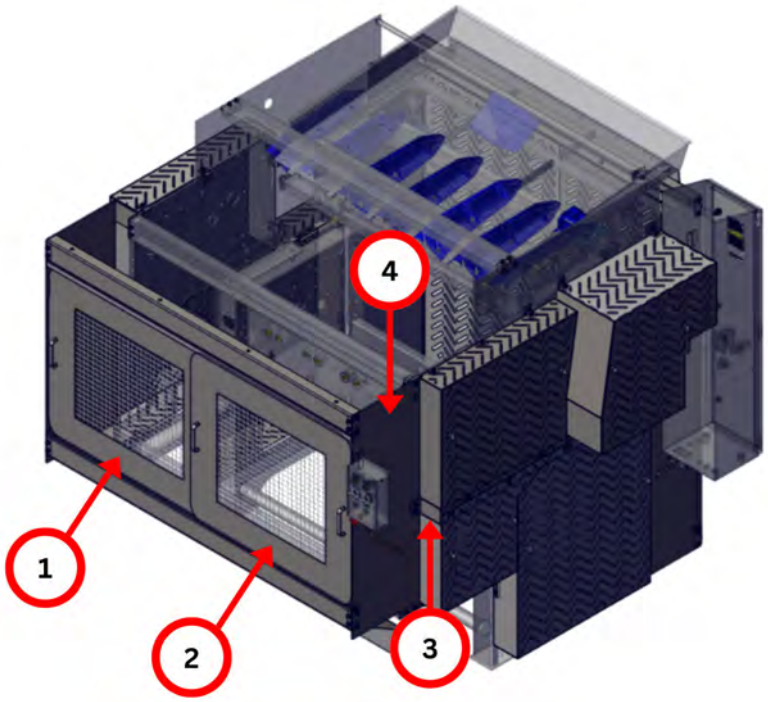
- All four guarding locations are on the front, rear, left and right sides of the PRO. The front and rear doors **[2023.0015, 2023.0016]** in **[Fig. 69]** & **[2023.0030, 2023.0031]** in **[Fig. 70]** slide open and are set on the headers/tracks.
- Once tracks are set on the machine, attach the standoff bar **[2023.0021]** in **[Fig. 69]** to the right-side guarding.
- After installing the standoff bar, place the headers and tracks on machine first prior to adding the doors/guards to the machine. Then install brackets for guarding **[2023.0018, 2023.0019]** in **[Fig. 73]** & **[2023.0020]** in **[Fig. 74]** with install screws. Only the double hole bracket **[2023.0020]** in **[Fig. 74]** will need to be drilled into the location on the frame of the standard pear machine. See dimensions graphic below for bracket location.

- The front sliding doors have access to the peeling area of the machine, in case of fruit jam incidents.
- The rear sliding doors are removable for daily maintenance purposes. From here, only maintenance has access to oiler/grease tanks that need occasional operational maintenance.
- Anytime the front or rear doors are opened while the machine is on, the blue jog switch with illuminate blue on the operator's station. From there, the operator will need to close doors and restart the machine.
- The right-side guarding can be taken off to gain access to a speed control for the PRO. Both left and right side can be taken off for annual overhaul.
- Sensors **[9502.3103.001A & 9502.3103.001B]** in **[Fig. 72]** are located on the side panels of the machine for the front and rear sliding doors that are wired to detect door movement while machine is operating.

NOTE
Refer to **[Figs. 69 through 76]** below for guarding/bracket positions, as well as the**[2023.8015]** CE Guard Assembly, PRO (page 158) drawing in the Drawings chapter.

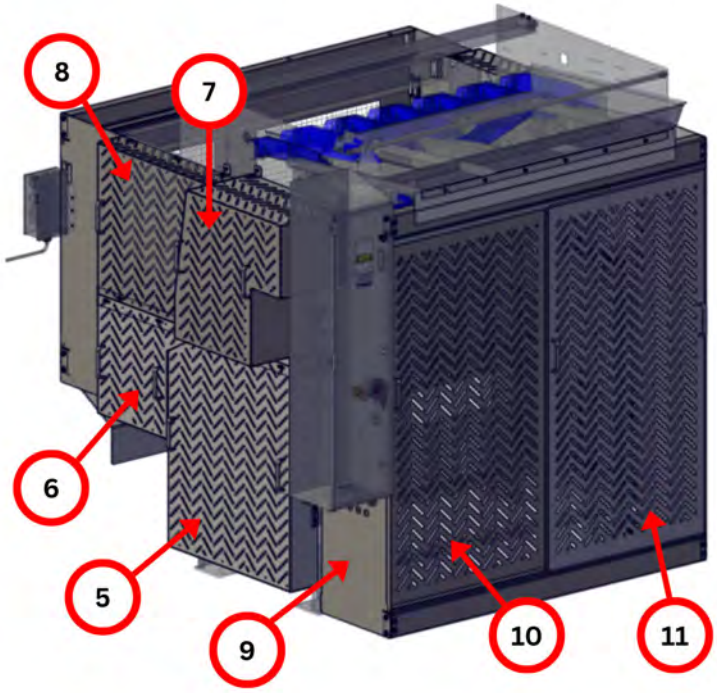
Machine with All Guards Installed

Figure 69.



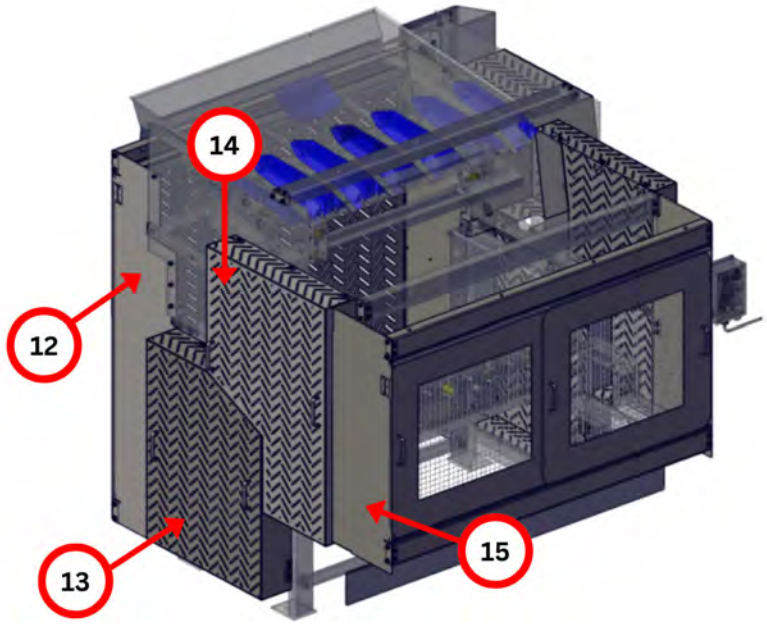
Item	Part Number	Description
1	2023.0015	GUARD,PRO CE FRONT DOOR LEFT
2	2023.0016	GUARD,PRO CE FRONT DOOR RIGHT
3	2023.0021	GUARD,PRO CE STAND OFF
4	2023.0007	GUARD,PRO CE RIGHT WALL

Figure 70.



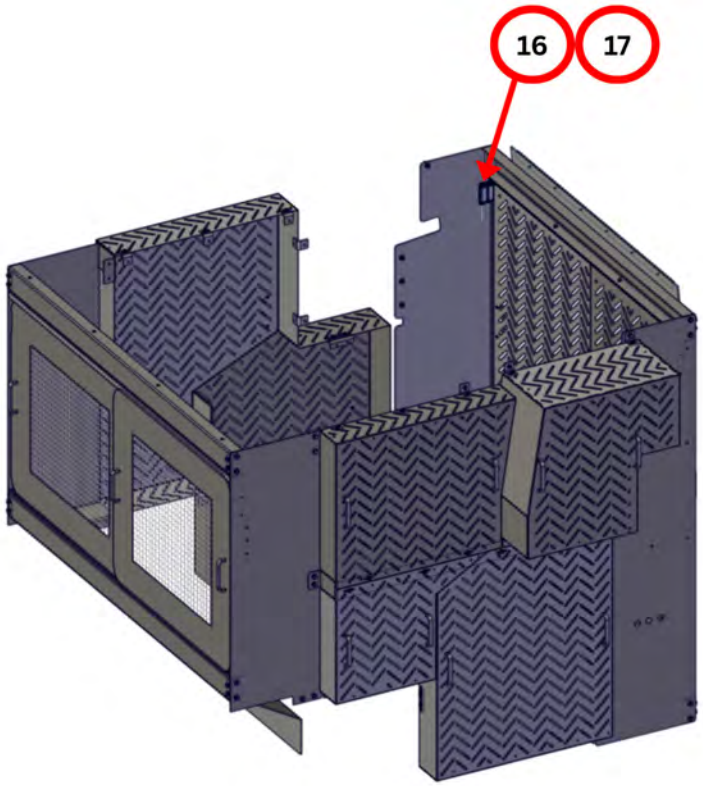
Item	Part Number	Description
5	2023.0003	GUARD,PRO CE LOWER RIGHT
6	2023.0004	GUARD,PRO CE LOWER RIGHT
7	2023.0005	GUARD,PRO CE UPPER RIGHT
8	2023.0006	GUARD,PRO CE UPPER LEFT
9	2023.0022	GUARD,PRO CE REAR LEFT PANEL
10	2023.0030	GUARD,PRO CE REAR LEFT DOOR
11	2023.0031	GUARD,PRO CE REAR RIGHT DOOR

Figure 71.



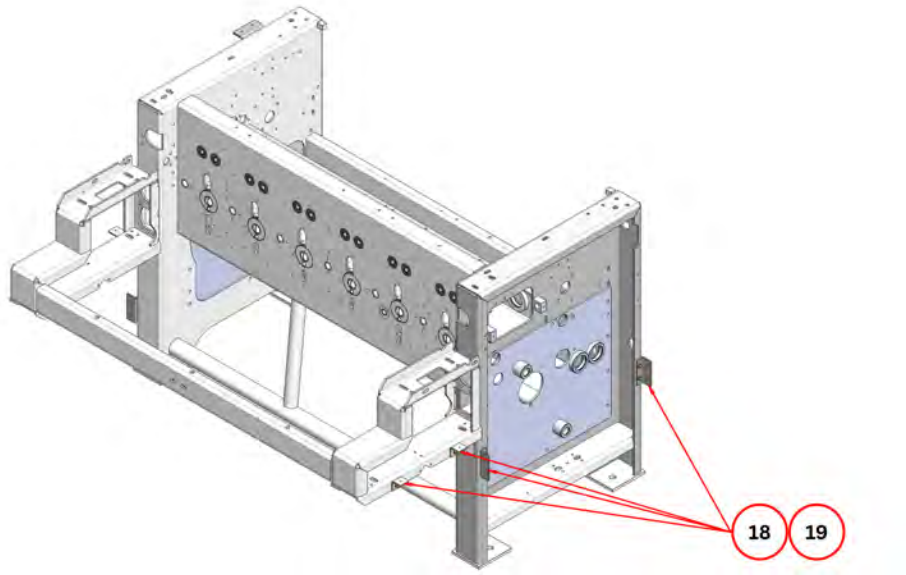
Item	Part Number	Description
12	2023.0023	GUARD,PRO CE REAR RIGHT PANEL
13	2023.0001	GUARD,PRO CE LOWER LEFT
14	2023.0002	GUARD,PRO CE UPPER LEFT
15	2023.0018	GUARD,PRO CE LEFT WALL

Figure 72.



Item	Part Number	Description
16	9502.3103.001A	SW,GUARD PAIR MAG SAFETY
17	9502.3103.001B	SW,GUARD PAIR MAG SAFETY

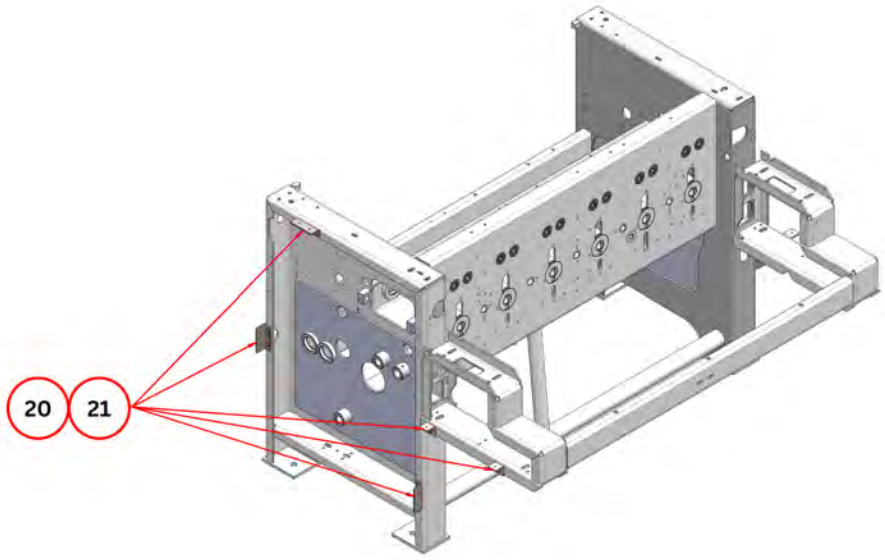
Figure 73.



Right side brackets on frame.

Item	Part Number	Description
18	2023.0018	GUARD,PRO CE BRACKET
19	2023.0020	GUARD,PRO CE DBL BRACKET

Figure 74.

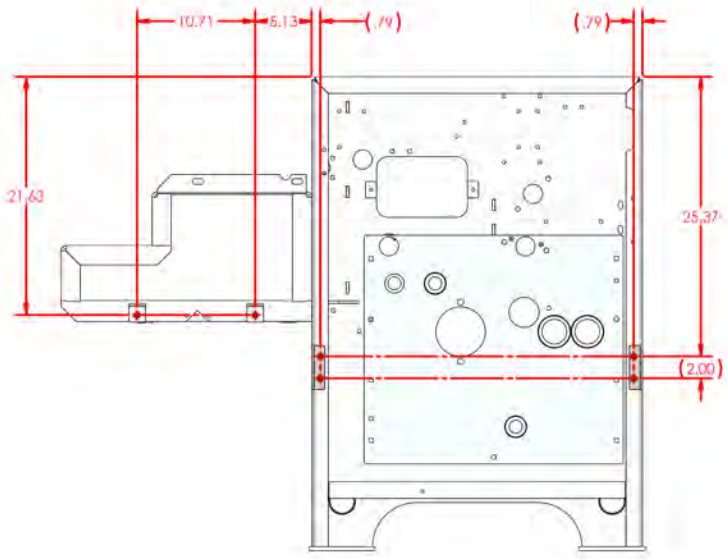


Left side brackets on frame.

Item	Part Number	Description
20	2023.0018	GUARD,PRO CE BRACKET
21	2023.0020	GUARD,PRO CE DBL BRACKET

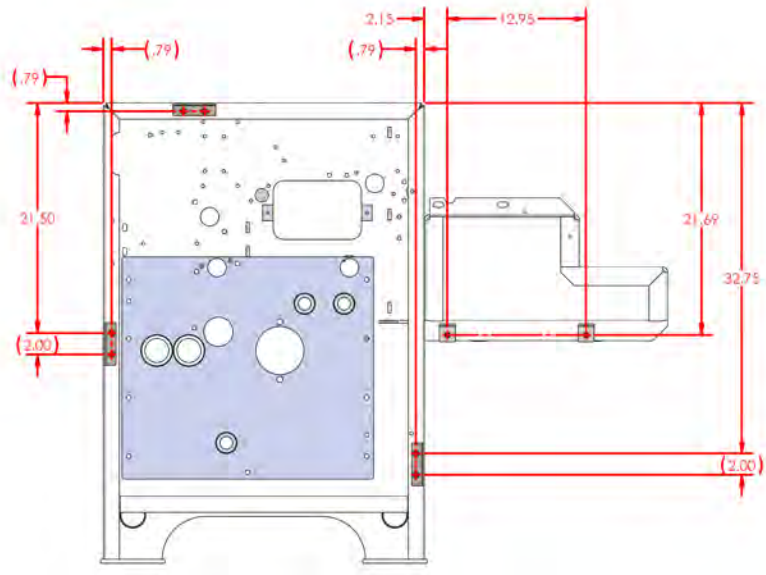
Dimensions of Bracket Placement

Figure 75.



Pear frame with brackets - right side dimensions.

Figure 76.



Pear frame with brackets - left side dimensions.

Operation

The PRO is supplied with a set of CE rated guarding which minimizes risk of injury. Where not covered by tool removable guards, there are interlocked doors which stop machine function when opened. All interlocks must be satisfied to restore function to the machine.

Figure 77.

Figure 78.

NOTE
Atlas Pacific provides either a stainless steel or plastic interlock switch on the PRO machine.

DANGER
DO NOT, for any reason, reach into the auto feeder, or pear machine when it is in operation. Stop the machine first.

The front operator station is located at the front right-hand side. The electrical control box is located at the rear of the PRO.

The stop buttons are equipped with lock-out attachments to prevent accidental starting when servicing or lubricating the unit. A safety stop and lock-out is also provided at the rear of the machine on the electrical control box to prevent accidental starting from the front operator station when maintenance personnel are working at the rear of the pear machine.

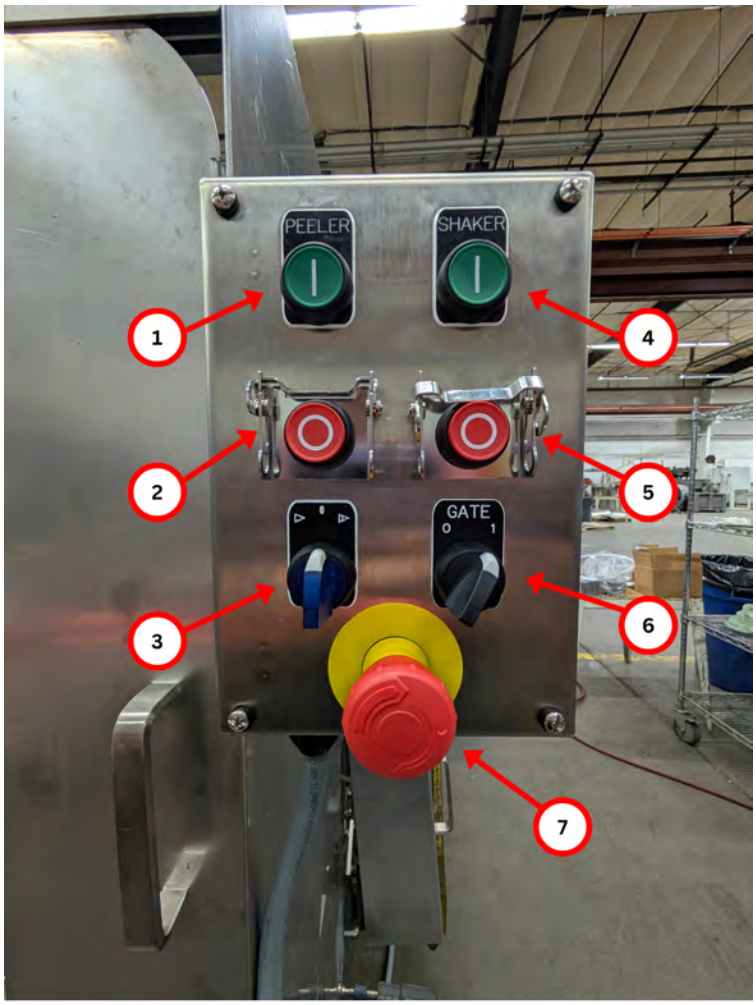
The front operator station controls both the pear machine and the pear roll orientor. The jog switch provides the option to run the machine momentarily while the switch is held. The gate switch controls the air supply to the shear gate air cylinder located on the pear feed conveyor above the shaker feeder pan. The on position of the selector switch permits the shear gate to be actuated automatically by the pear sensor system when the pear machine and PRO are in operation. The shear gate will automatically close, stopping pear flow into the PRO, when the pear machine or PRO is stopped. The off position of the gate switch permits the operator to discontinue the feeding of pears into the PRO while it is in motion. Emptying of the machine is desirable when the processing operation is terminated.

IMPORTANT
When a temporary interruption in processing is necessary, it is recommended that the shaker feeder be stopped while the pear machine continues to operate. This procedure will stop the feeding of pears to the pear machine and allow completion of the peeling operation of the pears in the machine.

CAUTION
If the pear machine is stopped while pears are being peeled, the peeling cutters can become clogged and prevent cutter rotation. When the machine is restarted, unpeeled pears can be discharged onto the peeled fruit conveyor.

Front Operator Station

Figure 79.



Item	Description	Function
1	Peeler **ON** Button	Turns ON Peeler Machine and Transfer Cups.
2	Peeler **OFF** Button	Turns OFF Peeler Machine and Transfer Cups.
3	Peeler **JOG** Switch	Left/Run: Reset machine for normal operation, Center/O: Neutral position, no function. Right/Jog: Momentarily runs machine while switch is held.
4	Shaker **ON** Button	Turns ON Pear Roll Orientor.
5	Shaker **OFF** Button	Turns OFF Pear Roll Orientor.
6	Shaker **GATE** Switch	Left/O: Deactivates Separator Gates. Right/I: Normal operations.
7	**E-STOP**	Emergency Stop. Push to STOP. Pull to RESET.

Electrical Operation

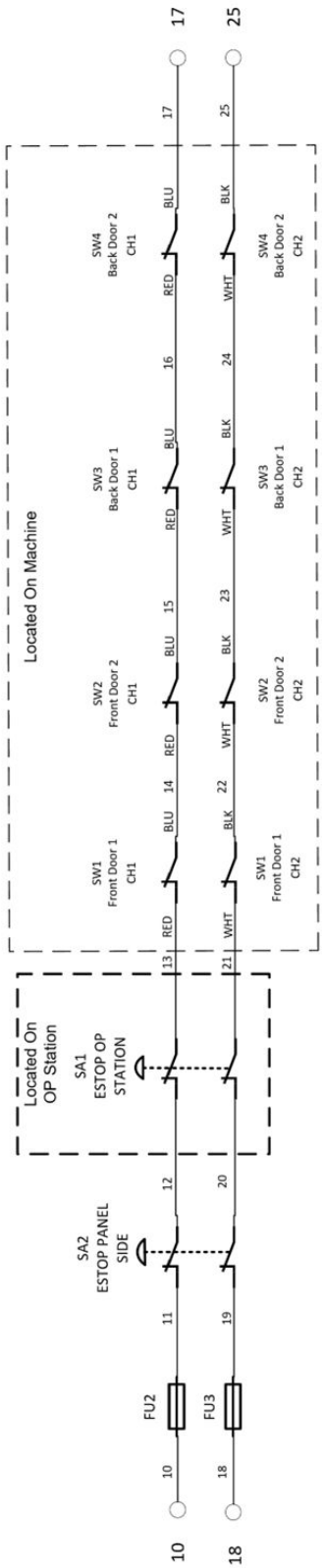
Operating Instructions

When starting the machine, the blue reset button should be illuminated.

The illuminated blue switch indicates the machine needs to be reset. To reset the machine, turn the blue switch to the left. The light will turn off if the safety system (E-stop and door interlocks) is ready to run. If the light does not turn on, an E-stop is pressed or one of the safety doors is not fully closed. Refer to **[Fig. 54]** below labeled *Safety Circuit*.

Figure 80.

Figure 81.



Safety Circuit.

Figure 82.

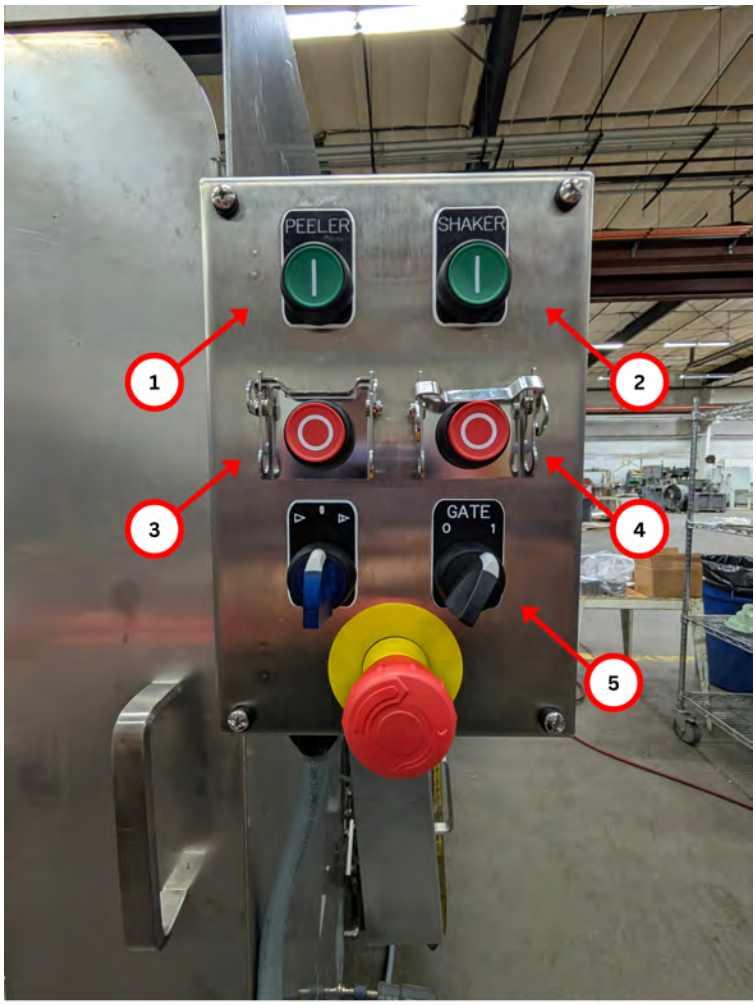


Table 3. Electrical Operation Station

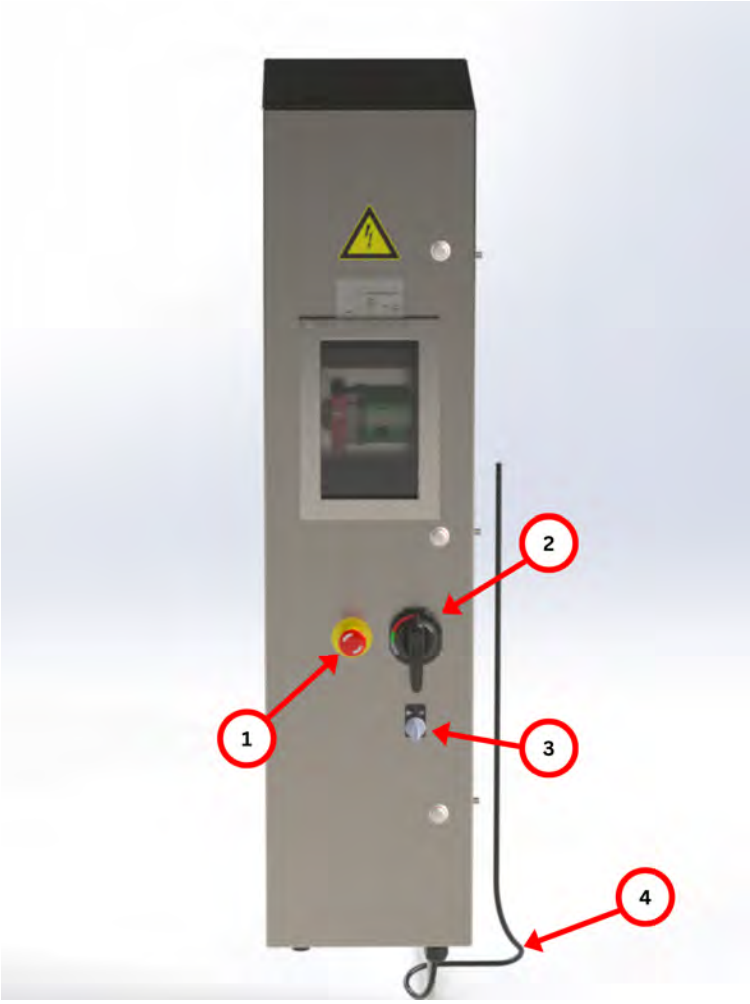
1	If the blue light is off and the user wants the peeler to run in automatic mode, press the green button on the left side of the control box labeled PEELER.
2	If the user wants the shaker to run automatically, press the green button on the right side labeled SHAKER.
3	To stop the PEELER, press the red button on the left-hand side of the control box.
4	To stop the SHAKER and the gates, press the red button on the right-hand side of the control box.
5	To enable the gates when the SHAKER is running, turn the switch labeled GATE on the bottom right hand side of the control box.

Table 4. How to jog PRO

1	To jog the machine from the back (operator side) use the blue switch and turn it to the right and the PEELER will jog, but not the SHAKER. The front doors should be closed.
2	To jog the machine from the front (panel side) turn the selector switch on the front of the electrical panel to the right. The back doors should be closed.
3	If all of the doors are open, the jog will not work. Machine can be jogged with all doors closed.

Electrical Control Box

Figure 83.



Item	Description	Function
1	**E-STOP**	Emergency Stop. Push to STOP. Pull to RESET.
2	**Disconnect** Switch Handle	ON, I: Connects power to system. OFF, O: Disconnects power to system.
3	**JOG** Switch	Momentarily runs machine while switch is held.
4	**Power supply**	Powers machine from the electrical control box.

50Hz versus 60Hz

The PRO machine can run on both 50 and 60 Hz power supplies.

- For 50 Hz, the application you will need: PN 3370.2109 – PULLEY,MOTOR DRIVE 50 HZ.
- For 60 Hz, the application you will need: PN 3370.1669 – PULLEY, MOTOR DRIVE 60 CYCLE.

NOTE
There are also two pulleys on the Standard Pear Peeler **[7590.0085.002]** which must be changed. They are covered in the Standard Pear Manual.

Safety & Operation

Operating personnel are assigned the responsibility of starting, stopping, and monitoring the pear feeder. Processing operation should first receive the following instructions:

1. DO NOT, for any reason, reach into the auto feeder, or pear machine when it is in operation.
2. Stop the machine first.

An additional safety feature of the electrical system is an independent dual channel safety relay where the required voltage must be met before machine is ready to run.

- The right-hand push button station controls the pear machine and feeder motion. The top selector switch provides the option to jog the main drive motor or run continuously without manually holding the green button in contact.
- The left-hand push button station controls the shaker feeder and orienting roller motion.

The top selector switch controls the air supply to the shear gate air cylinder located on the pear feed conveyor above the shaker feeder pan. The on position of the selector switch permits the shear gate to be actuated automatically by the pear sensor when the pear machine and shaker feeder are in operation. The shear gate automatically closes, stopping pear flow into the shaker pan, when the pear machine or shaker feeder is stopped. The off position of the selection switch permits the operator to discontinue the feeding of pears into the shaker pan while it is in motion. Emptying of the shaker feeder pan is desirable when the processing operation is terminated.

Maintenance

During the visual inspection and ongoing monitoring of operations, certain parts and assemblies may show signs of wear. Some the parts that require more frequent attention are discussed below with procedures for removal, adjustment, or repair.

If excesive wear appears during machine operation, contact you Atlas Pacific service representative.

Seasonal Maintenance

Maintenance, Off-Season

The PRO requires cleaning and preventative maintenance after shut down at the end of each season. Off season maintenance is conducted in four states:

1. Cleaning (page 88)
2. Lubrication (page 89)
3. Ordering replacement parts (page 92)
4. Recommended spare parts (page 93)

Correct off-season maintenance ensures that the PRO is ready for start-up at the beginning of the next season and that adequate supply of spare parts is on hand.

WARNING
Read and understand the Safety (page 10) guidelines chapter of this manual before performing maintenance or repairs.

Cleaning

Cleaning of the PRO during lunch or break times can be accomplished in the time normally allotted for the pear peeler. Pear contact areas will require attention, with special emphasis on the orientor cups and rollers, while the rollers are moving. The pear peeler should NOT be operating. During the daily complete wash-down, the lifter bar assembly will also require cleaning.

1. When foam or other cleaning agents are applied to the PRO and peeler, they must be neutralized according to manufacturers instructions.

2. Steam-cleaning should be avoided if possible. Plastic components can be destroyed.

3. End-of-season peeler cleaning program:

- Remove and store all guards.
- Remove and store the transfer cup bar assembly.
- Remove clamping screws and pivot the transfer finger bar assembly up, away from the peeler feed cups. Re-install screws in side frame holes provided for safe locking of the finger bar assembly in the up position.

4. A catch pan has been provided to collect pears that occasionally escape from the orientor roll area. The primary cause of pear dropage is over feeding. The person assigned to monitoring the pear feeding and processing operation should periodically remove the accumulated pears in the catch pans. Pans should be washed during the normal cleaning operation.

CAUTION
After completion of the cleaning operation, but prior to the start of pear processing, operate the pear peeler for a few minutes **WITHOUT** operating the shaker feeder. It is necessary for the rubber o-rings driving the peeling heads to dry out. Slipping of the o-rings will cause the peeling cutters to become clogged, resulting in unpeeled pears being discharged onto the peeled fruit conveyor. Be sure the peeling heads are rotating at normal speed before starting the shaker feeder.

Lubrication

PRO grease fittings are centrally located.

NOTE
The PRO should be checked daily for grease and oil levels in their respective reservoirs.

Lubricant Procedures

Although the PRO is equipped with an automatic lubrication system, Atlas Pacific recommends the machine be a manually cycled after it is washed down. Manually cycling the machine will help replenish any lubricant lost or displaced during the wash down process.

Recommended Lubricants

Atlas Pacific recommends certain product types for use with the PRO. The brand names listed in this manual have proven effective when used as directed but are not necessarily the only brands of oil that may be used.

U.S.D.A. Food Grade (H1) Grease and Oil

NOTE
Use food grade or recommended grease and oil for parts and assemblies where there may be incidental food contact.

Figure 84.

Picture of Auto Lube System.

The PRO lubrication system uses a multi-purpose food-grade grease with these properties:

- U.S.D.A. H1 Rated.
- Waterproof.
- Oxidation and corrosion inhibiting.
- Non-toxic.
- Tolerates extreme pressure.

Some products that have proven effective include:

- ATLAS PACIFIC FOOD-GRADE GREASE NLGI #2 **[0009.1316.XXX]**.
- Chevron FM Grease EP NLGI 2 or Conoco Polyurea based grease, for use in the automatic lube system.

NOTE
Once a grease type is selected for the PRO lube system, Atlas Pacific recommends the cannery continue to use the same grease. Mixing of grease types or different types of thickeners/bases (I.E., the Polyurea based grease vs. Lithium based) may destroy the composition and physical properties of the grease and cause the system to fail.

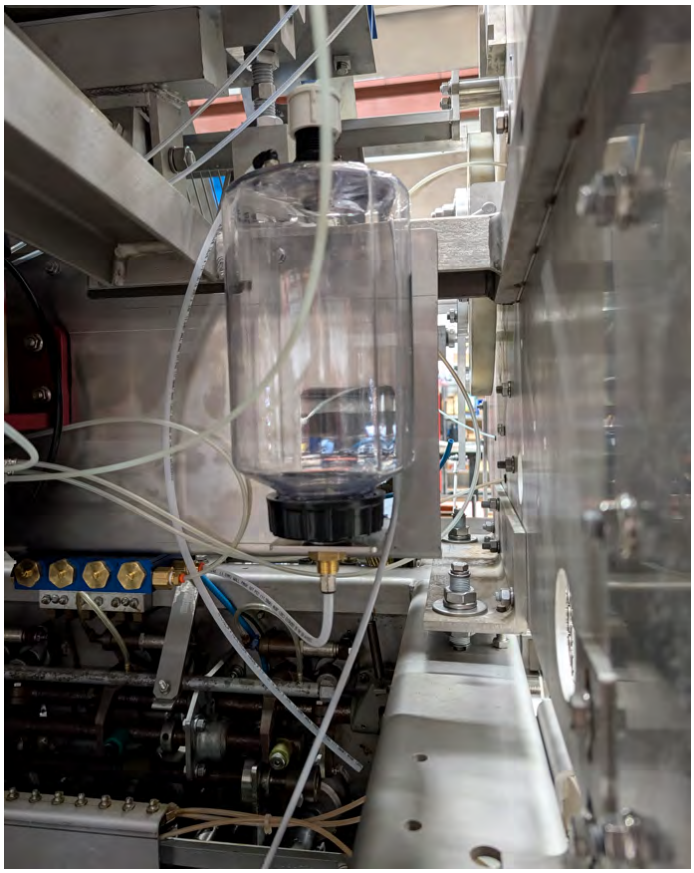
To fill the oil reservoir, use an oil with the following properties:

- U.S.D.A. H1 Rated.
- Non-detergent.
- Oxidation and corrosion inhibiting.
- Non-toxic.
- Tolerates extreme pressure.

Products that have proven effective include:

- ATLAS PACIFIC FOOD-GRADE ISO 32 **[0009.1317.XXX]**.
- Chevron Superla 7 Oil, used to fill oil reservoir.
- Ideal FG Oil 32.

Figure 85.



Picture of oil reservoir.

Other Products (Not U.S.D.A. Approved - H2)

Oil products:

Use ISO VG 460, 680, or 1000 oil. Some examples are shown below:

- Texaco Meropa ISO 460 Oil.
- Chevron ISO 460 Oil.

Thread lock:

Where noted, use Loctite. Use Loctite 271 (red) and Loctite 8331 (blue) or equivalent.

Water Lubrication

Ensure that the water spray system is functioning properly.

Oil and Grease Application

NOTE
Check oil and grease levels daily.

Ensure that the oil reservoir and automatic oil lubrication system never run dry. Check daily and refer to the recommended lubrication in this section.

Ensure that the automatic grease lubrication system has sufficient grease levels. A maximum fill line and a minimum fill line are marked in front of the lubricant reservoir. Check daily and refer to the recommended lubrication section for additional guidance.

Spare Parts

This section describes how to order spare parts and how to replace certain parts of the PRO.

WARNING
Lock-out/Tag-out procedures must be followed before performing any work, cleaning, or removal of plugged product in this machine.

Ordering Replacement Parts

Order replacement parts for your Atlas Pacific equipment by contacting your authorized Atlas Pacific agent or distributor. Be prepared to provide the following information:

- Equipment name, model, and serial number
- Date of purchase
- Part number and description
- Quantity of parts required and your purchase order number

Recommended Spare Parts

The following list of recommended spare parts is the minimum that should be kept on hand at all times. Experience will indicate where more or less or different parts should be on hand. Atlas Pacific makes every effort to keep an inventory of all parts that are expected to wear or break. Depending on recent sales of parts, some parts may be out of inventory at any given time.

NOTE
Spare parts per 10 machines is equivalent to 30% of 10 machines on average.

Table 5. AY,TRANSFER MECHANISM - 2023.8002

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
3370.1683	SPRING,SIDE ORIENTOR CUP	6	2	18
0002.0141	RODEND,3/8 x F3/8-24RHSS ECON	2	1	3
0002.142	RODEND,3/8 x F3/8-24LHSS ECON	2	1	3

Table 6. ADJUSTMENT,SPEED 50Hz - 2023.8000.50

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0002.5020	BRG,FLG BRN VF2S212	2	0.5	4
0006.2182	V-BELT,AP-37	1	0.5	1.5
0006.2181	V-BELT,BP-51	1	0.5	1.5
2010.9144	SPRKT AY,STUB SHAFT	1	0.2	2
0006.1095	SPRKT,40B10SS x .750	1	0.2	2
0005.1055	MOTOR LINC 1 HP T145(F) 7/8S	1	0.2	2
0002.2060	BEARING FOR MOTOR	0	0.3	0.9
0002.2070	BEARING FOR MOTOR	0	0.3	0.9
3370.1623	IDLER,TAKE-UP BELT DRIVE	1	1	2
0006.0024	CHAIN,RC40 SS	94"	45"	282"
0006.0060	CHAIN,ML RC40 SS CLIP PIN	1	1	3

Table 7. ADJUSTMENT,SPEED 60Hz - 2023.8003.60

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0002.5020	BRG,FLG BRN VF2S212	2	0.5	4
0006.2182	V-BELT,AP-37	1	0.5	1.5
0006.2181	V-BELT,BP-51	1	0.5	1.5
2010.9114	SPRKT AY,STUB SHAFT	1	0.2	2

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0006.1095	SPRKT,40B10SS x .750	1	0.2	2
0005.1055	MOTOR LINC 1 HP T145(F) 7/8S	1	0.2	2
0002.2060	BEARING FOR MOTOR	0	0.3	0.9
0002.2070	BEARING FOR MOTOR	0	0.3	0.9
3370.1623	IDLER,TAKE-UP BELT DRIVE	1	1	2
0006.0024	CHAIN,RC40 SS	94"	45"	282"
0006.0060	CHAIN,ML RC40 SS CLIP PIN	1	1	3

Table 8. AY,LINKAGE,TRANSFER FINGER - 2023.8004

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0002.0024	RODEND,1/4 x F1/4-28LHSS ECON	1	0.5	3
0002.0025	RODEND,1/4 x F1/4-28RHSS ECON	1	0.5	3
3370.1904	SPRING	1	0.2	2
3370.1935	FINGER,TRANSFER PLASTIC	6	1	6
3370.0194	SPRING,TORSION TRANSFER	6	2	12
3370.0195	SLEEVE,TOR.SPRING TRANS FNG	6	1	6

Table 9. AY,PADDLES - 2023.8005

Part Number	Decription	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0007.4325.2	BIMBA,AIR CYL 1.06D x 1.05	6	2	6
0003.0121	BRG,SLV 5/8 x 7/8 x 3/4	10	2	10
0002.2010	RODEND,5/16 x F5/16-24 BK	6	2	6

Table 10. AY,MAIN CAM SHAFT - 2023.8006

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0006.0026	CHAIN,RC50	120"	60	360
0006.0094.2	CHAIN,ML RC50 SS	1	1	3
3370.1866	IDLER,PLASTIC	1	0.3	2
3370.1501	SPROCKET,UPPER	1	0.3	2
0003.1373	BEARING	2	0.5	4
3370.1751	ROLLER,PLUNGER & TRANS FINGER	1	1	3
3370.3061	SHAFT	1	0.1	1

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
3370.3075	CAMS	2	0.2	2
3370.3077	CAMS	1	0.1	1
3370.3072	CAMS	1	0.1	1
3370.1500	SPROCKET,LOWER	1	0.3	2
0002.5044	BRG,FLG BRN VF2S220	2	1	4

Table 11. AY,FRONT ROLL - 2023.8007

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0006.0098	CHAIN,RS25SS 304SS CHAIN	91"	20	300
0006.0096.2	CHAIN,ML RC-25 SS	7	2	12
0006.0010	CHAIN,RC35 SS	94"	45"	135"
0006.0059.1	CHAIN,ML RC35 SS	3	3	9
0003.1031	BRG,OILSLV 3/8 x 1/2 x 7/16	1	0.4	2
0006.1234	SPRKT,35B30 x STK SS	1	0.4	2
2010.9191	SPRKT,FRONT ROLL DRIVE	14	3	10
2010.3652.1	ROLL,TAKE UP 35 PITCH	1	0.4	2
2010.9112	CHAIN,ROLLER T.U.	1	0.4	2
3370.3029	SPROCKET ASSEMBLY,SST	1	0.3	2
3370.1751	ROLLER,PLUNGER & TRANS FINGER	1	1	3
2010.3751.800	DRIVER,ADJ FRON ROLL	12	1	6
2010.3606.800	SUPT,FRONT ROLL BSHG	6	1	12
2010.3620.800	ROLL,FRONT ORIENTOR	12	2	12

Table 12. AY,ORIENT ROLL - 2023.8008

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
2010.3652.1	ROLL,TAKE UP 35 PITCH	1	0.4	2
2010.9901	ORIENT ROLLER	6	1	6
2010.3770.002	FINGER,ORIENTING	24	24	120
2010.3684.800	SHOE,STOP	6	1	10
2010.3618.1	SPROCKET,REAR ROLL DRIVE	1	0.3	2
0002.0027	RODEND,1/4 x M1/4-28 RH SST	1	0.5	3
0002.0028	RODEND,1/4 x M1/4-28 LH SST	1	0.5	3
0007.4325.2	BIMBA,AIR CYL 1.06D x 1.05	1	0.5	2

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0002.0210	RODEND,5/16 x F5/16-24 BK	1	0.5	4
0007.2005	FTG,PAEN 2MPT x 2.5TUQR * FLOW	2	1	4
0316.0062	BRG,PLSTCFLG 1 x 1 3/16 x *	3	3	12

Table 13. AY, FEEDER - 2023.8009

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0006.0010	CHAIN,RC35 SS	12"	6"	36"
0006.0059.1	CHAIN,ML RC35 SS	3	1	3
2010.3652.1	ROLL,TAKE UP 35 PITCH	1	0.4	2
0006.0106.1	SPRKT,35BS12SS x .625 SS	1	0.3	2
0006.0106.5	SPRKT,35B18 x .875 CS	1	0.3	2
0002.5044	BRG,FLG BRN VF2S220	2	0.5	4
9502.8501	SENSOR,INDUCT 3 OR 2W QD	1	0.3	2
952.8087	SENSOR CABLE 5M M12 4P	1	0.3	2
0002.9012	BRG,RADIAL	8	2	12
317303	BUSHING,TORSION	10	2	12
0002.4015	PILLOW BLOCK REXNORD P3S216E	2	0.5	4

Table 14. AY, PNEUMATICS - 2023.8010

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0009.2059.3	FILTER REG,CMPLT AY SMC	1	0.2	1
0005.2138	MANIFOLD,8 STATION VALVE-SMC	1	0.2	1
SY5100-5U1-X90	SMC VALVE, 5 PORT SOLENOID	8	0.6	5
0007.3433	FTG,PAP 4 TUQR PLSTC	4	0.4	6
0007.3444	FTG,PAP 2.5 TUQR PLSTC	2	0.2	4
0007.2009	FTG,PAT 2.5TU x 2.5TU x 2.5TU*	4	2	20
0007.2019.001	FTG,PAY 2.5TUQR x 2.5TUQR(2)	2	2	15
0007.4668	FTG,PAS 6MPT x 6TUQR BRS HX	2	2	15
0007.2114.1	TUBING IMP #66P 3/8 OD	2 FT	0.2	100 FT
0007.2127	TUBING,5/32 OD NYLON	50 FT	0.2	500 FT

Table 15. AY, LUBRICATION - 2023.8011

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0007.1322	FTG,GAEN 2MPT x2.5TUQR MSW BRS	13	3	6
0007.4222	GREASE PUMP,MLP,15PORT,2K	1	0.1	1
2010.4927	MOD,OIL RESERVOIR	1	0.1	1
0007.1039.1	TUBING,5/32 OD 2500 PSI NYLON	66'	0.3	500
0007.1041	FTG,PAS 4MPT x 4TUQR	1	0.2	10
0007.1096.1	FTG,PAEN 2MPT x 4TUQR PLSTC	1	0.2	10
0007.1099	FTG,WAS 2MPT x 4TUQR SS	1	0.2	10
0007.1322	FTG,GAEN 2MPT x2.5TUQR MSW BRS	13	0.4	10
0007.1802	FTG,GAS 2MBSPT x 2.5TUQR SS	12	0.4	10
0007.2017	FTG,PAS 2MPT x 2.5TUQR	1	0.2	10
0007.2086	TUBING IMP POLYFLOW #44P-1/4	25'	0.2	100'
0007.2113	NYLON TUBE 1/8 OD (2500 PSI)	30'	0.2	100'
0007.2558	FTG,PAS 2MPT x 2TUQR BRS	8	0.2	10
0007.3144	FTG,WAPN 12MPT X 8MPT PLSTC	1	0.2	10
0007.3190.2	FTG,PRST 2FPT x 2FPT BRS	4	0.2	10
0007.3508	FTG,WAC 12FPT PVC SCH40	1	0.2	10
0007.4203	BRSH,SHANK ROTO 3Ø X 1W NYL	4	4	12
0007.4222	GREASE PUMP,MLP,15PORT,2K	1	0.2	1
0007.4959	INJECTOR,LUBRICANT,4 UNIT	1	0.4	2
0519.0039	FTG,PAS 2FPT x 2MPT BRS BH	1	0.4	10

Table 16. AY WATER - 2023.8012

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0007.4105	VLV,SOLENOID 4FPT BRS 24VDC	2	0.5	4
0007.3545	FILTER,4-7/8" CARTRIDGE	1	1	2
0007.1379.4	NOZZLE,SPRAY FOGGER PLSTC	8	1	12
0007.1067	FTG,PAEN 6TUQR x 6TUQR PLSTC	1	0.2	3
0007.1376.6	STRAINER,DISC 100 MESH SS	8	0.5	3
0007.1379.2	NOZZLE,RETAINER TIP BRS	8	2	20
0007.2114	TUBING IMP #66P 3/8 OD	360	50'	500'
0007.2121	TUBING,WTHD PT24008 1/2"	240	5-'	500'
0007.2527	FTG,PAS 3/4-16 x 4MPT BRS BH	1	0.2	4
0007.3032	FTG,WAPN 4MPT x CLOSE SS	4	0.4	10
0007.3544	HOUSING,5" COMPACT FILTER	1	0.2	4

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0007.4691	FTG,PAU 8TUQR x 8 TUQR	1	0.2	4
0007.4692	FTG,PAN 6TUQR x 8 PLUG	2	0.2	4
0007.4693	FTG,PAT 8TUQR x8TUQR x8TUQR	1	0.2	4
0007.4694	FTG,PAT 11/16-16x 6BRBx6BRB BH	5	0.4	10
0007.4695	FTG,PAN 11/16-16 x 6BRB BH	3	0.2	9
0007.4917	FTG,PAT 4FPT x 4FPT x 4FPT SS	1	0.2	2
0007.3221	FTG,PAPB 4FPT x 6MPT SS	2	0.2	4
7571.2047	FTG,PAN 4TUBELOCK x 4MPT	1	0.2	2
7571.2052	FTG,PAN 6TUBELOK X 4MPT	2	0.2	4
7579.0008	CLAMP, HOSE CRIMP-1/2	13	5	25

Table 17. AY, ELECTRONICS - 2023.8013

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
	SWITCHES (CONTACTS, KIT NUMBERS)			
	WATER TIGHT CONNECTORS			
9550.1033	FILTER,EMI RFI 3 WIRE 30A	1	0.2	1
3370.31	ENCL,PRO 48 x 12 x 12	1		
9501.9132.2	LABEL,WARNING ELECTRICAL 3.9"	1		
0009.0027	NAMEPLATE,ATLAS PRO CE	1		
8408.1412.512	KIT,RITTAL 9.0 x 5.5 WINDOW	1		
9503.0013	SW AY,IEC ESTOP 40MM 1NCLB	2		
9501.9140.9	LEGEND,IEC YELLOW BLANK	2		
9502.7017	CABLE,9 COND 18 AWG NO/SH	120		
9502.6044.102	KIT,63AMP DISCO BLK HNDL,ROD	1		
95002.6243.001	SWITCH,2POS RTN	1		
9501.9241.15	LABEL,RUN-0-JOG ICON	2		
0005.3229	MEYERS HUB 10093-STG-1	1		
9501.9329	LOCKNUT,ELEC 1/2" NON METALLIC	5		
5.31	WATERPROOF WASH T&B 5262 1/2	5		
9501.9326	CORD GRIP,1/2"	4		
9501.9324	CORD GRIP,3/4 IN L'TITE*	3		
9501.9324.001	CORD GRIP,3HOLE BUSHING	1		
0005.3104	WASH. WATERPROOF 3/4 T&B 5263	3		
9501.933	LOCKNUT,ELEC 3/4" NON METALLIC	3		
9501.934	CORD GRIP,4HOLE BUSHING	1		

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
9502.7129	CABLE,18AWG 18COND FOIL/BRAID*	120		
6900.0908	ENCLOSURE,PB STATION W/O PBO	1		
0005.3182	CORD CONNECTOR 1/2"T&B #2922NM	1		
9502.6205	SWITCH,PB IEC GRN 'I'	2		
9501.9241.01	LABEL,IEC SWITCH "SHAKER"	1		
9501.9241.18	LABEL,IEC SWITCH "PEELER"	1		
9502.6207	SWITCH,PB IEC RED 'O'	2		
9503.0032	SW AY,IEC BLK 2P MTN 1NO	1		
9501.9241.20	LABEL,IEC SWITCH "GATE"	1		
9502.6069	SWITCH,3 POS SPRING RETURN	1		
9501.9196	LABEL,SELF PROT MTR CNTRLR	1		
9501.9258	LABEL,CIRCUIT BRKR BRANCH	1		
9501.9154	LABEL,WIRING - ENGLISH	1		
9501.9252	LABEL,TERM TORQUE 20LB-IN EN	1		
9502.626	LATCH,3 ACR PLASTIC	6		
9502.627	CONTACT BLOCK,1 NO SPRG	5		
9502.6277	CONTACT BLOCK,1NC SELF MONITOR	3		
9550.1033	FILTER,EMI RFI 3 WIRE 30A	1		
0001.5100	NUT,HX 10-32 x 3/8 SS	4		
0001.4052	WSHR,LK 10 SS	4		
0001.4290	WSHR,FLT .218 X .437 X .031 SS	2		
9502.6271	CONTACT BLOCK,1 NC SPRG	2		
9501.9272.102	LABEL,WHITE 4" BLANK	1		
9501.9272.001	RIBBON,BLACK LABEL PRINTER	1		
9502.6280	SWITCH,LED,24VAC/DC,WHT SPR	1		
3370.3002.001	BACKPANEL,PRO CNTRLS	1		
9501.9209	LABEL,GRND SYMBOL 300 COUNT	2		
9501.802	GROUNDING BAR, 9 POSITION	2		
9501.9033.1	WIRE DUCT,1" WIDE X 2" HIGH	100		
9501.9034	COVER WIRE DUCT 1"	100		
0005.0202	RM,DIN RAIL AB#199DR1	60		
0001.3182	SCR,THMS 10-32 x 3/8 SS	12		
0005.0273	WAGO END STOP 249-117	14		
9502.9802.001	RELAY,PRGMD SMART COMPACT SCHN	1		
9501.7100.140	TERM BLK (4) 16-24 GRY	79		
9501.7100.101	TERM BLK (4) 16-24 ORG END PLT	7		

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
9501.7100.100	TERM BLK (4) 16-24 ADJ JMPR	21		
9501.7100.900	LABEL,TERM BLK PRINTER	15		
9501.7100.950	RIBBON, LABEL TRM BLK PRINT	15		
9501.9240	LABEL,COMPONENT GENERIC	1		
9502.3029	RELAY,SAFETY 24VAC/DC 3 N.O.	1		
9501.7049	FUSE BLOCK,1 ACROSS CC TYPE	1		
9502.0030	FUSE,3.00A 600V CC SLOW	1		
9501.7069	TERM,WAGO FUSE BLK 12-30V GRY	2		
9502.0056	FUSE,800mA 250VAC FAST ACT	2		
9501.9089.3	LABELS,WAGO FUSE BLOCKS	1		
9502.3035.2	RELAY,TERM BLK,24VAC/DC DPDT	3		
9502.3035	RELAY,TERM BLK,24VAC/DC SPDT	4		
9501.7069.140	TERM BLK(4)14-22 GY 24V NP LED	4		
9501.7069.102	TERM BLK(4)14-22 GY END PLT	1		
9501.5054	XFMR,POWER SUPPLY 120W 3PH	1		
9504.3114.203	BREAKER,UL 1077 2 POLE 3A	1		
9502.9203.010	STRTR,MANL MTR ABB .63-1.0A	1		
9502.9203.999	AUX TRIP CONT ABB MS132 NO NC	3		
9502.9203.040	STRTR,MANL MTR ABB 2.5-4.0A	1		
9502.9203.025	STRTR,MANL MTR ABB 1.6-2.5	1		
9502.9185.916	CONTACTOR,3P 24VDC AC/DC 16A	3		
9502.9158.990	COUPLER,MANL STRTR & CNTCTR 3	3		
9502.3035.7	RELAY,TERM BLK,JUMPER,GRAY	1		
9502.7133	WIRE,14 GA BLK MTW	48		
9502.7100.02	WIRE,14 GA GRN/YEL MTW	60		
9502.7009.02	WIRE,16 GA RED MTW	48		
9502.7134	WIRE,16 GA WHT MTW	60		
9502.7023.4	WIRE,16 GA DK BLUE MTW	120		
0005.3024	SPIRAL WRAPPING PANDUIT #T-25F	48		

Table 18. CE GUARD ASSEMBLY, PRO - 2023.8015

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
9502.3103.001	SW,GUARD PAIR MAG SAFETY	3	0.5	6
7591.0002	HNDL,5 x 1-5/16 "U"	17	3	20

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
0001.3051.2	SCR,THMS 8-32 x 1/2 SS	34	10	50

Table 19. AY, PRO LABEL - 2023.8016

Part Number	Description	Quantity	Overhaul Per Machine Once A Year	Spare Parts Per 10 Machines
7590.0635	LABEL,PINCH POINT,CE*	2	0.2	4
7590.0631	LABEL,DO NOT OP W/O GUARD GEAR	6	0.2	12

Yearly Overhaul

The following list bellow are spare parts that are recommended to be replaced yearly.

Table 20. AY,TRANSFER MECHANISM - 2023.8002

Part Number	Description	Quantity
3370.1683	SPRING,SIDE ORIENTOR CUP	6
0002.0141	RODEND,3/8 x F3/8-24RHSS ECON	2
0002.0142	RODEND,3/8 x F3/8-24LHSS ECON	2

Table 21. ADJUSTMENT,SPEED 50Hz - 2023.8000.50

Part Number	Description	Quantity
0002.5020	BRG,FLG BRN VF2S212	2
0006.2182	V-BELT,AP-37	1
0006.2181	V-BELT,BP-51	1
3370.1623	IDLER,TAKE-UP BELT DRIVE	1

Table 22. ADJUSTMENT,SPEED 60Hz - 2023.8003.60

Part Number	Description	Quantity
0002.5020	BRG,FLG BRN VF2S212	2
0006.2182	V-BELT,AP-37	1
0006.2181	V-BELT,BP-51	1
3370.1623	IDLER,TAKE-UP BELT DRIVE	1

Table 23. AY,LINKAGE,TRANSFER FINGER - 2023.8004

Part Number	Description	Quantity
0002.0024	RODEND,1/4 x F1/4-28LHSS ECON	1
0002.0025	RODEND,1/4 x F1/4-28RHSS ECON	1
3370.1904	SPRING	1

Part Number	Description	Quantity
3370.0194	SPRING,TORSION TRANSFER	6

Table 24. AY,PADDLES - 2023.8005

Part Number	Description	Quantity
0002.0210	RODEND,5/16 x F5/16-24 BK	6

Table 25. AY,MAIN CAM SHAFT - 2023.8006

Part Number	Description	Quantity
3370.1866	IDLER,PLASTIC	1
0002.5044	BRG,FLG BRN VF2S220	2

Table 26. AY,FRONT ROLL - 2023.8007

Part Number	Description	Quantity
2010.3652.1	ROLL,TAKE UP 35 PITCH	1
2010.9112	CHAIN,ROLLER T.U.	1
3370.1751	ROLLER,PLUNGER & TRANS FINGER	1

Table 27. AY,ORIENT ROLL - 2023.8008

Part Number	Description	Quantity
2010.3652.1	ROLL,TAKE UP 35 PITCH	1
0316.0062	BRG,PLSTCFLG 1 x 1 3/16 x *	3

Table 28. AY,FEEDER - 2023.8009

Part Number	Description	Quantity
2010.3652.1	ROLL,TAKE UP 35 PITCH	1

Table 29. AY,LUBRICATION - 2023.8011

Part Number	Description	Quantity
0007.4203	BRSH,SHANK ROTO 3Ø X 1W NYL	4
GREASE		
OIL		

Table 30. AY,WATER - 2023.8012

Part Number	Description	Quantity
0007.3545	FILTER,4-7/8" CARTRIDGE	1

Trouble Shooting

Most PRO problems can be attributed to:

1. Improper supply of pears to the feed conveyor (merry-go-round).
2. Improper feed into the shaker feeder pan and improper control of pear movement in the shaker feeder.

Problem 1

Dropping pears from the orientor cup and roller area with excessive accumulation of pears in catch pan.

Item	Cause	Correction
1	Double feeding from shaker.	Re-adjust shaker pear sensor and/or shaker speed.
2	Broken or missing orientor side cup spring.	Replace item.
3	Broken orientor cups (double as feeding of firm pears).	Replace item.
4	Feed conveyor shear gate stuck open, overfeeding shaker pan.	1. Lubricate air supply to valve and gate cylinder. 2. Replace leaking plastic air line. 3. Adjust manifold air pressure to 10lbs. 4. Adjust sensor air valve up until valve ball is depressed 1/32" when contacted by sensor actuator, for sensor valve operation.

Problem 2

Decrease in first stage orienting efficiency. The number of mis-oriented pears has increased.

Item	Cause	Correction
1	Double feeding from shaker.	Re-adjust pan sensor and/or shaker speed.
2	Improper adjustment of chute stop mechanism.	Adjust and replace finger.
3	Broken chute stop finger.	Install 2 fingers (double thickness) if processing large pears.

NOTE
Clean chute surface thoroughly (must be dry) before cementing skid pad (recommend use of acetone).

Problem 3

Poor pear transfer from transfer cups to pear peeler feed cups and marking soft pears.

Item	Cause	Correction
1	Double feeding (causes cross feeds)	Re-adjust shaker pear sensor and/or shaker speed.
2	Transfer cup bar not adjusted correctly.	Re-adjust cup bar.
3	Transfer finger bar not adjusted correctly for size and condition or pears being processed.	Re-adjust transfer finger bar per instructions in the Installation (page 24) chapter.
4	Pear peeler feed cup not adjusted correctly.	Re-adjust pear peeler feed cup hook cams to obtain correct vertical feed cup receiving posture.
5	Incorrect peeler feed cup insert installed.	Select correct cup insert (pear peeler feed cup) for size pears being processed.
6	Broken transformation cup (cross feeding firm pears).	Replace cup.
7	Broken or missing spring-transfer cups.	Replace spring.

Problem 4

Underfeeding - poor pear peeler efficiency.

Item	Cause	Correction
1	Shaker pear sensor not correctly adjusted for sized pears being processed.	Adjust pear sensor.
2	Shaker speed incorrect for size and condition of pear being processed.	Adjust shaker speed.

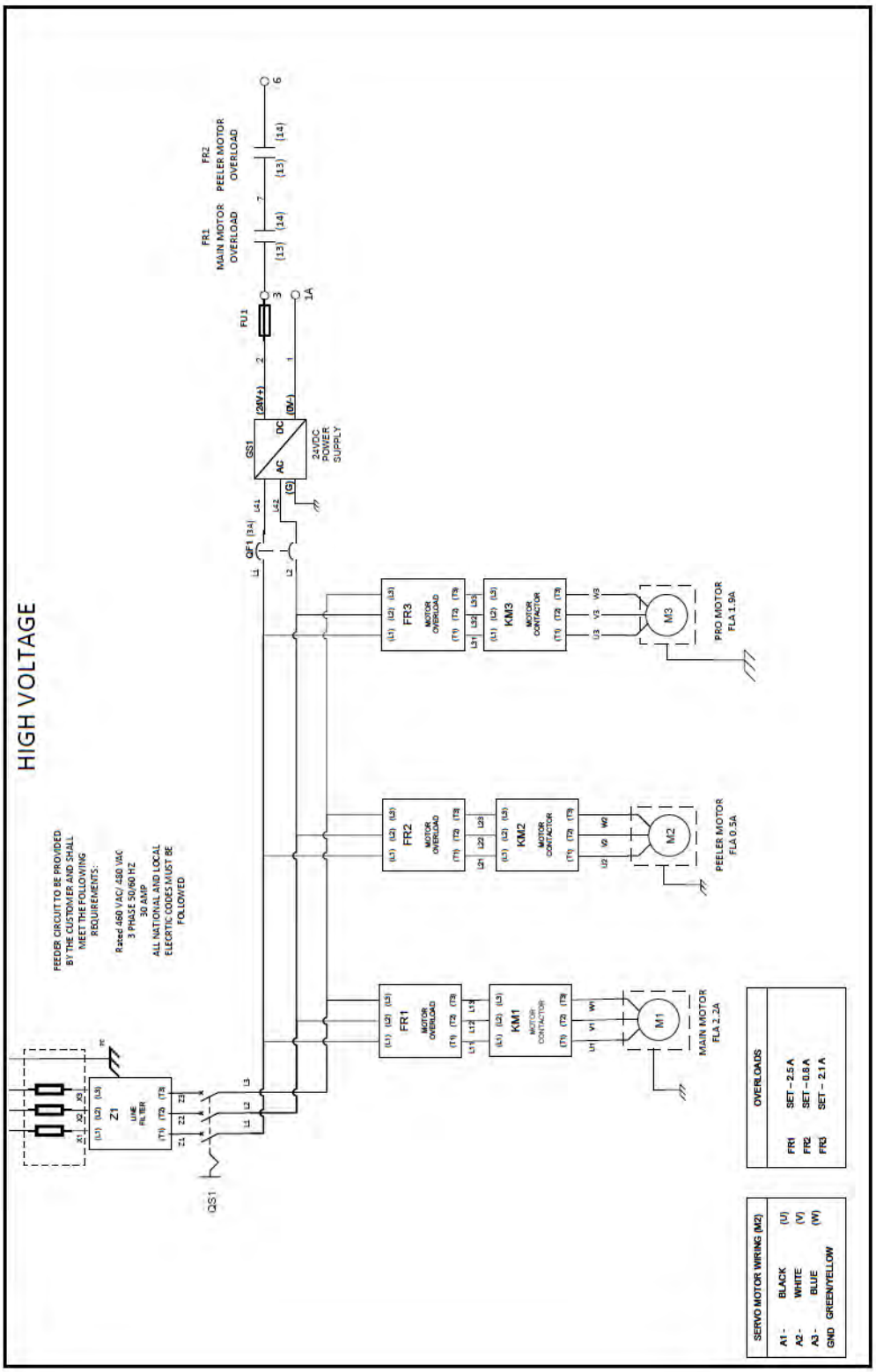
Problem 5

Pears bouncing out of feeding posture in transfer cups.

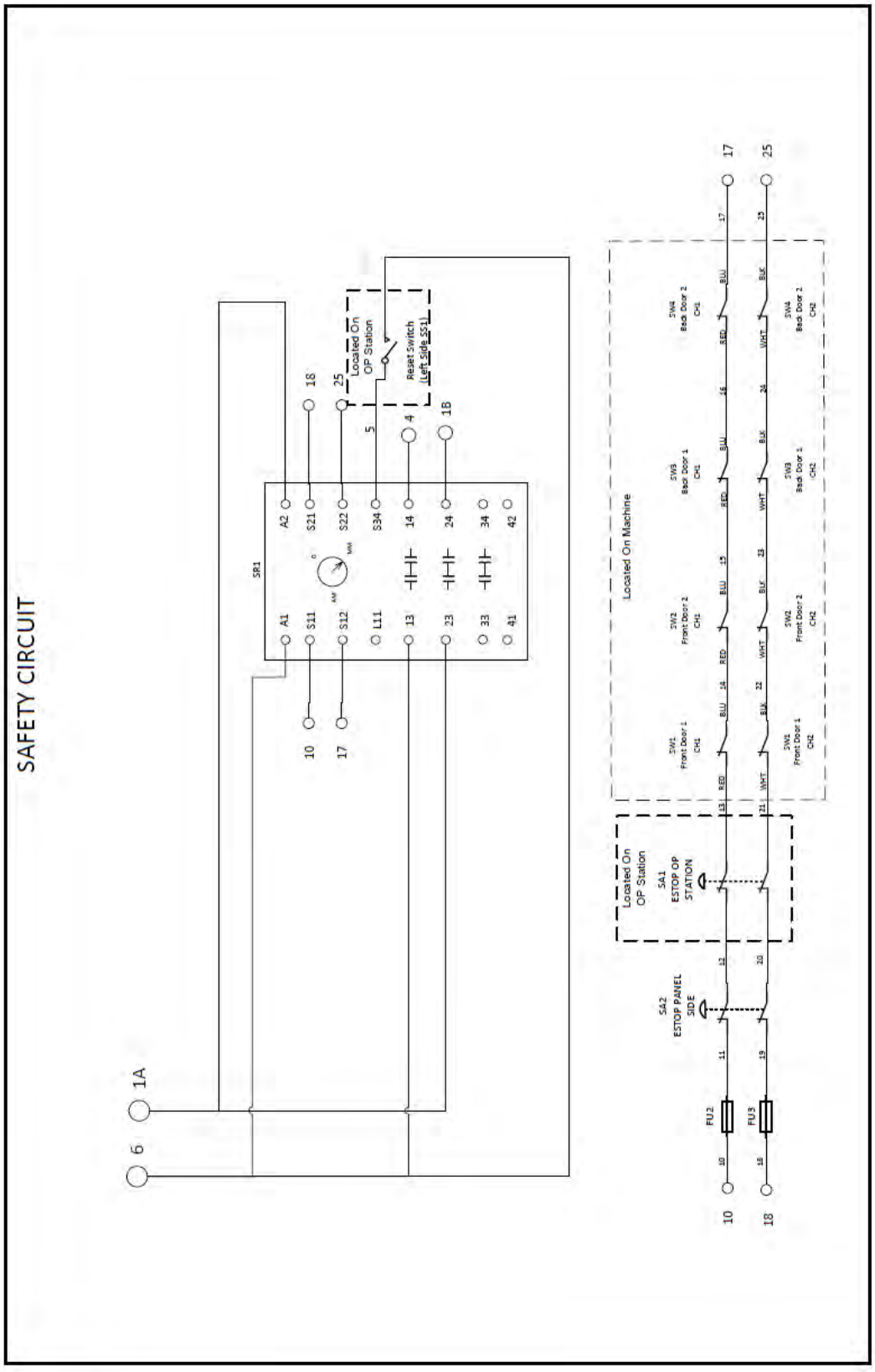
Item	Cause	Correction
1	Both right and left hand transfer cam arms have super cam rollers installed. Bouncing action of transfer cup is too violent for size of pears being processed.	Remove upper roller from one cam arm.

Drawings

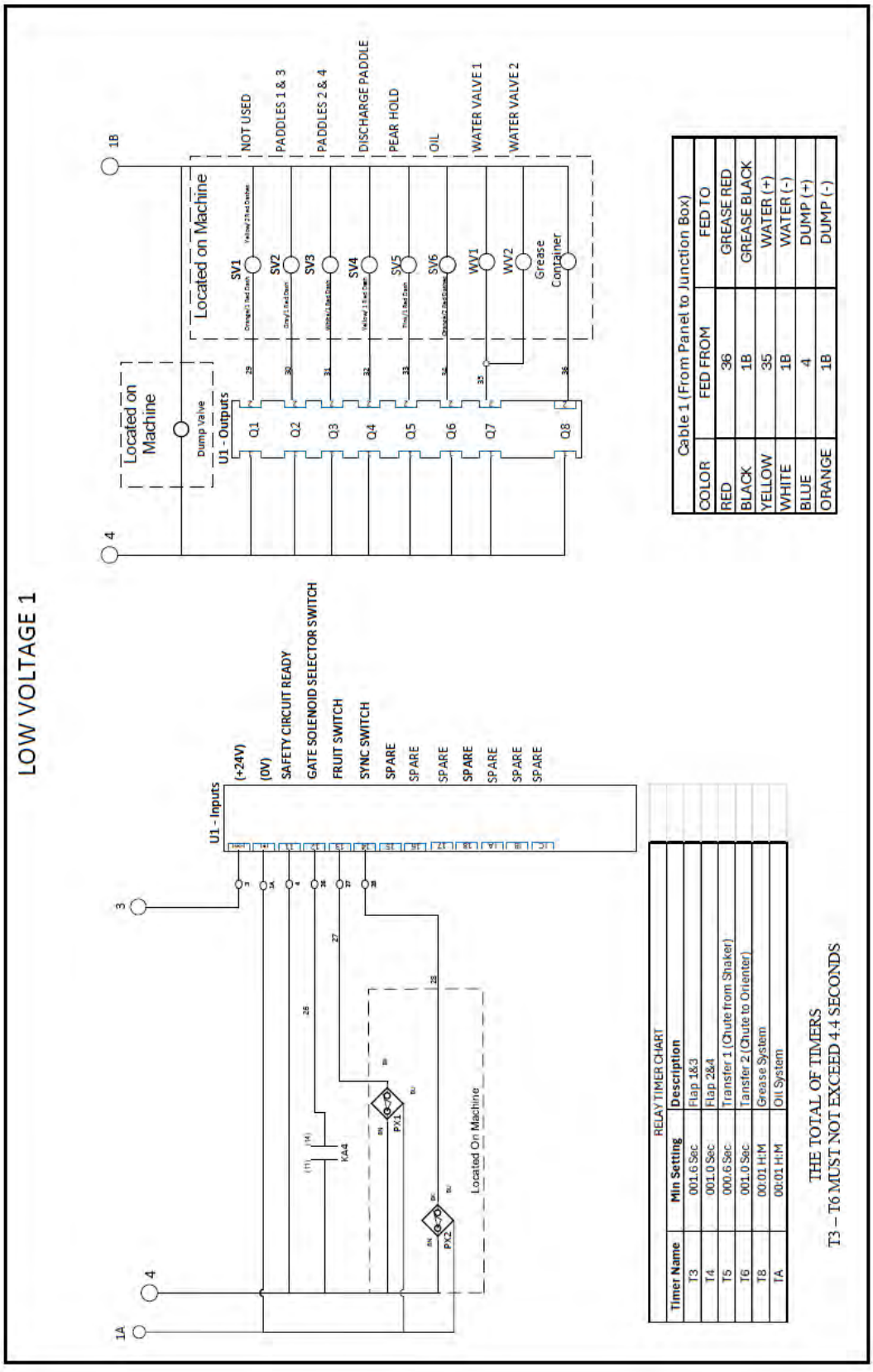
High Voltage Schematic

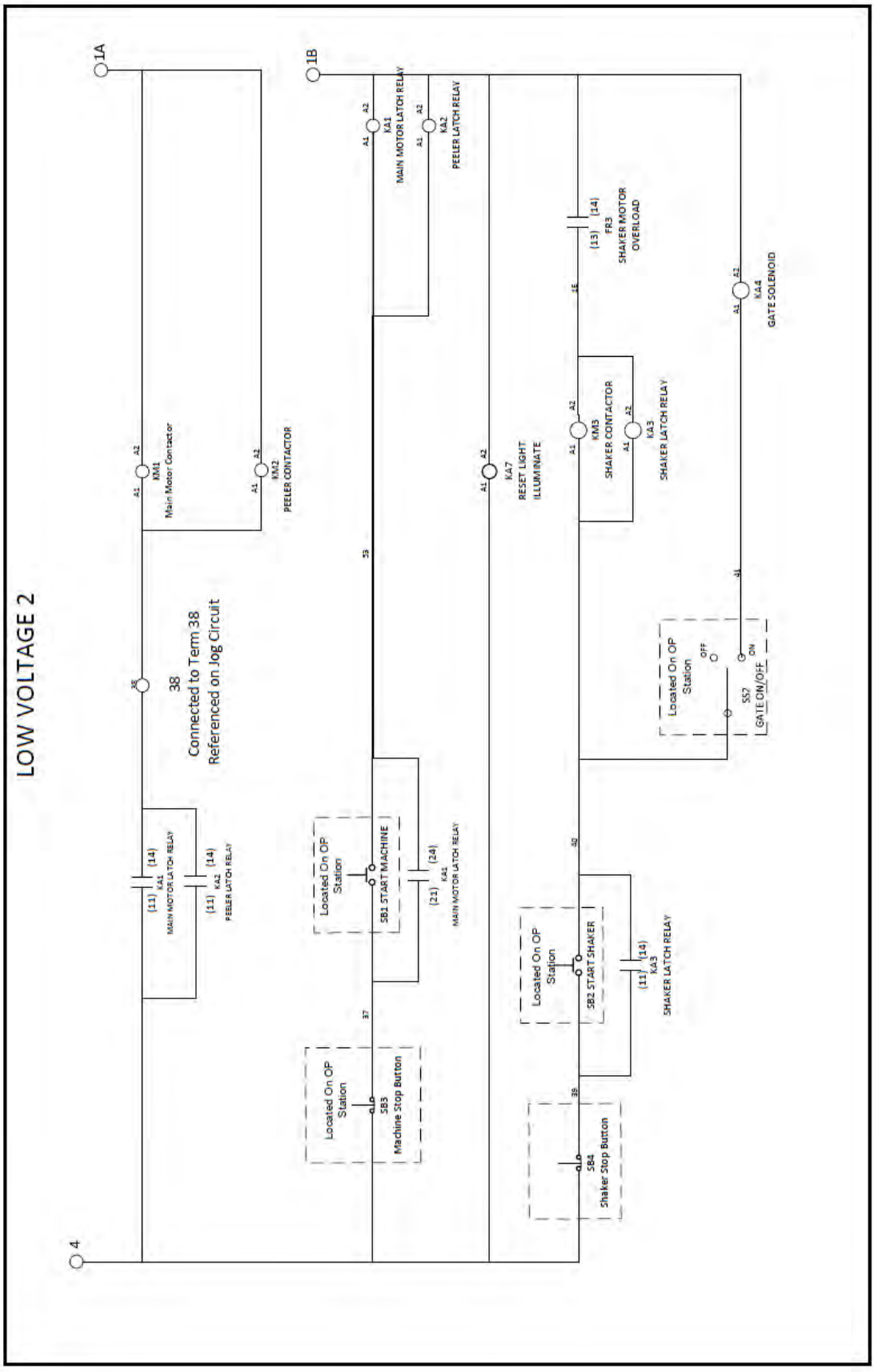


Safety Circuit Schematic

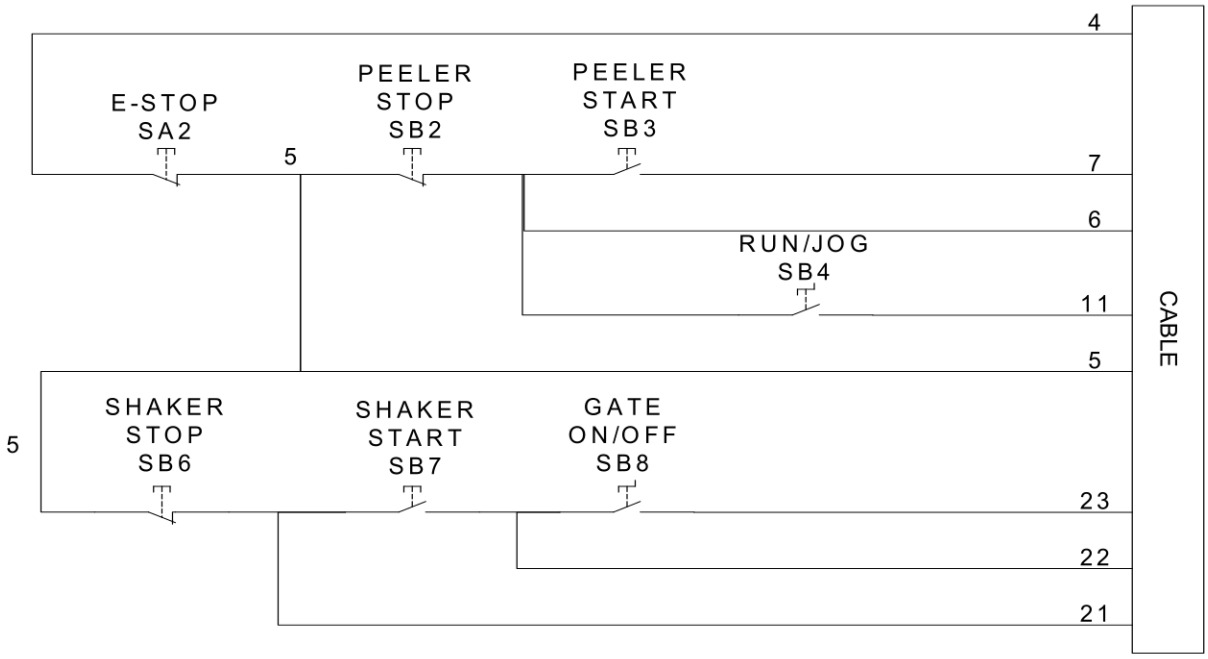


Low Voltage Schematics



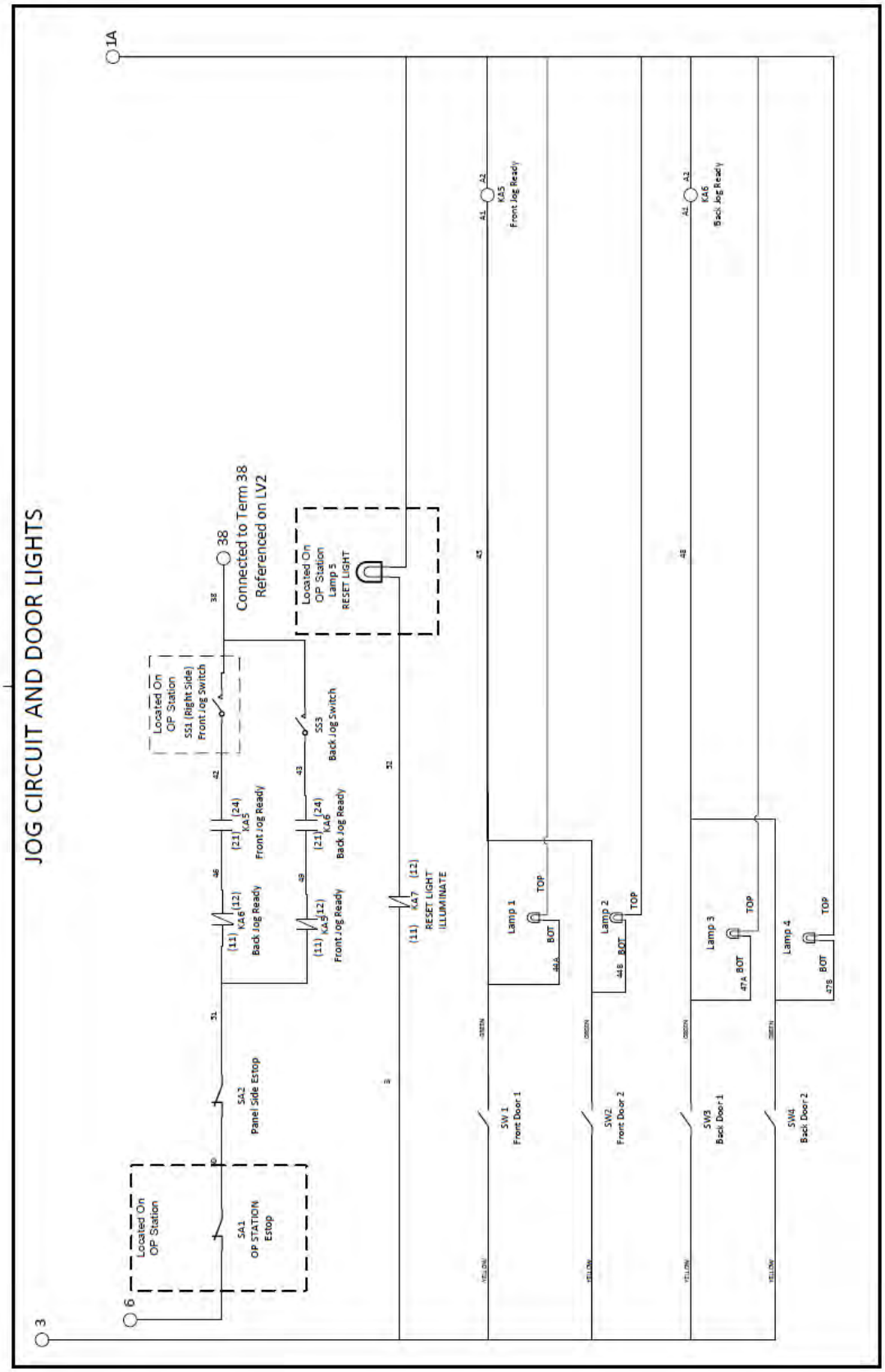

LOW VOLTAGE 2
1A
1B
4
38
Connected to Term 38
Referenced on Jog Circuit
KM1
Main Motor Contactor
KM2
PEELER CONTACTOR
KA1
MAIN MOTOR LATCH RELAY
KA2
PEELER LATCH RELAY
KA7
RESET LIGHT
ILLUMINATE
KM3
SHAKER CONTACTOR
KA3
SHAKER LATCH RELAY
FR3
SHAKER MOTOR
OVERLOAD
KA4
GATE SOLENOID
SB1 START MACHINE
SB2 START SHAKER
SB3
Machine Stop Button
SB4
Shaker Stop Button
SS7
GATE ON/OFF
Located On OP
Station
ON
OFF

Front Station Schematics

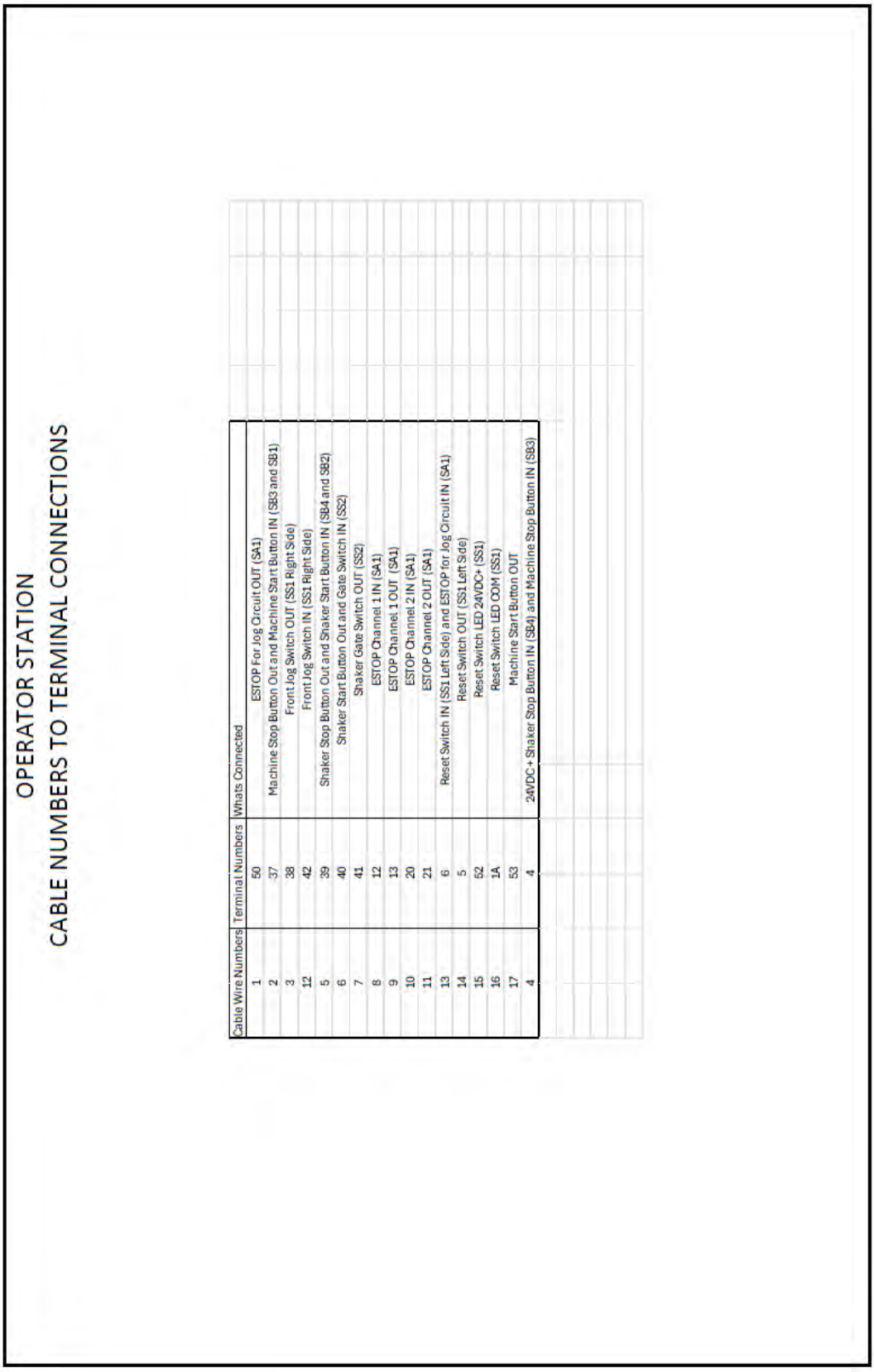


Cable Color	Schematic Number	Alternate Cable Wire Number
Black	4	4
White	5	5
Red	6	6
Green	7	7
Orange	11	8
Blue	21	1
White/Black	22	2
Red/Black	23	3

Jog Circuit and Door Lights Schematic



Operation Station Cable Numbers to Terminal Connections



OPERATOR STATION

CABLE NUMBERS TO TERMINAL CONNECTIONS

Cable Wire Numbers	Terminal Numbers	Whats Connected
1	50	ESTOP For Jog Circuit OUT (SA1)
2	37	Machine Stop Button Out and Machine Start Button IN (SB3 and SB1)
3	38	Front Jog Switch OUT (SS1 Right Side)
12	42	Front Jog Switch IN (SS1 Right Side)
5	39	Shaker Stop Button Out and Shaker Start Button IN (SB4 and SB2)
6	40	Shaker Start Button Out and Gate Switch IN (SS2)
7	41	Shaker Gate Switch OUT (SS2)
8	12	ESTOP Channel 1 IN (SA1)
9	13	ESTOP Channel 1 OUT (SA1)
10	20	ESTOP Channel 2 IN (SA1)
11	21	ESTOP Channel 2 OUT (SA1)
13	6	Reset Switch IN (SS1 Left Side) and ESTOP for Jog Circuit IN (SA1)
14	5	Reset Switch OUT (SS1 Left Side)
15	52	Reset Switch LED 24VDC+ (SS1)
16	1A	Reset Switch LED COM (SS1)
17	53	Machine Start Button OUT
4	4	24VDC+ Shaker Stop Button IN (SB4) and Machine Stop Button IN (SB3)

2023.8000.50 - PEAR ROLL ORIENTOR 50Hz

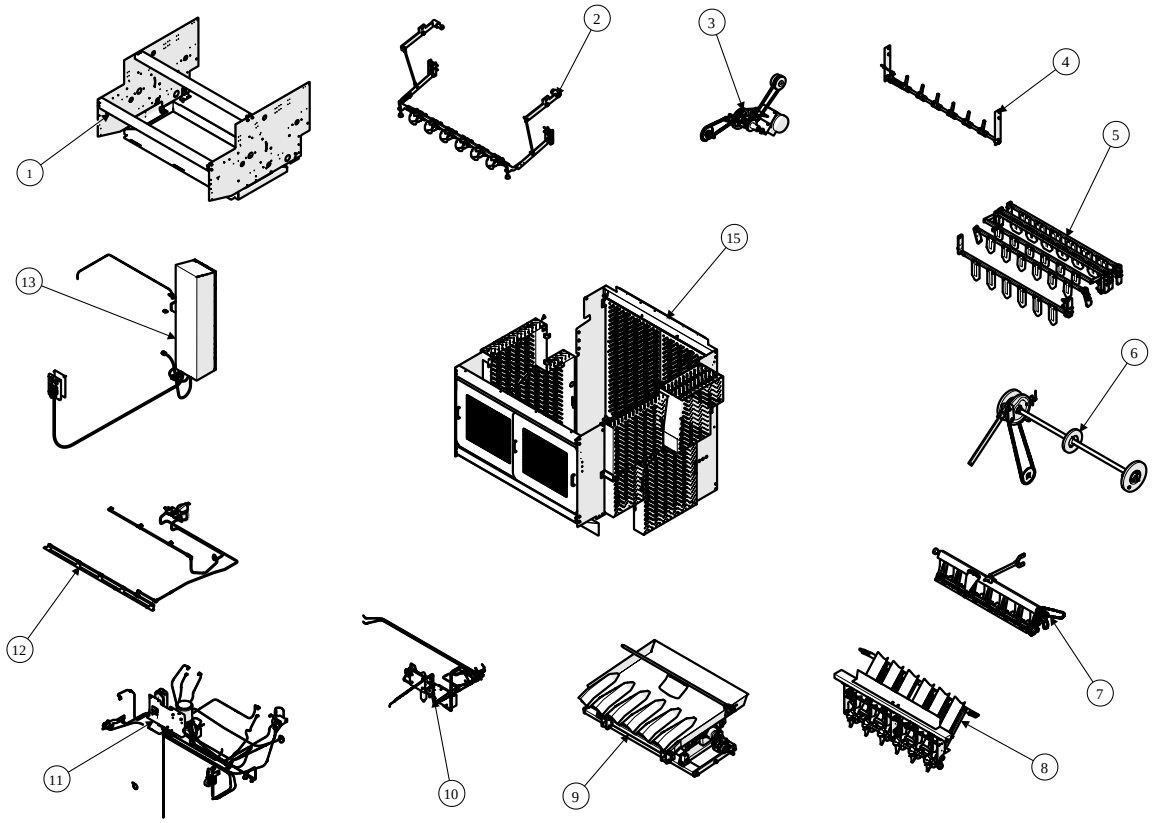


Table 31. PEAR ROLL ORIENTOR - 2023.8000.50

Item	Part Number	Description	Quantity
1	2023.8001	AY,FRAME	1
2	2023.8002	AY,TRANSFER MECHANISM	1
3	2023.8003.50	AY,ADJUSTMENT,SPEED,50Hz	1
4	2023.8004	AY,LINKAGE,TRANSFER FINGER	1
5	2023.8005	AY,PADDLES	1
6	2023.8006	AY,MAIN CAM SHAFT	1
7	2023.8007	AY,FRONT ROLL	1
8	2023.8008	AY,ORIENT ROLL	1
9	2023.8009	AY,FEEDER	1
10	2023.8010	AY,PNEUMATICS	1
11	2023.8011	AY,LUBRICATION	1
12	2023.8012	AY,WATER	1
13	2023.8013	AY,ELECTRONICS	1
14	2023.8015	CE GUARD ASSEMBLY,PRO	1

Item	Part Number	Description	Quantity
15	2023.8016	AY,PRO CE LABEL	1

2023.8000.60 - PEAR ROLL ORIENTOR 60Hz

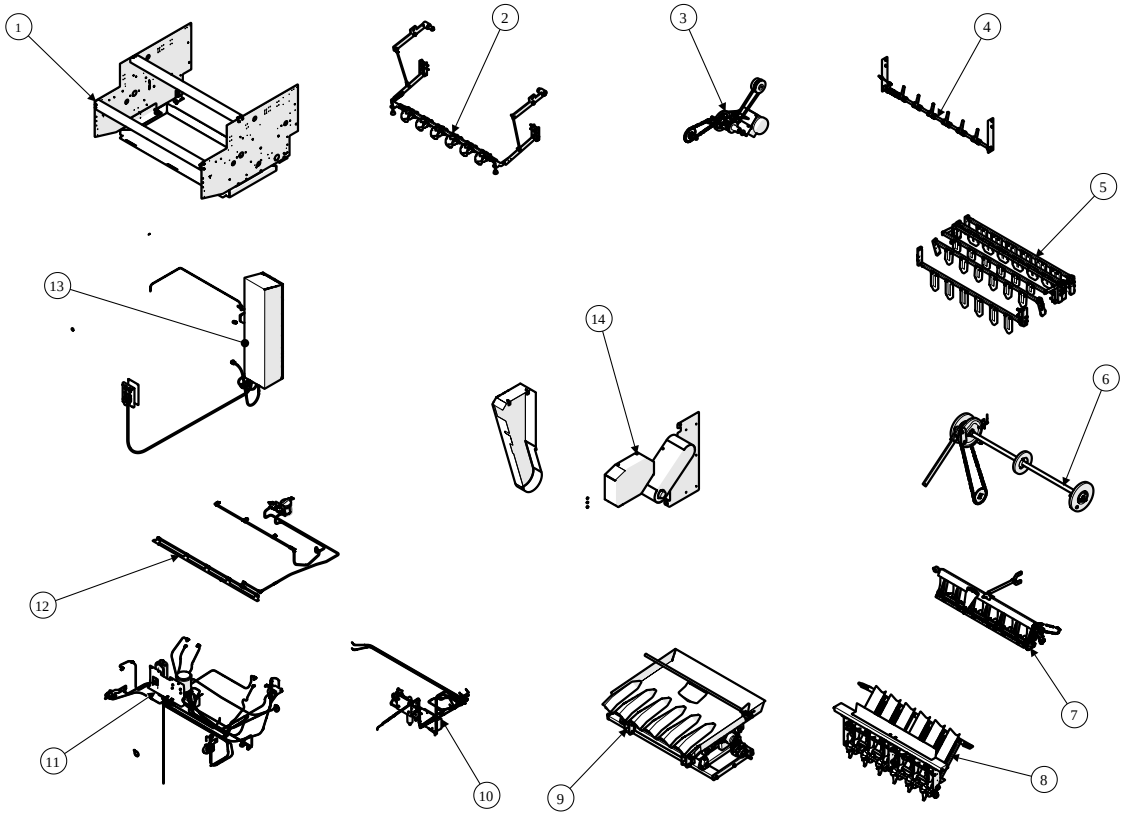


Table 32. PEAR ROLL ORIENTOR - 2023.8000.60

Item	Part Number	Description	Quantity
1	2023.8001	AY,FRAME	1
2	2023.8002	AY,TRANSFER MECHANISM	1
3	2023.8003.60	AY,ADJUSTMENT,SPEED,60Hz	1
4	2023.8004	AY,LINKAGE,TRANSFER FINGER	1
5	2023.8005	AY,PADDLES	1
6	20223.8006	AY,MAIN CAM SHAFT	1
7	2023.8007	AY,FRONT ROLL	1
8	2023.8008	AY,ORIENT ROLL	1
9	2023.8009	AY,FEEDER	1
10	2023.8010	AY,PNEUMATICS	1
11	2023.8011	AY,LUBRICATION	1

Item	Part Number	Description	Quantity
12	2023.8012	AY,WATER	1
13	2023.8013	AY,ELECTRONICS	1
14	2023.8014	AY,GUARDING	1

2023.8001 - AY, FRAME

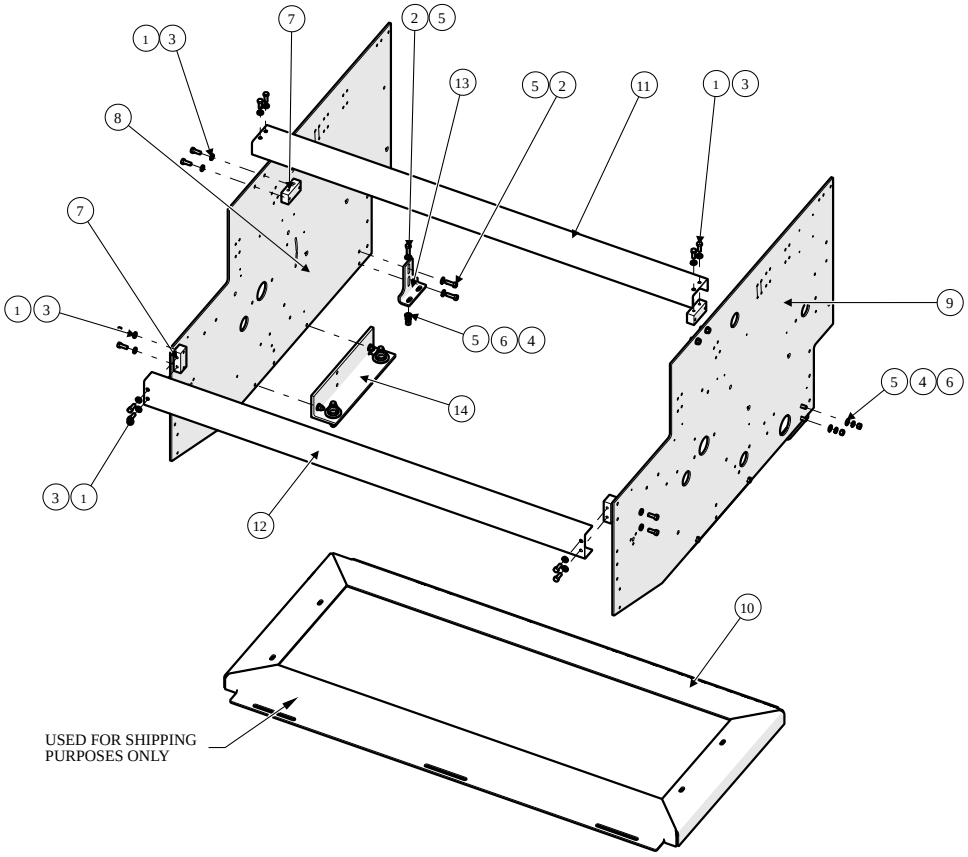


Table 33. AY, FRAME - 2023.8001

Item	Part Number	Description	Quantity
1	0001.0570	SRC,HCS,3/8-16 x 1 SS	16
2	0001.0600	SCR,HCS 3/8-16 x 1 1/4 SS	6
3	0001.4160	WSHR,LK 3/8 HVY SS	16
4	0001.4161	WSHR,LK 3/8 SS	6
5	0001.4500	WSHR,FLT .406 x .813 x .063 SS	12
6	0001.5220	NUT,HX 3/8-16 x 9/16 SS	6
7	2010.4202.1	BRKT,CONTROL BAR MTG SST	4
8	2010.9014	PLATE,FRAME LH SIDE	1
9	2010.9015	PLATE,FRAME RH SIDE	1

Item	Part Number	Description	Quantity
10	3370.3013	BASE,FRAME WELDMENT	1
11	3370.3014	BAR,SUPPORT SHAKER	1
12	3370.3015	BAR,CONTROL MTG FRONT	1
13	3370.3030	BRKT,SIDE PLATE SUPPORT	2
14	3370.3067	MOUNTING ANGLES ASSEMBLY	1

2023.8002 - AY, TRANSFER MECHANISM

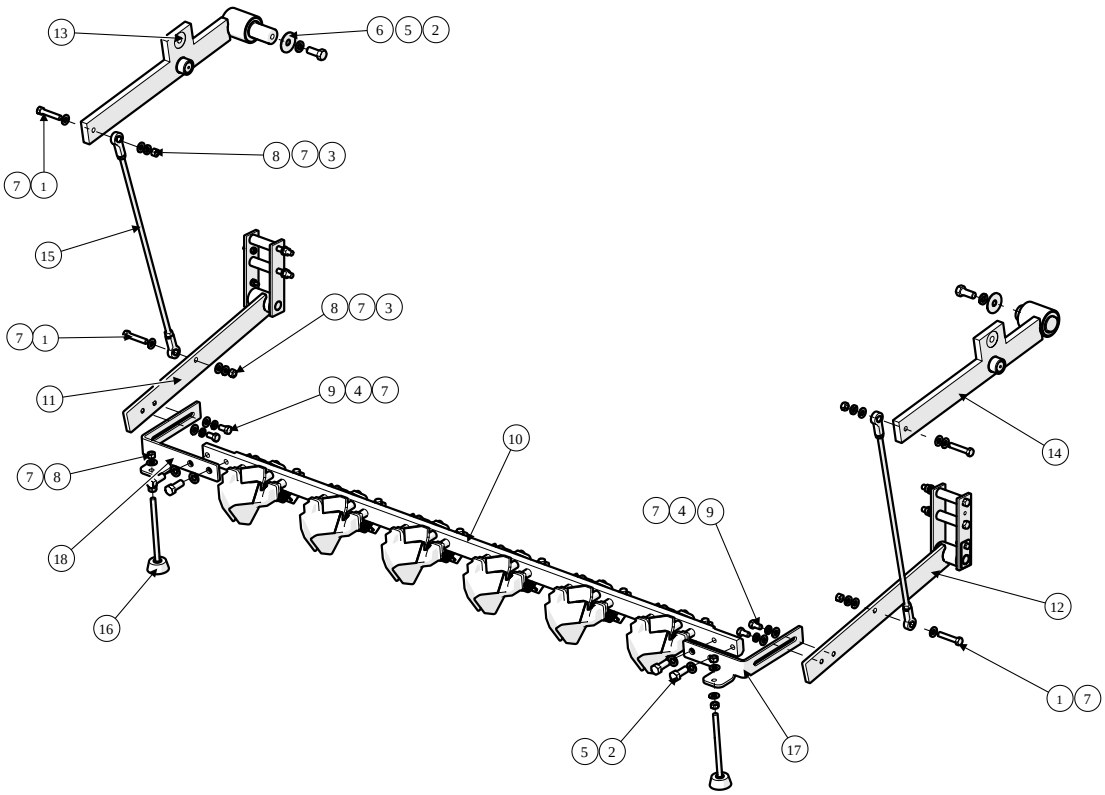


Table 34. AY, TRANSFER MECHANISM - 2023.8002

Item	Part Number	Description	Quantity
1	0001.0670	SCR,HCS, 3/8-16 x 2 SS	4
2	0001.0810	SCR,HCS 1/2-13 x 1 1/4 SS	6
3	0001.4160	WSHR,LK, 3/8 HVY SS	4
4	0001.4161	WSHR,LK, 3/8 SS	4
5	0001.4200	WSHR,LK, 1/2 SS	6
6	0001.4251	WSHR,FLT .516 x 1.688x .090 SS	2
7	0001.4500	WHSR,FLT .406 x .813 x .063 SS	17

Item	Part Number	Description	Quantity
8	0001.5220	NUT,HX 3/8-16 x 9/16 SS	8
9	0001.0540	SCR,HCS 3/8-16 x 3/4 SS	4
10	3370.1711	CUPS,TRANSFER & MECHANISM	1
11	3370.1728.L	ARM,LH,TRANSFER CUP	1
12	3370.1728.R	ARM,RH,TRANSFER CUP	1
13	3370.1875.L	AY,LH,TRANSFER CUP CAM ARM	1
14	3370.1875.R	AY,RH, TRANSFER CUP CAM ARM	1
15	3370.1936	AY,ROD CONN TRANS CUP	2
16	3370.1938	CUP, TRANSFER STOP	2
17	3370.3027	BRKT,RH, TRANSFER BAR CARRIER	1
18	3370.3028	BRKT,LH TRANSFER BAR CARRIER	1

2023.8003.50 - AY, ADJUSTMENT, SPEED, 50Hz

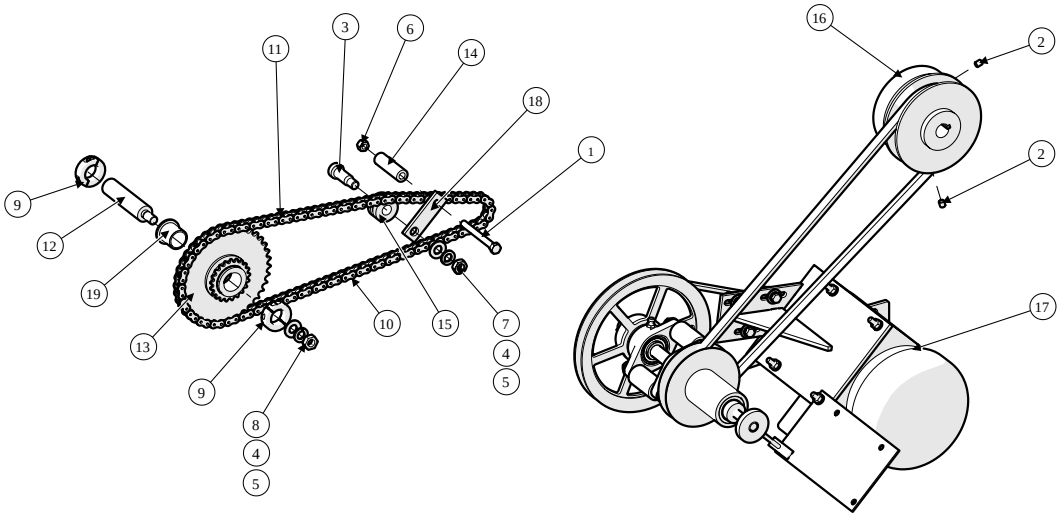


Table 35. AY, ADJUSTMENT, SPEED, 50Hz - 2023.8003.50

Item	Part Number	Description	Quantity
1	0001.0748.1	SCR,HCS 3/8-16 x 3 1/2 SS	1

Item	Part Number	Description	Quantity
2	0001.2402	SCR,SSS 5/16-18 x 3/8 SS	2
3	0001.3905.1	SCR,SHSCS 5/8x1 1/4x 1/2-13 SS	1
4	0001.4200	WSHR,LK 1/2 SS	2
5	0001.4570	WSHR,FLT .531 x 1.063 x.094 SS	2
6	0001.5240	NUT,HX 3/8-24 x 9/16 SS	1
7	0001.5560	NUT,HXJ 1/2-13 x 3/4 SS	1
8	0001.5601.1	NUT,HXJ 1/2-20 x 3/4 SS LH	1
9	0001.7706	CLR,DBLSPLT 1 x 1 3/4 SS	2
10	0426.0023	CHAIN,ML RC40 SS	1
11	0006.0024	CHAIN,RC40 SS	46.5
12	2010.9180	SPRKT,STUB SHAFT	1
13	2010.9114	SPRKT AY,STUB SHAFT	1
14	3370.1574	SPACER,3/4 OD x 13/32 ID x 2.5	1
15	3370.1623	IDLER,TAKE-UP BELT DRIVE	1
16	3370.1700.50	DRIVE MOTOR AY,50Hz	1
17	3370.1892	AY,JACKSHAFT	1
18	3370.2072	BRACKET,CHUTE STOP CHAIN IDLER	1
19	3370.3026	BRG,PLSTCFLG 1 x1 1/2 x1 1/4	1

2023.8003.60 - AY, ADJUSTMENT, SPEED, 60Hz

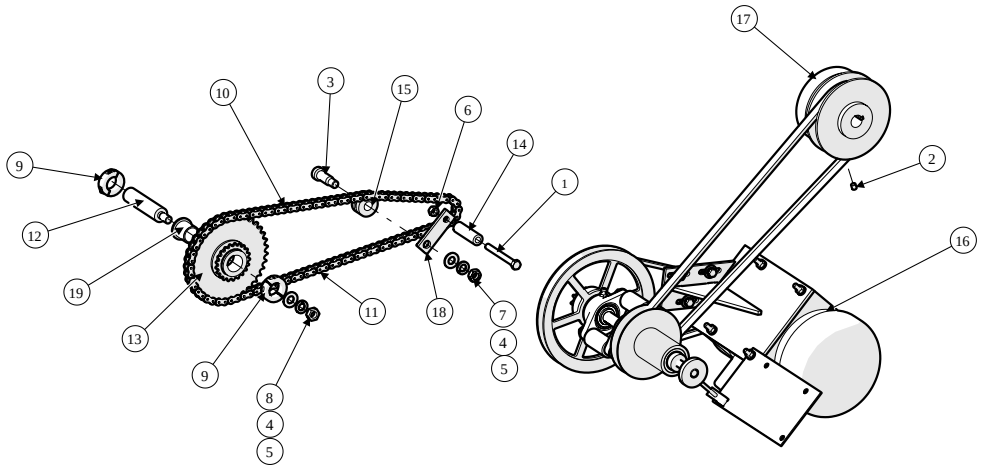


Table 36. AY, ADJUSTMENT, SPEED, 60Hz - 2023.8003.60

Item	Part Number	Description	Quantity
1	0001.0748.1	SCR,HCS 3/8-16 x 3 1/2 SS	1
2	0001.2402	SCR,SSS 5/16-18 x 3/8 SS	2
3	0001.3905.1	SCR,SHSCS 5/8x1 1/4x 1/2-13 SS	1
4	0001.4200	WSHR,LK 1/2 SS	2
5	0001.4570	WSHR,FLT .531 x 1.063 x.094 SS	2
6	0001.5240	NUT,HX 3/8-24 x 9/16 SS	1
7	0001.5560	NUT,HXJ 1/2-13 x 3/4 SS	1
8	0001.5601.1	NUT,HXJ 1/2-20 x 3/4 SS LH	1
9	0001.7706	CLR,DBLSPLT 1 x 1 3/4 SS	2
10	0006.0024	CHAIN,RC40 SS	46.5
11	0426.0023	CHAIN,ML RC40 SS	1
12	2010.9108	SPRKT,STUB SHAFT	1
13	2010.9114	SPRKT AY,STUB SHAFT	1
14	3370.1574	SPACER,3/4 OD x 13/32 ID x 2.5	1

Item	Part Number	Description	Quantity
15	3370.1623	IDLER,TAKE-UP BELT DRIVE	1
16	3370.1700.60	DRIVE MOTOR AY,60Hz	1
17	3370.1892	AY,JACKSHAFT	1
18	3370.2072	BRACKET,CHUTE STOP CHAIN IDLER	1
19	3370.3026	BRG,PLSTCFLG 1 x1 1/2 x1 1/4	1

2023.8004 - AY, LINKAGE, TRANSFER FINGER

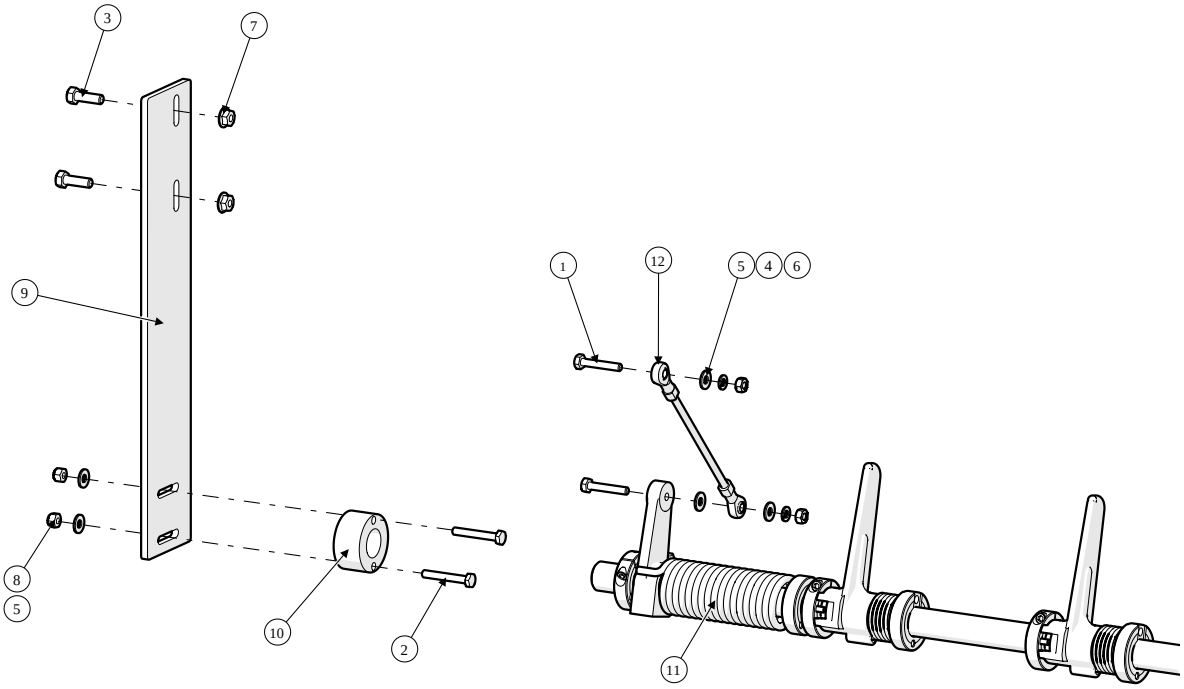


Table 37. AY, LINKAGE, TRANSFER FINGER - 2023.8004

Item	Part Number	Description	Quantity
1	0001.0185	SCR,HCS 1/4-20 x 1 1/2 SS	2
2	0001.0190	SCR,HCS 1/4-20 x 1 3/4 SS	4
3	0001.0330	SCR,HCS 5/16-18 x 1 SS	4
4	0001.4100	WSHR,LK 1/4 SS	4
5	0001.4350	WSHR,FLT .281 x .625 x .063 SS	7
6	0001.5120	NUT,HX 1/4-20 x 7/16 SS	2
7	0001.5680	NUT,FLGLK 5/16-18 x 1/2 SS	4

Item	Part Number	Description	Quantity
8	0001.5712	NUT,HXSLFLKG 1/4-20 x 7/16 SS*	4
9	2010.9022	FINGER AY,TRANS SUPPORT	2
10	3370.1520	BEARING PIVOT,1" ID	2
11	3370.1699	FINGER ASSEMBLY,TRANSFER	1
12	3370.1881	LINKAGE,TRANSFER FINGER	1

2023.8005 - AY, PADDLES

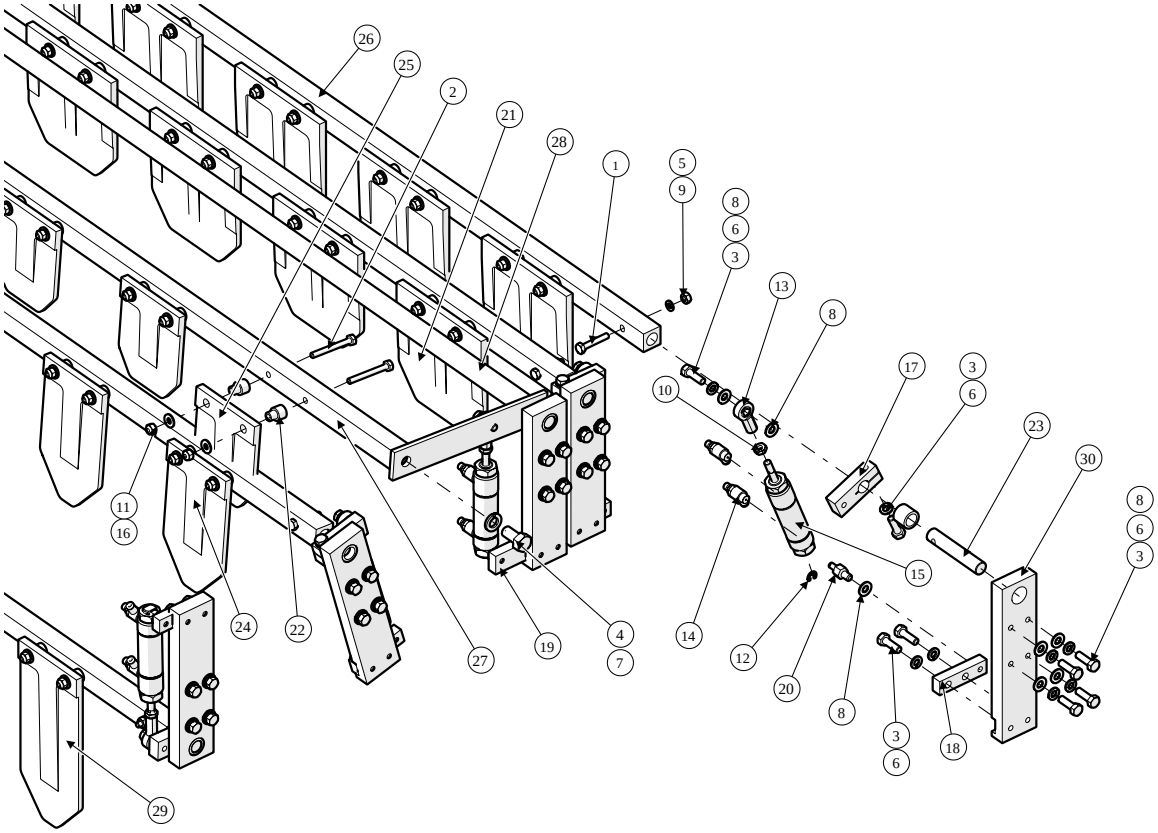


Table 38. AY, PADDLES - 2023.8005

Item	Part Number	Description	Quantity
1	0001.0185	SCR,HCS 1/4-20 x 1 1/2 SS	8
2	0001.0194	SCR,HCS 1/4-20 x 2 1/4 SS	60
3	0001.0330	SCR,HCS 5/16-18 x 1 SS	62
4	0001.0780	SCR,HCS 1/2-13 x 1 SS	2
5	0001.4100	WSHR,LK 1/4 SS	8
6	0001.4120	WSHR,LK 5/16 SS	62
7	0001.4200	WSHR,LK 1/2 SS	2

Item	Part Number	Description	Quantity
8	0001.4390	WSHR,FLT .344 x .688 x .063 SS	57
9	0001.5120	NUT,HX 1/4-20 x 7/16 SS	8
10	0001.5484	NUT,HXJ 5/16-24 x 1/2 SS	6
11	0001.5712	NUT,HXSLFLKG 1/4-20 x 7/16 SS*	60
12	0001.7268	RING,EXTERNFRCD .250 SS	6
13	0002.0210	RODEND,5/16 x F5/16-24 BK	6
14	0007.2005	FTG,PAEN 2MPT x 2.5TUQR * FLOW	12
15	0007.4325.2	BIMBA,AIR CYL 1.06D x 1.05	6
16	0001.4350	WSHR,FLT .281 x .625 x .063 SS	60
17	2010.3723.1	LEVER,1 1/4 5/16-18 SS	4
18	2010.3731.1	SUPPORT,AIR CYL PIVOT	4
19	2010.3731.2	SUPPORT,AIR CYL PIVOT	2
20	2010.3732	PIVOT,AIR CYL	6
21	2010.3814.001	PADDLE,5.88 x 6 RIBBED	12
22	2010.3820	SPACER,ISOLATOR PADDLE	60
23	2010.9138	PIN,PADDLE SHAFT	8
24	2010.3815.001	PADDLE,6.88 x 4.12 RIBBED	6
25	2010.3816.001	PADDLE,4.88 x 4.12 RIBBED	6
26	3370.3016	SHAFT,PEAR CONTROL	4
27	3370.3017	SHAFT,PEAR CONTROL,MID	1
28	3370.3018	RM,RND 1" 304 SST	1
29	3370.3019	PADDLE,9.13 x 4.12 RIBBED	6
30	3370.3031	SUPPORT,SWEEP SHAFT	10

2023.8006 - AY, MAIN CAM SHAFT

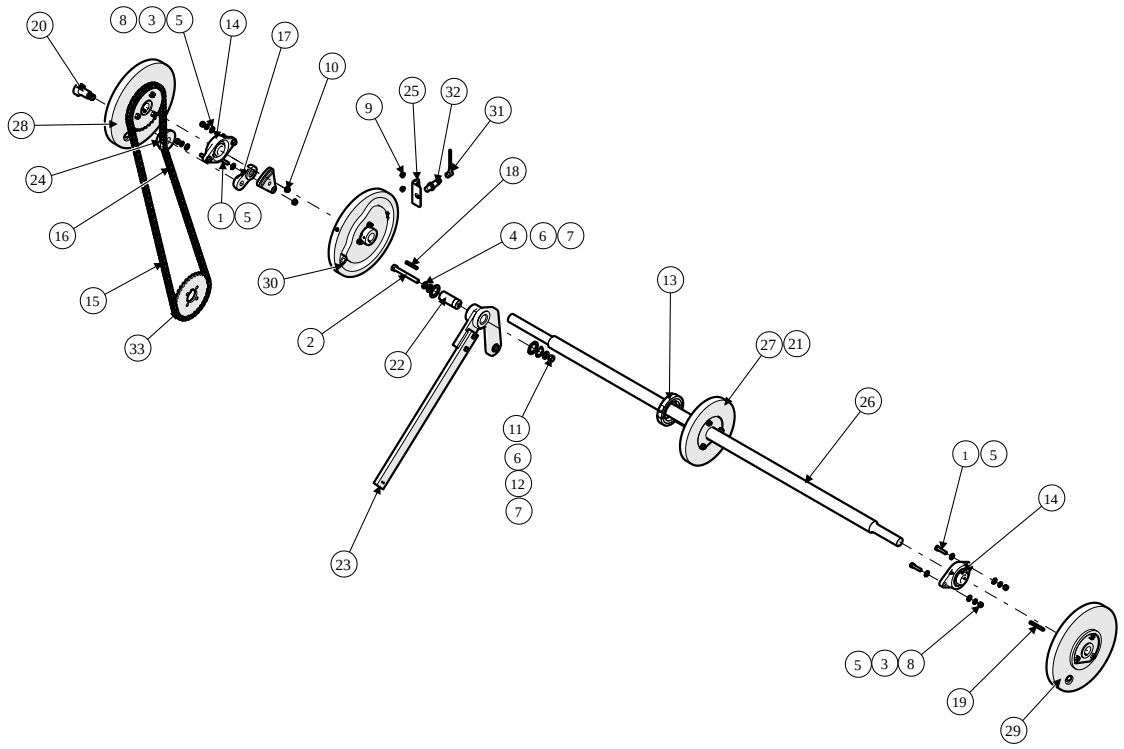
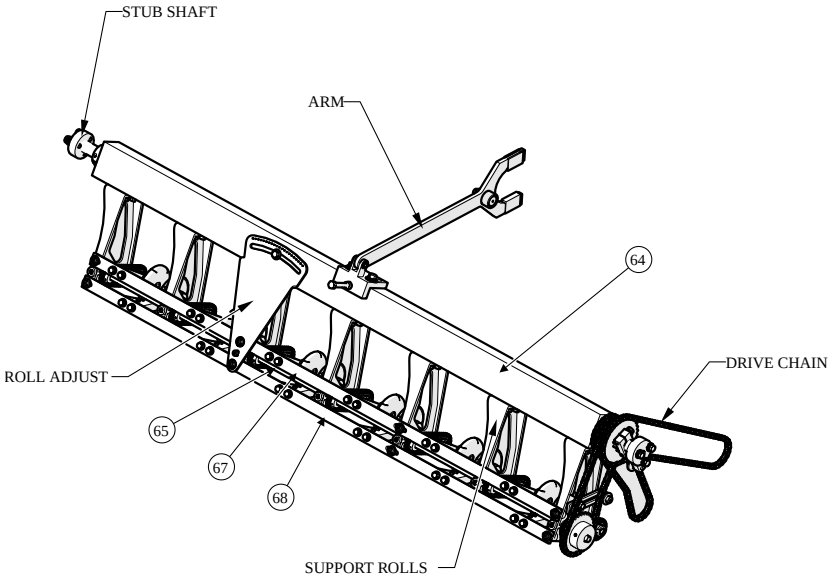


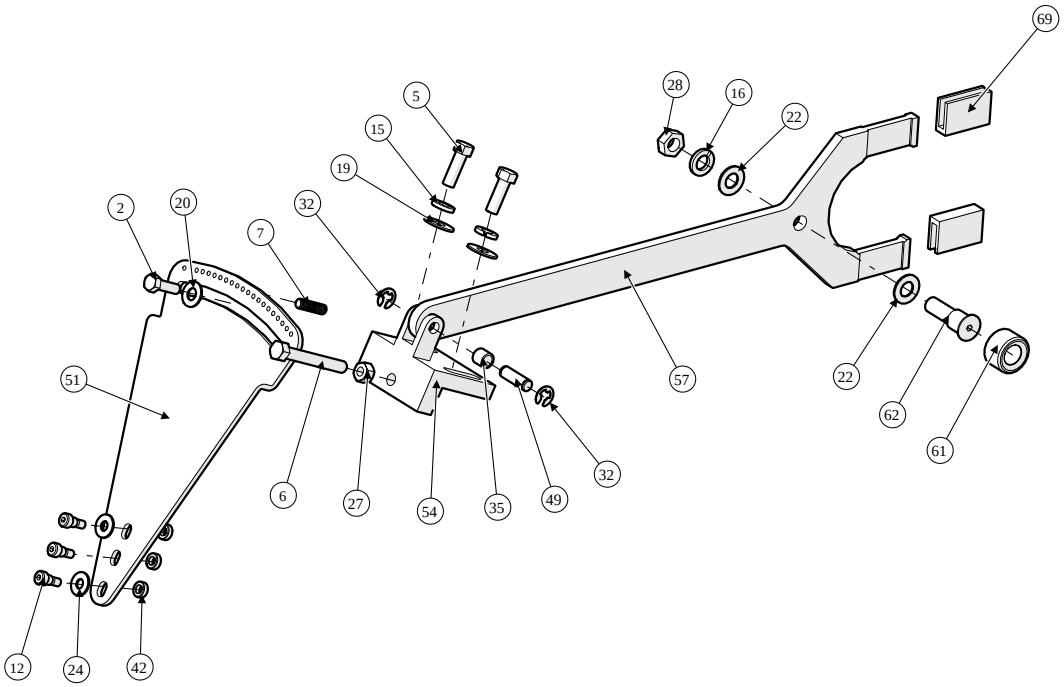
Table 39. AY, MAIN CAM SHAFT - 2023.8006

Item	Part Number	Description	Quantity
1	0001.0630	SCR,HCS 3/8-16 x 1 1/2 SS	6
2	0001.0963	SCR,HCS 1/2-13 x 4 1/4 SS	1
3	0001.4161	WSHR,LK 3/8 SS	4
4	0001.4200	WSHR,LK 1/2 SS	1
5	0001.4500	WSHR,FLT .406 x .813 x .063 SS	10
6	0001.4570	WSHR,FLT .531 x 1.063 x.094 SS	2
7	0001.4656.1	WSHR,FLT 1.260 x 1.875x.060 SS	2
8	0001.5220	NUT,HX 3/8-16 x 9/16 SS	4
9	0001.5680	NUT,FLGLK 5/16-18 x 1/2 SS	2
10	0001.5688	NUT,FLGLK 3/8-16 x 9/16 SS	2
11	0001.5310	NUT,HX 1/2-13 x 3/4 SS	1
12	0001.7210	RING,EXT 1.250 SS	1
13	0001.7733	CLR,DBLSPLT 3 x 4 1/2 SS	1
14	0002.5044	BRG,FLG BRN VF2S220	2

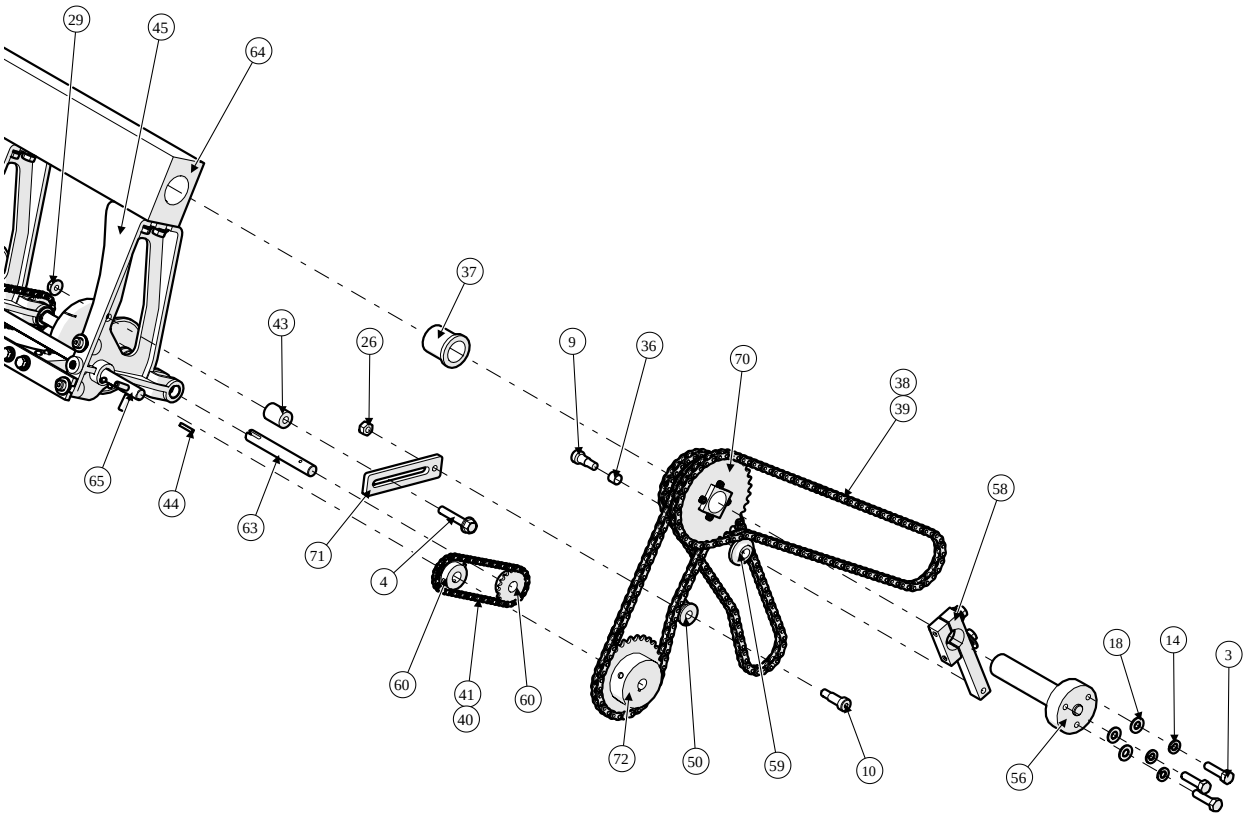
Item	Part Number	Description	Quantity
15	0006.0026.1	CHAIN,RC50 SS	120
16	0006.0094.2	CHAIN,ML RC50 SS	1
17	0006.1501	BASE,DRIVE TENS.-UNIV. #SM	1
18	0006.7012	KEY,SQ 1/4 x 2 SS	1
19	0006.7020	KEY,SQ 1/4 x 2 1/2 SS	2
20	0006.1500	SHAFT,DRIVE TENS.-UNIV. #SO-2	1
21	0006.7141	KEY,SQ 3/8 x 3 SS	1
22	3370.1650	SHAFT,TRANS FIN CAM LH	1
23	3370.1841	ARM,TRANSFER FINGER	1
24	3370.1866	IDLER,PLASTIC	1
25	3370.3041	BRKT,PROX SENSOR	1
26	3370.3061	CAM SHAFT,MAIN	1
27	3370.3070	AY,ROLL CAM OPEN NYL	1
28	3370.3073.L	AY,TRANSFER CAM CUP NYL LH	1
29	3370.3073.R	AY,TRANSFER CAM CUP NYL RH	1
30	3370.3076	AY,TRANSFER CAM NYL	1
31	9502.8087	SENSOR CABLE 5M M12 4P	1
32	9502.8151	SENSOR,INDUCT 3 OR 2W QD	1
33	3370.1500	SPROCKET,LOWER	1

2023.8007 - AY, FRONT ROLL





ARM AND ROLL ADJUST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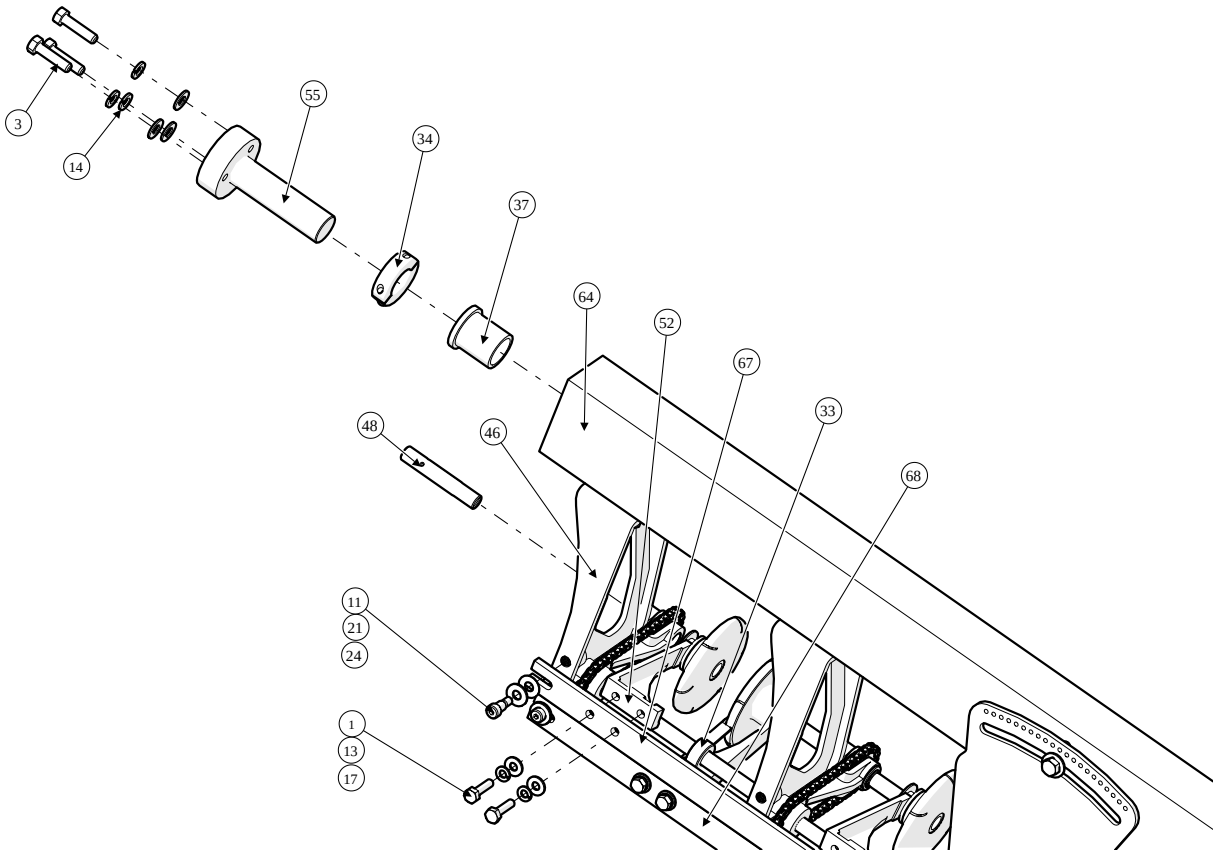
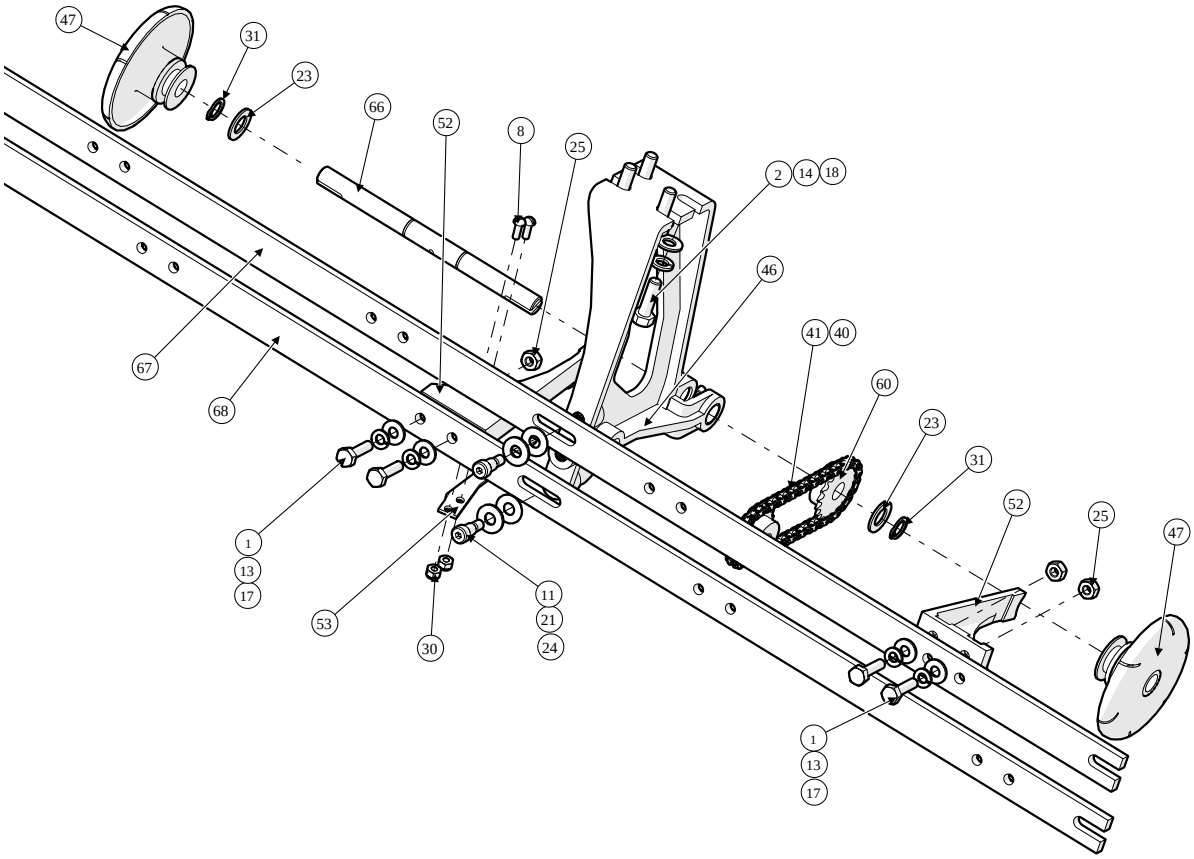
DRIVE CHAIN



STUB SHAFT



SUPPORT ROLLS

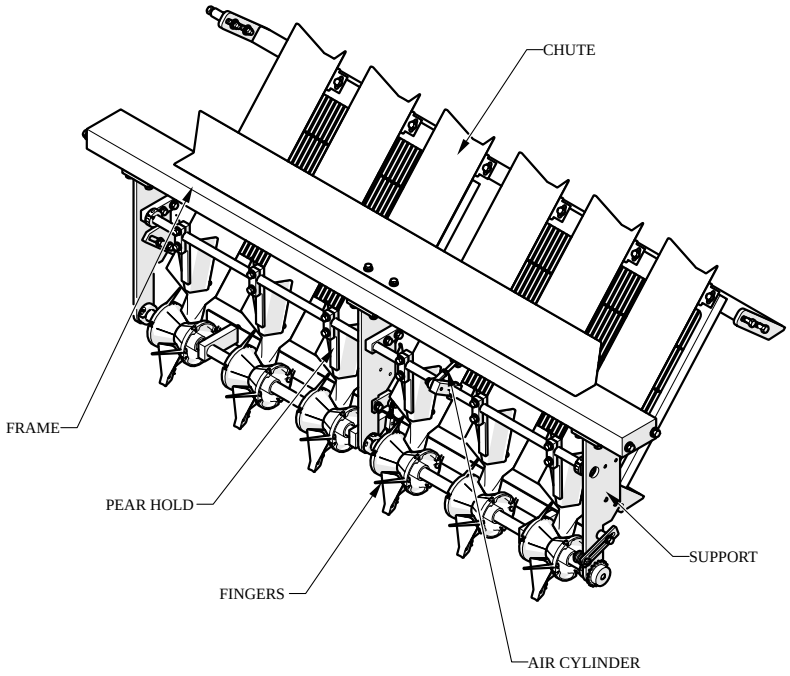
Table 40. AY, FRONT ROLL - 2023.8007

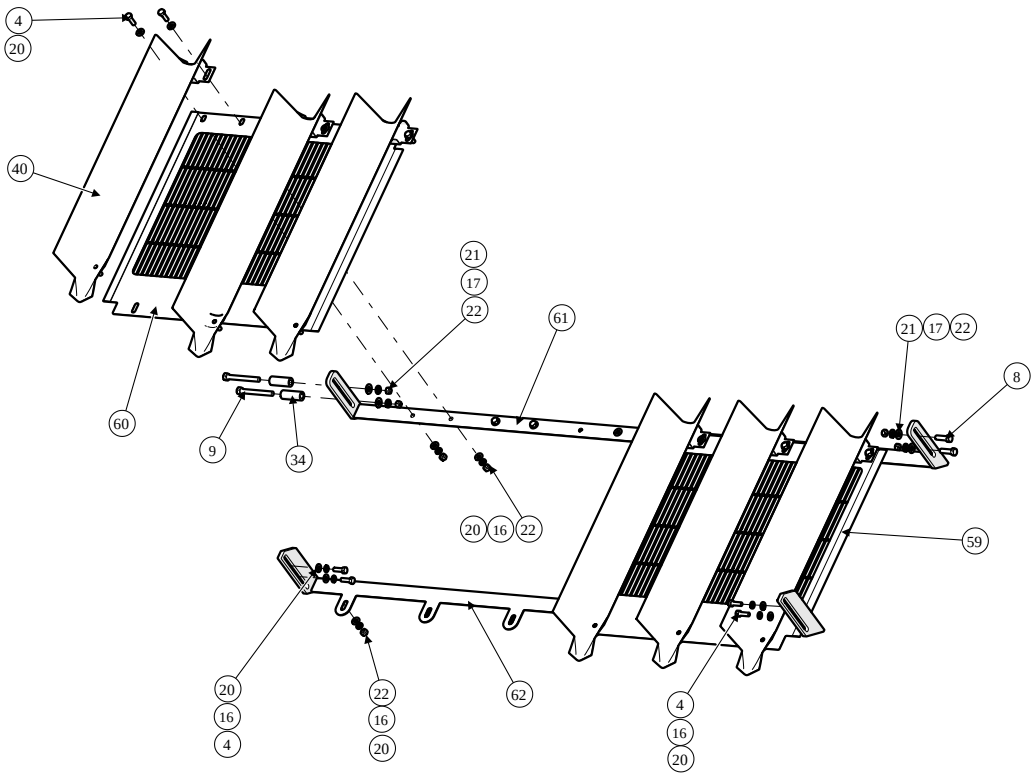
Item	Part Number	Description	Quantity
1	0001.0150	SCR,HCS 1/4-20 x 1 SS	24
2	0001.0330	SCR,HCS 5/16-18 x 1 SS	29
3	0001.0370	SCR,HCS 5/16-18 x 1 1/4 SS	6
4	0001.0337	SCR,HCS FLGLK 5/16-18x1-3/4 SS	1
5	0001.0610	SCR,HCS 3/8-16 x 1 1/4 SS *	2
6	0001.0730.1	SCR,HCS 3/8-16 x 2 3/4 SS *	1
7	0001.2538.2	SCR,SSS 5/16-18 x1 1/4 SS CNPT	1
8	0001.3051.1	SCR,RHMS 8-32 x 1/2 SS	12
9	0001.3900.5	SCR,SHSCS 3/8x 1/2x 5/16-18 SS	1
10	0001.3900.10	SCR,SHSCS 3/8x 3/4x 5/16-18 SS	1
11	0001.3901.1	SCR,SHSCS 5/16x 3/8x 1/4-20 SS	6
12	0001.3901.2	SCR,SHSCS 5/16x 1/4x 1/4-20 SS	3
13	0001.4100	WSHR,LK 1/4 SS	24
14	0001.4120	WSHR,LK 5/16 SS	34
15	0001.4160	WSHR,LK 3/8 HVY SS	2

Item	Part Number	Description	Quantity
16	0001.4200	WSHR,LK 1/2 SS	1
17	0001.4350	WSHR,FLT .281 x .625 x .063 SS	24
18	0001.4390	WSHR,FLT .344 x .688 x .063 SS	34
19	0001.4433.1	WSHR,FLT .395 x 1.000 x.060 SS	2
20	0001.4500	WSHR,FLT .406 x .813 x .063 SS	1
21	0001.4649	WSHR,FLT .317 x .739 x .060 SS	6
22	0001.4654	WSHR,FLT .510 x .968 x .060 SS	2
23	0001.4716	WSHR,FLT .505 x .875 x.062 NYL	10
24	0001.4802	WSHR,FLT .315 x .750 x.031 NYL	10
25	0001.5120	NUT,HX 1/4-20 x 7/16 SS	24
26	0001.5200	NUT,HX 5/16-18 x 1/2 SS	1
27	0001.5220	NUT,HX 3/8-16 x 9/16 SS	1
28	0001.5601	NUT,HXJ 1/2-20 x 3/4 SS	1
29	0001.5680	NUT,FLGLK 5/16-18 x 1/2 SS	1
30	0001.5705	NUT,HXSLFLKG 8-32 x 11/32 SS *	12
31	0001.7130.1	RING,EXT .500 HVY SST	10
32	0001.7430	RING,EXTE .375 SS	2
33	0001.7542	CLR,SLD 1/2 x 1 SS	1
34	0001.7706	CLR,DBLSPLT 1 x 1 3/4 SS	1
35	0003.1031	BRG,OILSLV 3/8 x 1/2 x 7/16	1
36	0003.1033	BRG,OILSLV 3/8 x 7/16 x 3/8	1
37	0003.4117	BRG,PLSTCFLG 1 x 1 1/4 x 1 1/2	2
38	0006.0010	CHAIN,RC35 SS	48
39	0006.0059.1	CHAIN,ML RC35 SS	3
40	0006.0096.2	CHAIN,ML RC-25 SS	7
41	0006.0098.1	CHAIN,RS25SS 304SS CHAIN	92
42	0009.9236	SPACER,.25 ID .50 OD .188 L S	3
43	0009.9232	SPACER,.315ID x .750 x1.00L SS	1
44	241.119	KEY,SQ 1/8 x 3/4 SS	1
45	2010.3606.001	SUPT,FRONT ROLL BSHG MOD	1
46	2010.3606.800	SUPT,FRONT ROLL BSHG	6
47	2010.3620.800	ROLL,FRONT ORIENTOR	12
48	2010.3621	SHAFT, FRONT ROLL END	1
49	2010.3650	PIN,PIVOT ROLL OPEN	1
50	2010.3652.1	ROLL,TAKE UP 35 PITCH	1
51	2010.3694	LEVER,FRONT ROLL ADJ WIDTH	1
52	2010.3751.800	DRIVER,ADJ FRON ROLL	12
53	2010.3792	BLADE,ROLL CLEAN	6

Item	Part Number	Description	Quantity
54	2010.9021	ADJ,ROLL OPEN	1
55	2010.9042.1	STUB SHAFT,FRONT ROLL SUP,LH	1
56	2010.9042.2	STUB SHAFT,FRONT ROLL SUP,RH	1
57	2010.9086	ARM,FRONT ROLL OPEN SHORT PAN	1
58	2010.9111	ROW ORIENTOR DRV CHAIN TU CLMP	1
59	2010.9112	CHAIN,ROLLER T.U.	1
60	2010.9191	SPRKT,FRONT ROLL DRIVE	14
61	3370.1751	ROLLER,PLUNGER & TRANS FINGER	1
62	3370.1752	SHAFT	1
63	3370.3006	SHAFT,FRONT ROLL END	1
64	3370.3007	SUPPORT,FRONT ROLL	1
65	3370.3008	SHAFT,FRONT ROLL DRIVE CENTRAL	1
66	3370.3009	SHAFT,FRONT ROLL CENTER	5
67	3370.3010	BAR,FRONT ROLL ADJ. UPPER	1
68	3370.3011	BAR,FRONT ROLL ADJ. LOWER	1
69	3370.3012	PAD,WEAR	2
70	3370.3029	SPROCKET ASSEMBLY,SST	1
71	3370.3043	SUPPORT,CHAIN T.V.	1
72	3370.3046	SPRK,35B30 x .50 x 1/4KEY SS	1

2023.8008 - AY, ORIENT ROLL

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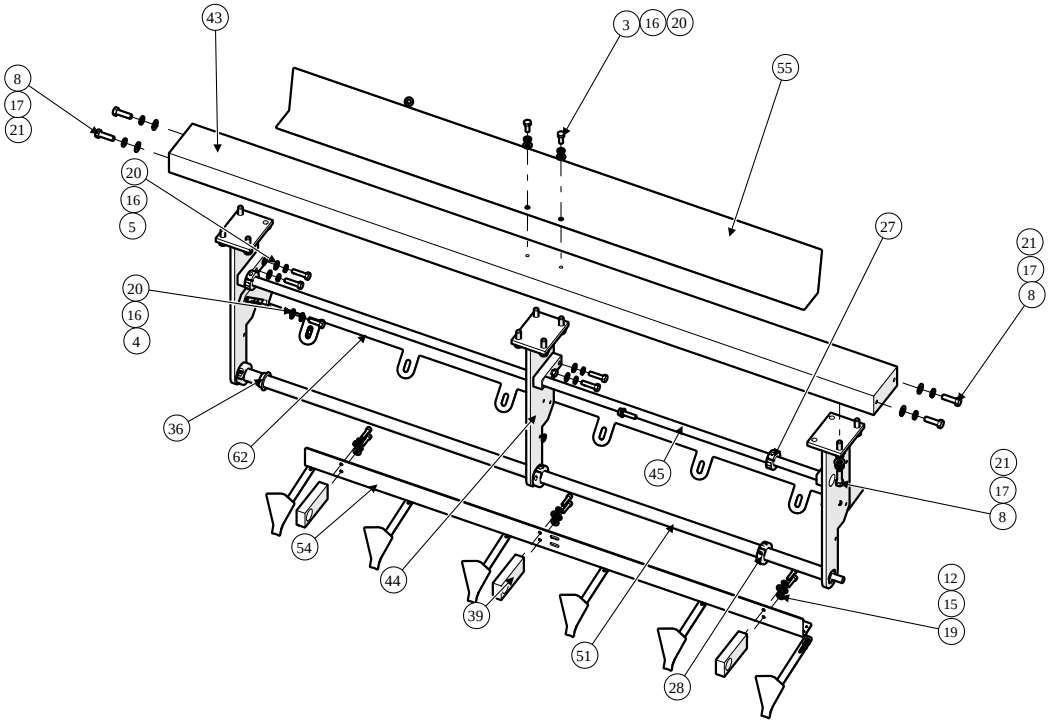
CHUTE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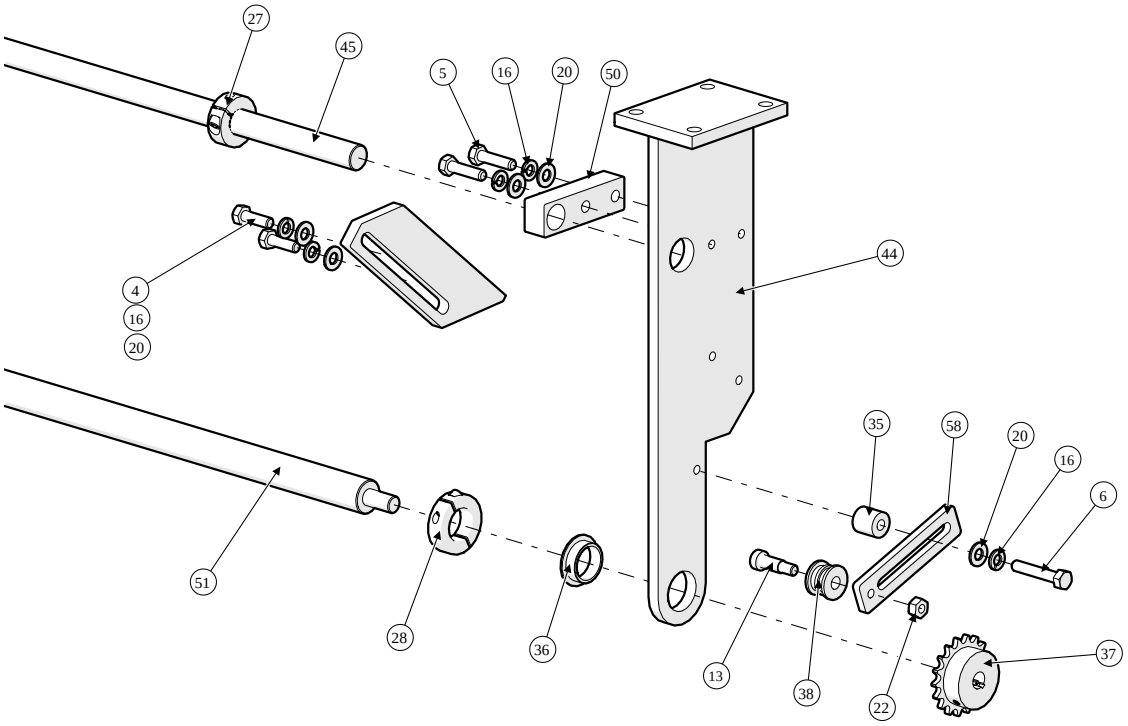
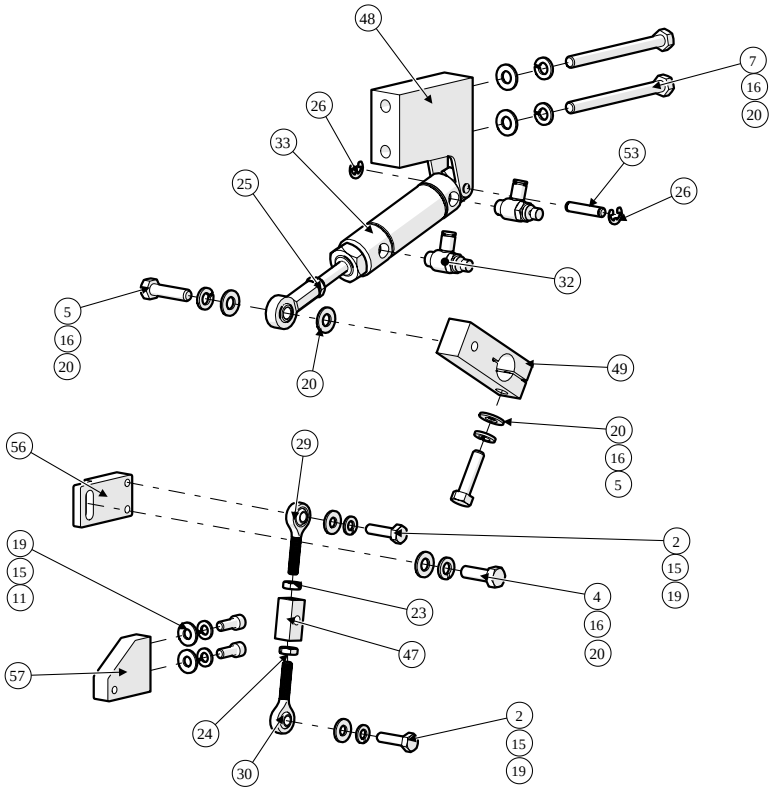
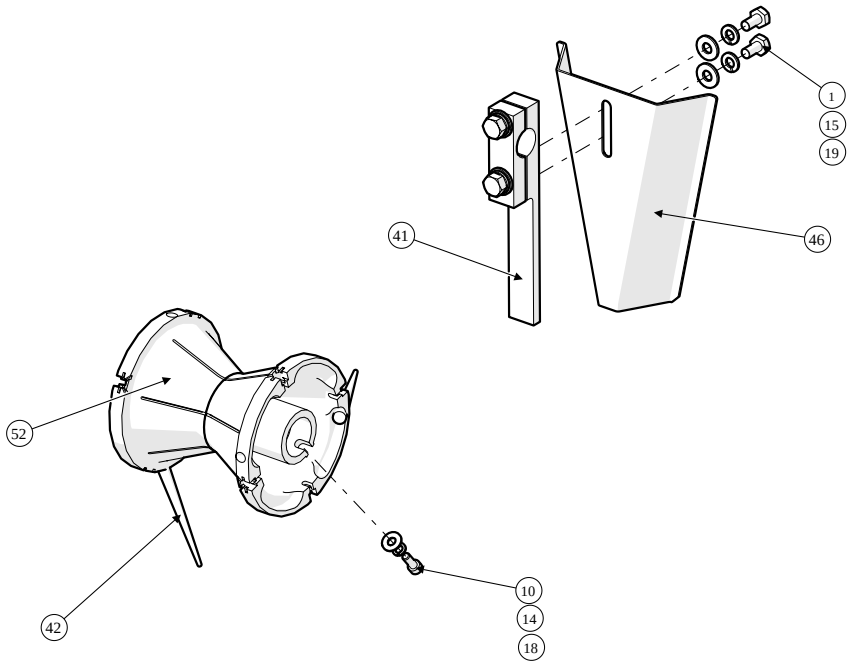


SUPPORT



AIR CYLINDER



PEAR HOLD AND FINGERS

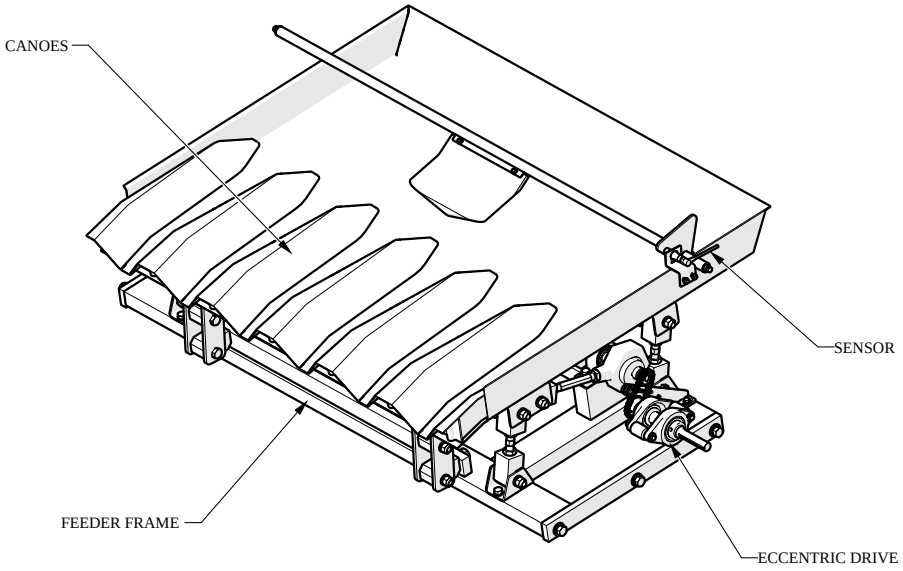
Table 41. AY, ORIENT ROLL - 2023.8008

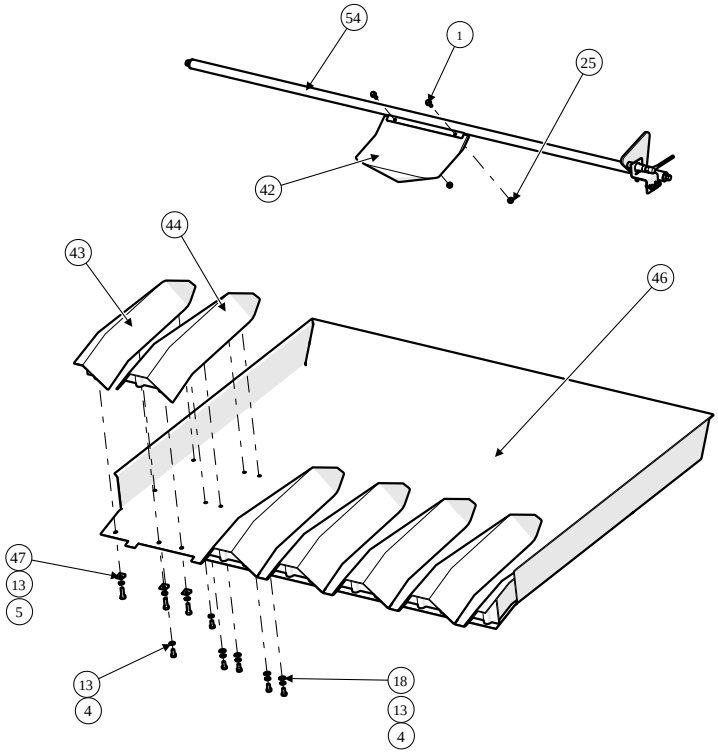
Item	Part Number	Description	Quantity
1	0001.0060	SCR,HCS 1/4-20 x 1/2 SS	12
2	0001.0150	SCR,HCS 1/4-20 x 1 SS	2
3	0001.0280	SCR,HCS 5/16-18 x 3/4 SS	2
4	0001.0330	SCR,HCS 5/16-18 x 1 SS	17
5	0001.0370	SCR,HCS 5/16-18 x 1 1/4 SS	8
6	0001.0410	SCR,HCS 5/16-18 x 1 3/4 SS	1
7	0001.0489.5	SCR,HCS 5/16-18 x 3 3/4 SS	2
8	0001.0600	SCR,HCS 3/8-16 x 1 1/4 SS	18
9	0001.0741	SCR,HCS 3/8-16 x 3 1/4 SS	2
10	0001.1101	SCR,SCS 10-32 x 1/2 SS	12
11	0001.1141	SCR,SCS 1/4-20 x 5/8 SS	2
12	0001.1200	SCR,SCS 1/4-20 x 1 SS	6
13	0001.3900.10	SCR,SHSCS 3/8x 3/4x 5/16-18 SS	1
14	0001.4052	WSHR,LK 10 SS	12

Item	Part Number	Description	Quantity
15	0001.4100	WSHR,LK 1/4 SS	22
16	0001.4120	WSHR,LK 5/16 SS	36
17	0001.4161	WSHR,LK 3/8 SS	20
18	0001.4300	WSHR,FLT .219 x .500 x .047 SS	12
19	0001.4350	WSHR,FLT .281 x .625 x .063 SS	22
20	0001.4390	WSHR,FLT .344 x .688 x .063 SS	49
21	0001.4500	WSHR,FLT .406 x .813 x .063 SS	20
22	0001.5200	NUT,HX 5/16-18 x 1/2 SS	23
23	0001.5440	NUT,HXJ 1/4-28 x 7/16 SS	1
24	0001.5440.001	NUT,HXJ 1/4-28 x 7/16 LH SS	1
25	0001.5484	NUT,HXJ 5/16-24 x 1/2 SS	1
26	0001.7268	RING,EXTERNFRCD .250 SS	2
27	0001.7704	CLR,DBLSPLT 3/4 x 1 1/2 SS	2
28	0001.7706	CLR,DBLSPLT 1 x 1 3/4 SS	3
29	0002.0027	RODEND,1/4 x M1/4-28 RH SST	1
30	0002.0028	RODEND,1/4 x M1/4-28 LH SST	1
31	0002.0210	RODEND,5/16 x F5/16-24 BK	1
32	0007.2005	FTG,PAEN 2MPT x 2.5TUQR * FLOW	2
33	0007.4325.2	BIMBA,AIR CYL 1.06D x 1.05	1
34	0009.9237	SPACER,.380ID x .750 x 2.0L SS	2
35	0009.9239	SPACER,.315ID x .750 x.750L SS	1
36	0316.0062	BRG,PLSTCFLG 1 x 1 3/16 x *	3
37	2010.3618.1	SPROCKET,REAR ROLL DRIVE	1
38	2010.3652.1	ROLL,TAKE UP 35 PITCH	1
39	2010.3686	BSHG, PEAR HOLDER DRV	3
40	2010.3759	CHUTE	6
41	2010.3764.1	CLAMP,PEAR HOLD SST	6
42	2010.3770.002	FINGER,ORIENTING	24
43	2010.9011	SUPT,REAR ROLLS ORIENT	1
44	2010.9012	SUPT,PEAR ORIENT ROLL	3
45	2010.9039	SHAFT,PEAR HOLD	1
46	2010.9040	PEAR HOLD	6
47	2010.9066	LINK,ADJUST STOP SHOE	1
48	2010.9085	SUPPORT,PEAR STOP CYLINDER	1
49	2010.9115	LEVER,PEAR HOLD DRIVE	1
50	2010.9122.1	BSHG,SUPPORT	3
51	2010.9153	SHAFT,ORIENT ROLLS	1
52	2010.9901	ORIENT ROLLER	6

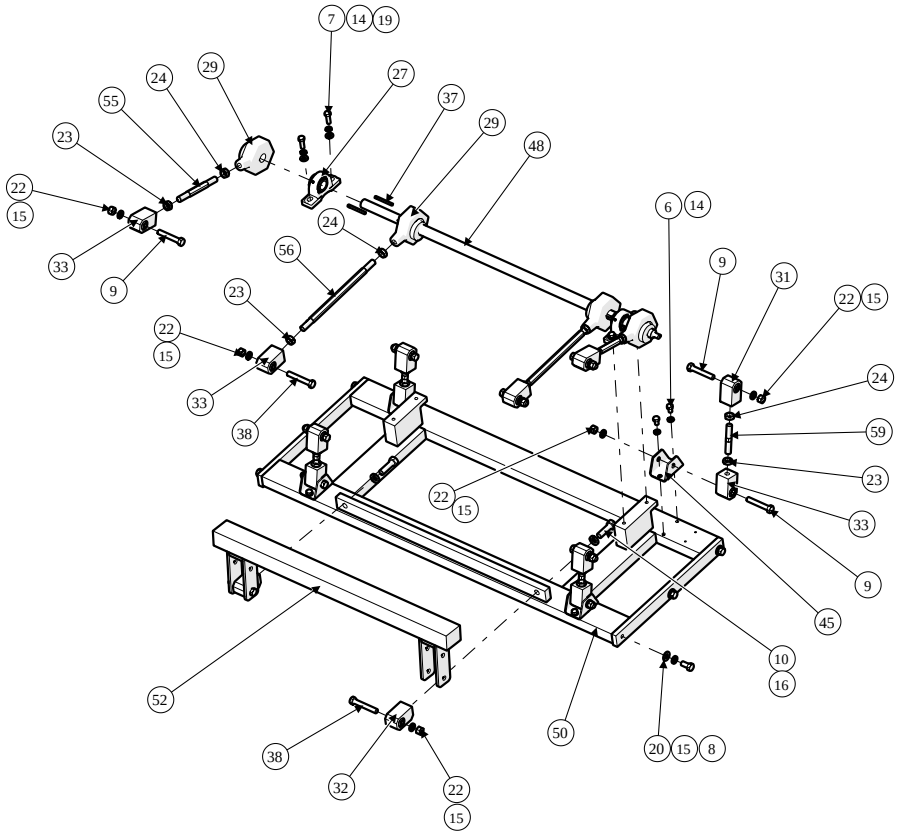
Item	Part Number	Description	Quantity
53	3370.3001	PIN,PIVOT ROLL .25OD x 1.25 SS	1
54	3370.3020	AY,ROLL ORIENT	1
55	3370.3021	GUARD,ORIENT ROLL	1
56	3370.3022	BRKT,ADJ,ROLL ORIENT	1
57	3370.3023	BRKT,ADJ,ROLL ORIENT,LWR	1
58	3370.3043	SUPPORT,CHAIN T.V.	1
59	3370.3059	GUARD,PEAR DROP LH	1
60	3370.3060	GUARD,PEAR DROP RH	1
61	3370.3065	SUPPORT,CHUTE,UPPER	1
62	3370.3066	SUPPORT,CHUTE,LOWER	1

2023.8009 - AY, FEEDER

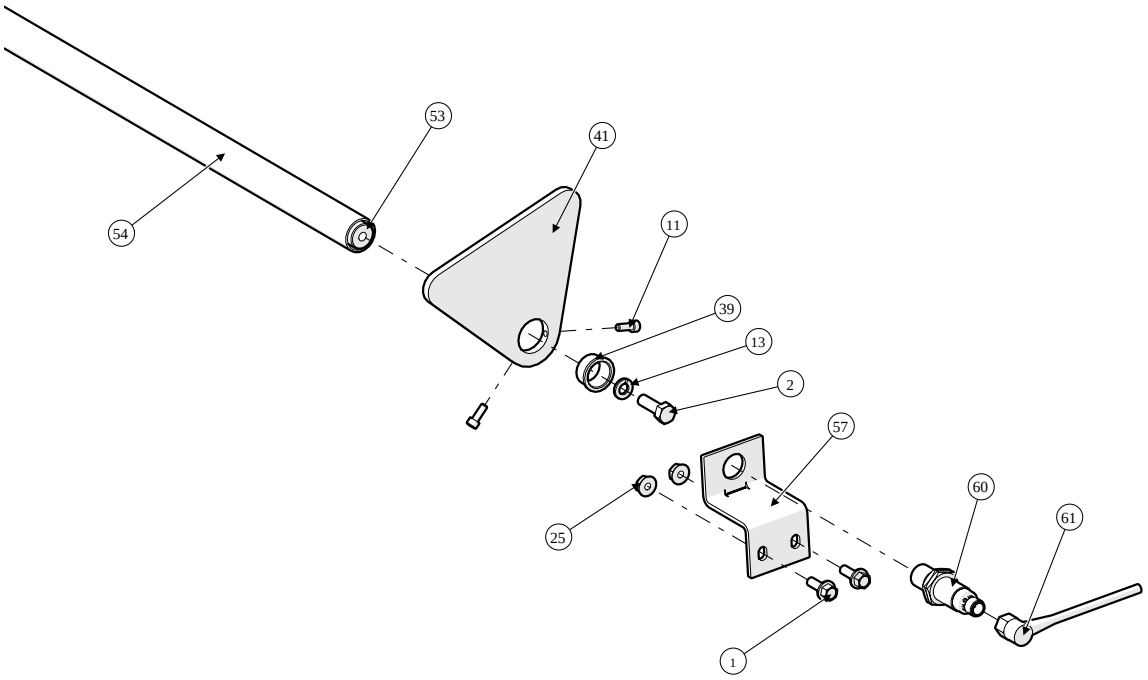




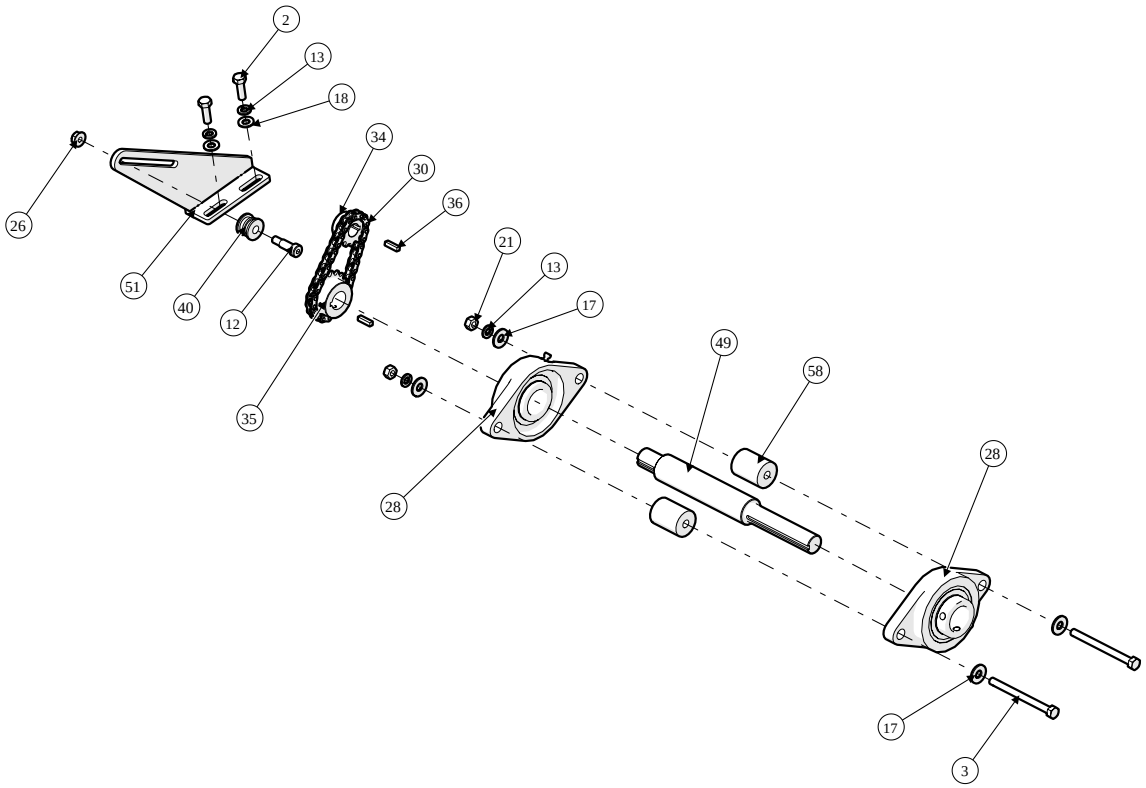
CANOES



FEEDER FRAME



SENSOR



ECCENTRIC DRIVE

Table 42. AY, FEEDER - 2023.8009

Item	Part Number	Description	Quantity
1	0001.0166	SCR,HCS FLGLK 1/4-20 x 3/4 SS	4
2	0001.0330	SCR,HCS 5/16-18 x 1 SS	4
3	0001.0489.5	SCR,HCS 5/16-18 x 3 3/4 SS	2
4	0001.0499	SCR,HCS 5/16-24 x 5/8 SS	24
5	0001.0499.1	SCR,HCS 5/16-24 x 1 SS	12
6	0001.0761	SCR,HCS 1/2-13 x 3/4 SS	8
7	0001.0840	SCR,HCS 1/2-13 x 1 1/2 SS	4
8	0001.0981	SCR,HCS 5/8-11 x 1 1/4 SS	6
9	0001.0988.1	SCR,HCS 5/8-11 x 3 3/4 SS	10
10	0001.1001.5	SCR,HCS 3/4-10 x 2 1/2 SS	2
11	0001.1101	SCR,SCS 10-32 x 1/2 SS	2
12	0001.3900.10	SCR,SHSCS 3/8x 3/4x 5/16-18 SS	1
13	0001.4120	WSHR,LK 5/16 SS	42
14	0001.4200	WSHR,LK 1/2 SS	12

Item	Part Number	Description	Quantity
15	0001.4220	WSHR,LK 5/8 SS	20
16	0001.4225.2	WSHR,LK 3/4 SS	2
17	0001.4371.1	WSHR,FLT .375 x .875 x .078 SS	4
18	0001.4390	WSHR,FLT .344 x .688 x .063 SS	22
19	0001.4570	WSHR,FLT .531 x 1.063 x.094 SS	4
20	0001.4590	WSHR,FLT .656 x 1.313 x.094 SS	6
21	0001.5200	NUT,HX 5/16-18 x 1/2 SS	2
22	0001.5341	NUT,HX 5/8-11 x 15/16 SS	14
23	0001.5631.2	NUT,HXJ 3/4-10 x 1 1/8 SS LH	8
24	0001.5633	NUT,HXJ 3/4-10 x 1 1/8 SS	8
25	0001.5679	NUT,FLGLK 1/4-20 x 7/16 SS	4
26	0001.5680	NUT,FLGLK 5/16-18 x 1/2 SS	1
27	0002.4015.2	PILLOW BLOCK,C-25K1-14	2
28	0002.5044	BRG,FLG BRN VF2S220	2
29	0002.9015	ECCENTRIC-PAC 1-S 3/16 THROW	4
30	0006.0010	CHAIN,RC35 SS	12
31	0006.0058	HEAD,CONN-3/4-10 #11344 RH	4
32	0006.0058.2	HEAD,CONN-3/4-10 #11344 RH MOD	2
33	0006.0059	HEAD,CONN 3/4-10 #11344 LH	8
34	0006.0106.1	SPRKT,35BS12SS x .625 SS	1
35	0006.0106.5	SPRKT,35BS18SS x .875 SS	1
36	0006.7004	KEY,SQ 3/16 x 3/4 SS	2
37	0006.7014	KEY,SQ 1/4 x 3 SS	4
38	121.593	SCR,HCS 5/8-11 x 4 SS	4
39	0316.0037	BRG,PLSTCFLG 3/4 x 7/8 x 7/16	2
40	2010.3652.1	ROLL,TAKE UP 35 PITCH	1
41	2010.3720	BRKT,TRIP	1
42	2010.3744.800	PLATE,PLASTIC SENSOR	1
43	2010.3781	CHUTE,FEEDER CANOE LH/RH	1
44	2010.3781.800	CHUTE,FEEDER CANOE	5
45	2010.9013	CLAMP,LOWER CONNECTING HEAD	4
46	2010.9054	RESERVOIR & SUPPORT AY,SHORT	1
47	2010.9157	WSHR,BVLD	12
48	2010.9201	SHAFT,ECCENTRIC DRIVEN OLD CWT	1
49	2010.9202	SHAFT,ECCENTRIC DRIVE	1
50	2010.9205	SUPPORT,RESERVOIR & DRIVE	1
51	2010.9212	CHAIN,TAKE UP	1
52	2010.9223	COUNTERWEIGHT AY	1

Item	Part Number	Description	Quantity
53	3370.3003	SHAFT,63 IN SENSOR	1
54	3370.3004	SUPPORT,SENSOR SHAFT	1
55	3370.3039	LINK,8.0 IN ECCENTRIC DRIVE	2
56	3370.3040	LINK,15.75 IN ECCENTRIC DRIVE	2
57	3370.3045	BRKT,LEVEL PROX SENSOR	1
58	3370.3053	SPACER,ECCENTRIC SHAFT	2
59	3370.3056	LINK,4 IN ECCENTRIC DRIVE	4
60	9502.8151	SENSOR,INDUCT 3 OR 2W QD	1
61	9502.8087	SENSOR CABLE 5M M12 4P	1

2023.8010 - AY, PNEUMATICS

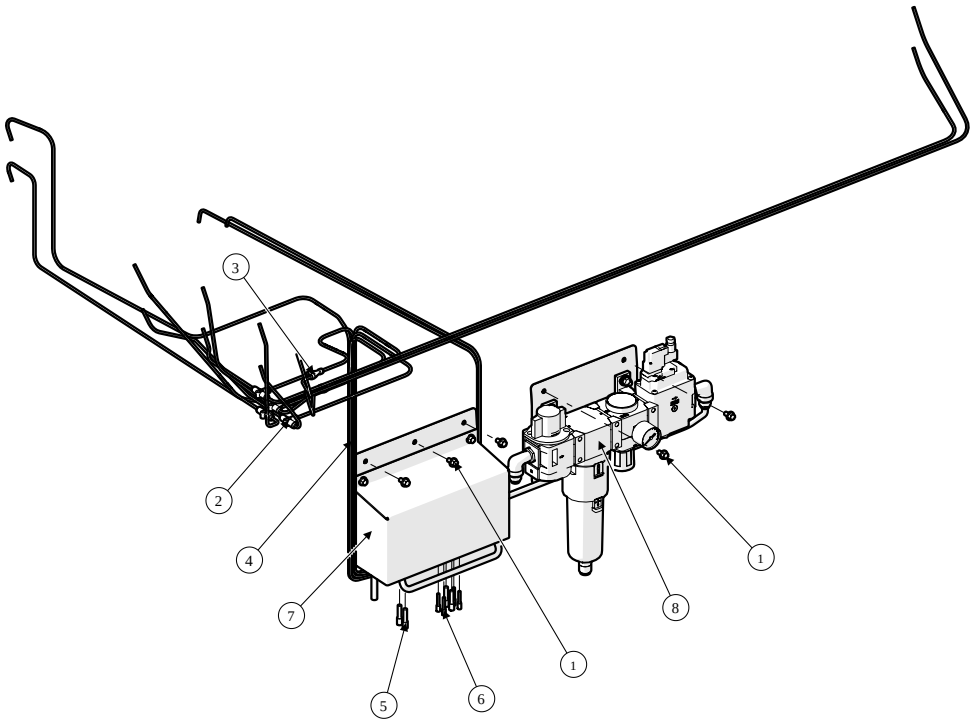
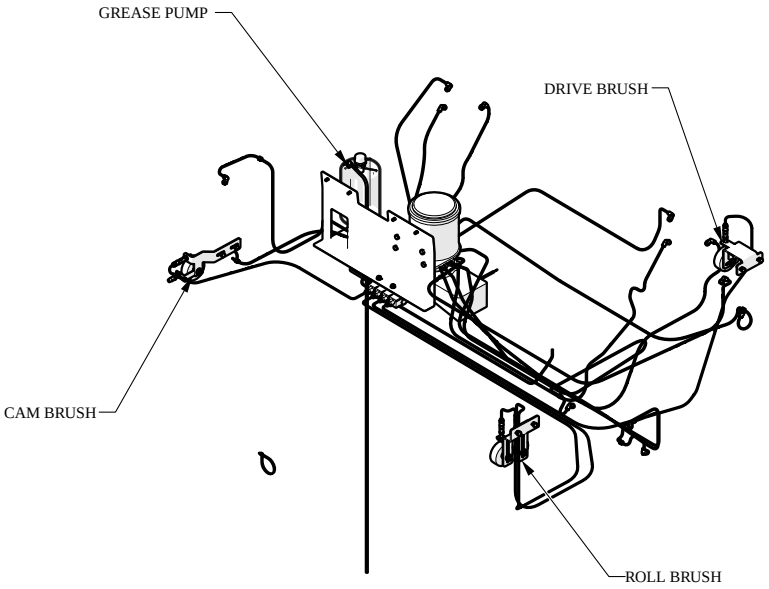


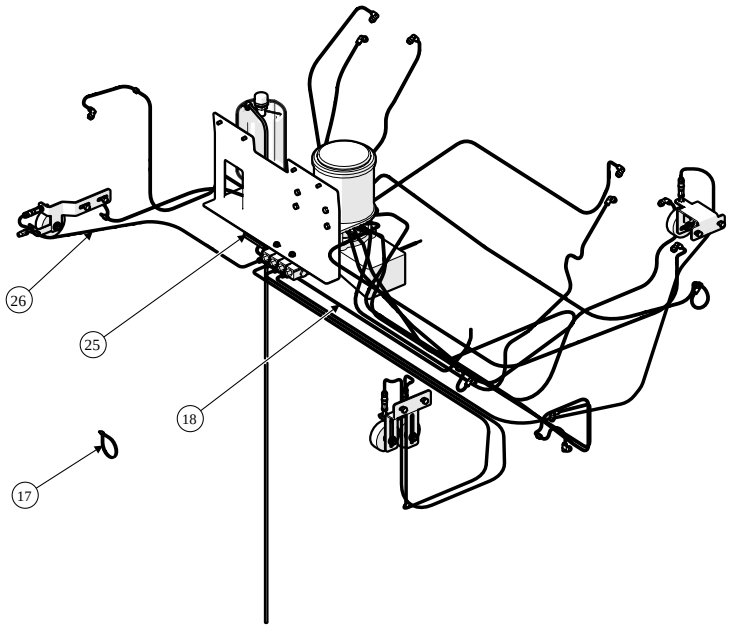
Table 43. AY, PNEUMATICS - 2023.8010

Item	Part Number	Description	Quantity
1	0001.0062	SCR,HCS FLGLK 1/4-20 x 1/2 SS	5
2	0007.2009	FTG,PAT 2.5TU x 2.5TU x 2.5TU*	4
3	0007.2019.001	FTG,PAY 2.5TUQR x 2.5TUQR(2)	2

Item	Part Number	Description	Quantity
4	0007.2127	TUBING,5/32 OD NYLON	1200
5	0007.3433	FTG,PAP 4 TUQR PLSTC	4
6	0007.3444	FTG,PAP 2.5 TUQR PLSTC	4
7	3370.3032	VALVE AY,STACK PRO	1
8	3370.3034	FILTER REG,AY PRO	1

2023.8011 - AY, LUBRICATION

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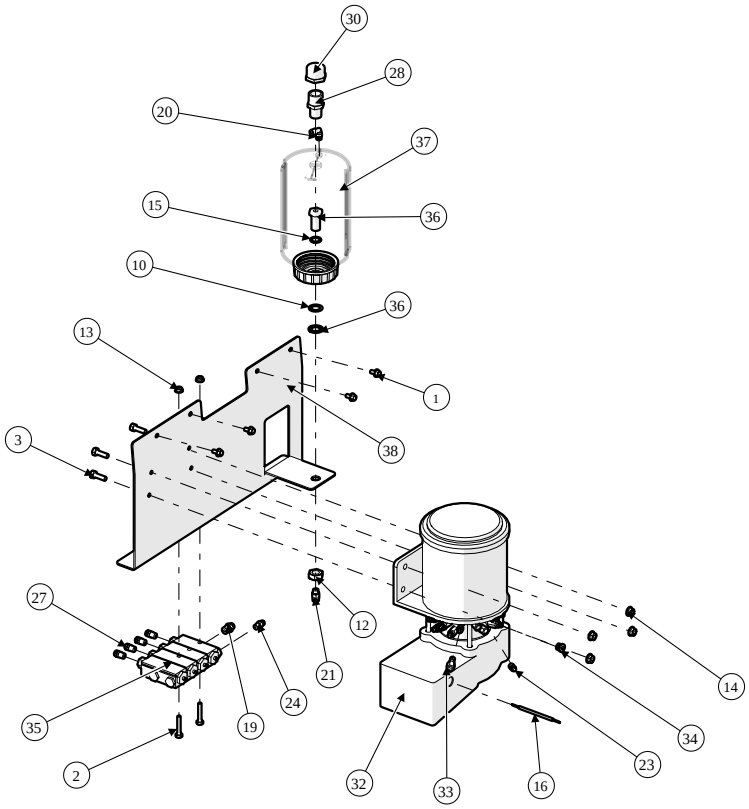
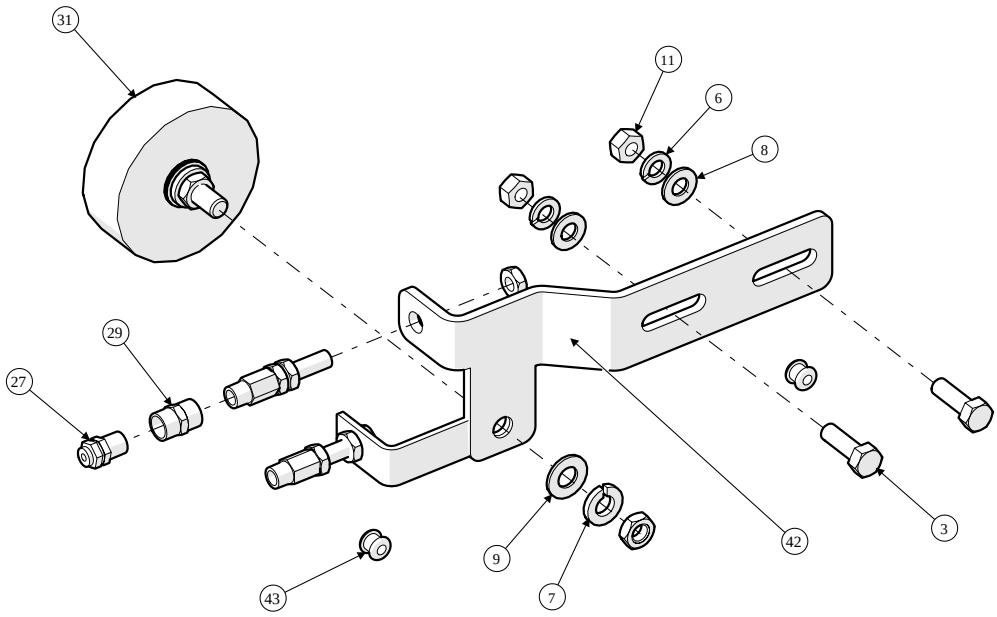
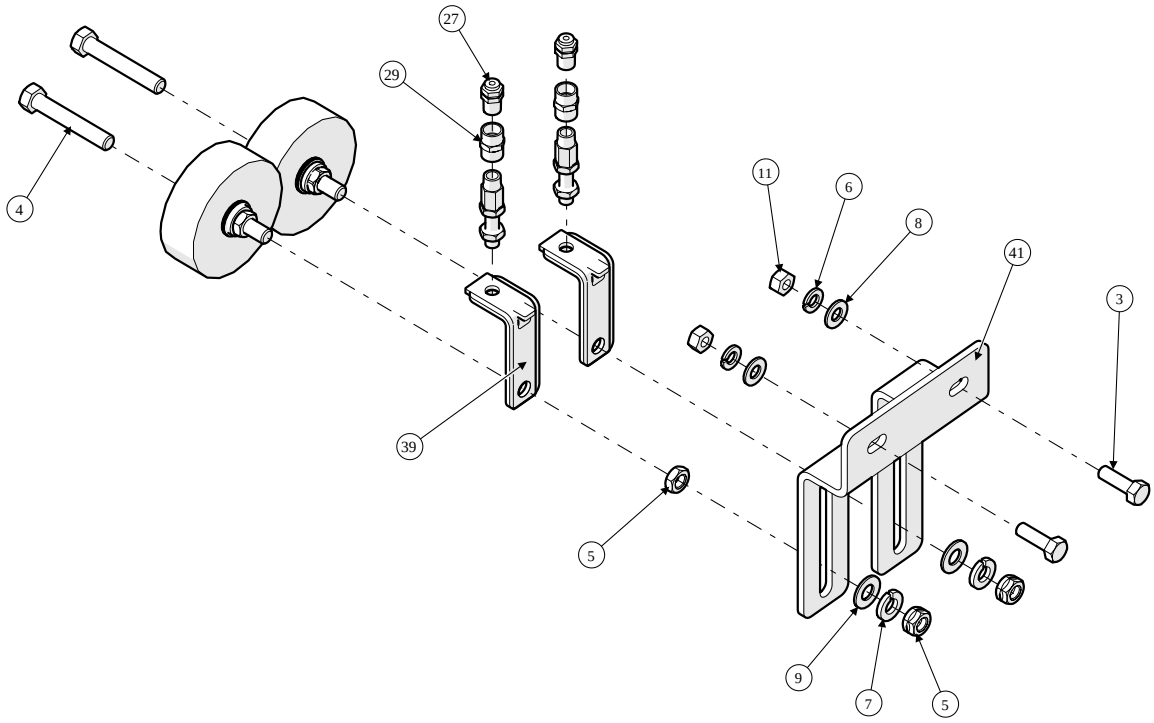


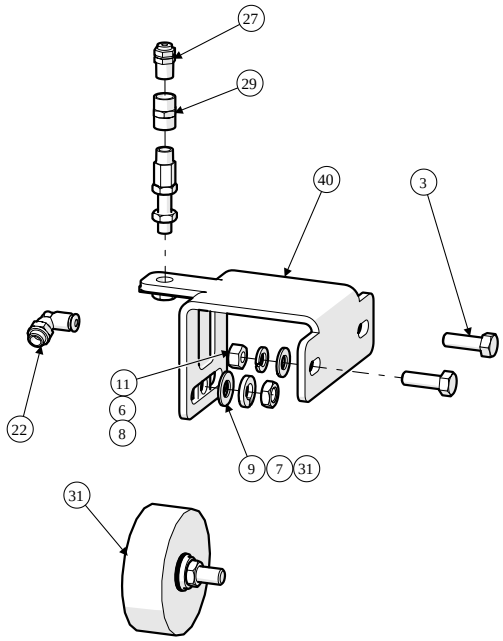
GREASE PUMP



CAM BRUSH



ROLL BRUSH



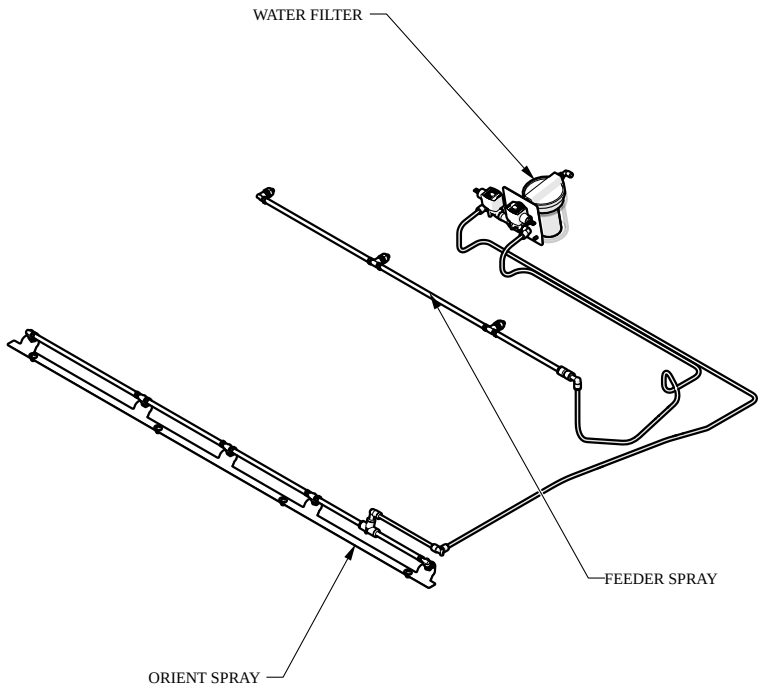
DRIVE BRUSH

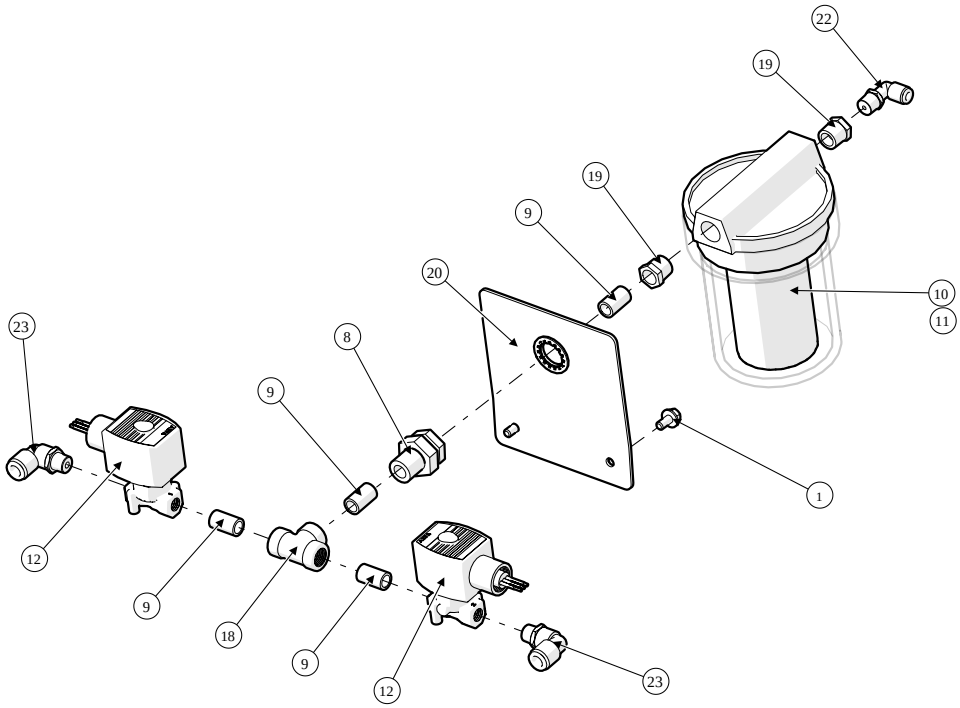
Table 44. AY, LUBRICATION - 2023.8011

Item	Part Number	Description	Quantity
1	0001.0062	SCR,HCS FLGLK 1/4-20 x 1/2 SS	4
2	0001.0185	SCR,HCS 1/4-20 x 1 1/2 SS	2
3	0001.0330	SCR,HCS 5/16-18 x 1 SS	10
4	0001.0690	SCR,HCS 3/8-16 x 2 1/4 SS	2
5	0001.5500	NUT,HXJ 3/8-16 x 9/16 SS	4
6	0001.4120	WSHR,LK 5/16 SS	6
7	0001.4160	WSHR,LK 3/8 HVY SS	4
8	0001.4390	WSHR,FLT .344 x .688 x .063 SS	6
9	0001.4500	WSHR,FLT .406 x .813 x .063 SS	4
10	0001.4585.4	WSHR,FLT .641 x 1.000 x.031 SS	1
11	0001.5200	NUT,HX 5/16-18 x 1/2 SS	6
12	0001.5622	NUT,HXJ 5/8-18 x 15/16 SS	1
13	0001.5679	NUT,FLGLK 1/4-20 x 7/16 SS	2
14	0001.5680	NUT,FLGLK 5/16-18 x 1/2 SS	4

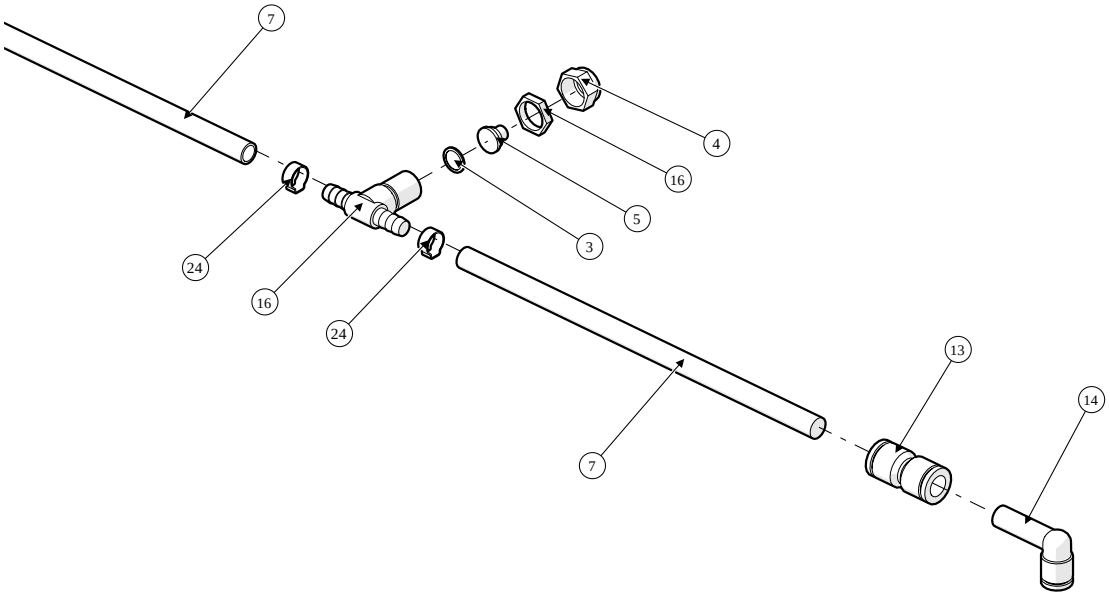
Item	Part Number	Description	Quantity
15	0004.1329	O-RING,5/8 x 13/16 x 3/32	1
16	0005.3064	CABLE 2 CONDUCTOR SHIELD 18AWG	70
17	0005.3150	TY-RAP TIES #TY-25-M	100
18	0007.1039.1	TUBING,5/32 OD 2500 PSI NYLON	800
19	0007.1041	FTG,PAST 4MPT x 4TUQR	1
20	0007.1096.1	FTG,PAEN 2MPT x 4TUQR PLSTC	1
21	0007.1099	FTG,WAS 2MPT x 4TUQR SS	1
22	0007.1322	FTG,GAEN 2MPT x2.5TUQR MSW BRS	13
23	0007.1802	FTG,GAS 2MBSPT x 2.5TUQR SS	12
24	0007.2017	FTG,PAS 2MPT x 2.5TUQR	1
25	0007.2086	TUBING IMP POLYFLOW #44P-1/4	300
26	0007.2113	NYLON TUBE 1/8 OD (2500 PSI)	360
27	0007.2558	FTG,PAS 2MPT x 2TUQR BRS	8
28	0007.3144	FTG,WAPN 12MPT x 8MPT PLSTC	1
29	0007.3190.2	FTG,PRST 2FPT x 2FPT BRS	4
30	0007.3508	FTG,WAC 12FPT PVC SCH40	1
31	0007.4203	BRSH,SHANK ROTO 3Ø X 1W NYL	4
32	0007.4222	GREASE PUMP,MLP,15PORT,2K	1
33	0007.4224	INJECTOR,MLP 0.04CC	13
34	0007.4229	PLUG,RING,MLP	2
35	0007.4959	INJECTOR,LUBRICANT,4 UNIT	1
36	0519.0039	FTG,PAS 2FPT x 2MPT BRS BH	1
37	2010.4927	MOD,OIL RESERVOIR	1
38	3370.3054	PLATE,MTG,GREASE	1
39	3370.3085	BRKT,ROTO BRUSH	2
40	3370.3086	BRKT,LUBE,ESSENTRIC	1
41	3370.3087	BRKT,LUBE,ADJUSTMENT SPEED	1
42	3370.3088	BRKT,LUBE,MAIN CHAIN	1
43	0009.2080	GROMT,RBR .188 x .313 x .375	6

2023.8012 - AY, WATER

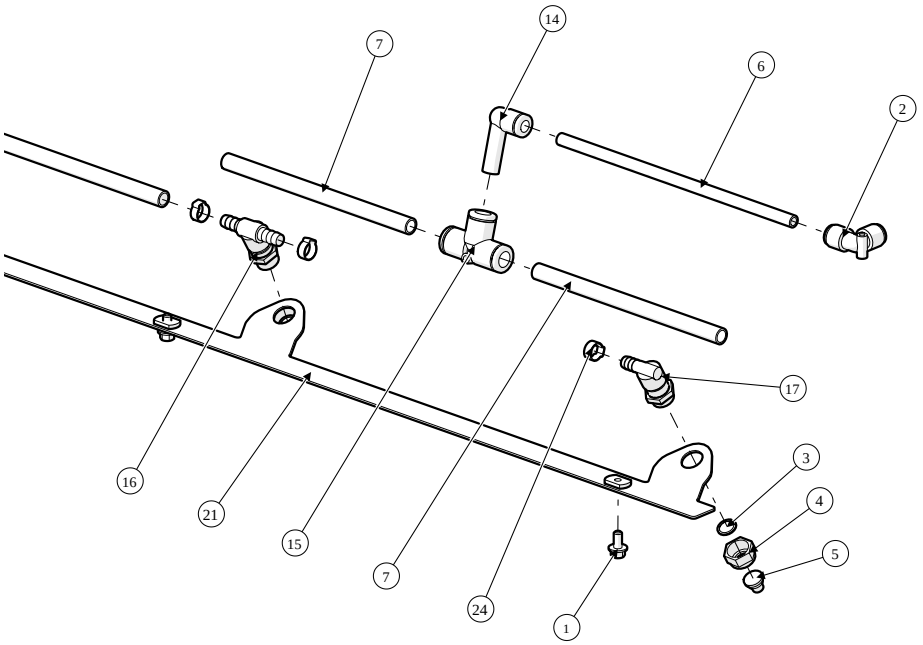




WATER FILTER



FEEDER SPRAY



ORIENT SPRAY

Table 45. AY, WATER - 2023.8012

Item	Part Number	Description	Quantity
1	0001.0062	SCR,HCS FLGLK 1/4-20 x 1/2 SS	6
2	0007.1067	FTG,PAEN 6TUQR x 6TUQR PLSTC	1
3	0007.1376.6	STRAINER,DISC 100 MESH SS	8
4	0007.1379.2	USE UP THEN 0007.1379.201	8
5	0007.1379.4	NOZZLE,SPRAY FOGGER PLSTC	8
6	0007.2114	TUBING IMP #66P 3/8 OD	360
7	0007.2121	TUBING,WTHD PT24008 1/2"	240
8	0007.2527.001	FTG,PAS 3/4-16 x 4FPT SS BH	1
9	0007.3032	FTG,WAPN 4MPT x CLOSE SS	4
10	0007.3544	HOUSING,5" COMPACT FILTER	1
11	0007.3545	FILTER,4-7/8" CARTRIDGE	1
12	0007.4105	USE UP THEN 0007.4105.001	2
13	0007.4691	FTG,PAU 8TUQR x 8 TUQR	1
14	0007.4692	FTG,PAN 6TUQR x 8 PLUG	2

Item	Part Number	Description	Quantity
15	0007.4693	FTG,PAT 8TUQR x8TUQR x8TUQR	1
16	0007.4694	USE UP THEN 0007.4694.001	5
17	0007.4695	USE UP THEN 0007.4695.001	3
18	0007.4917	FTG,PAT 4FPT x 4FPT x 4FPT SS	1
19	0007.3221	FTG,WAPB 4FPT x 6MPT SS BUSHNG	2
20	3370.3057	BRACKET,WATER MANIFOLD PRO	1
21	3370.3058	BRKT,FRNT SPRAY NOZZLE PRO	1
22	7571.2047	FTG,PAN 4TUBELOCK x 4MPT	1
23	7571.2025	FTG,PAN 6TUBELOK x 4MPT	2
24	7579.0008	CLAMP,HOSE CRIMP-1/2	13

2023.8013 - AY, ELECTRONICS

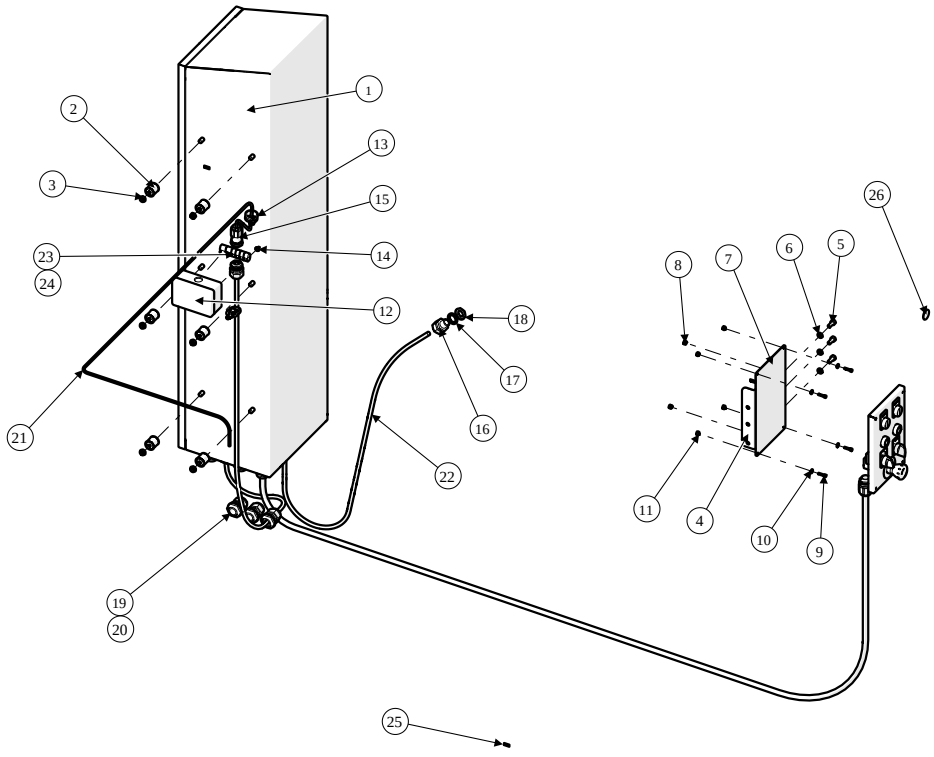
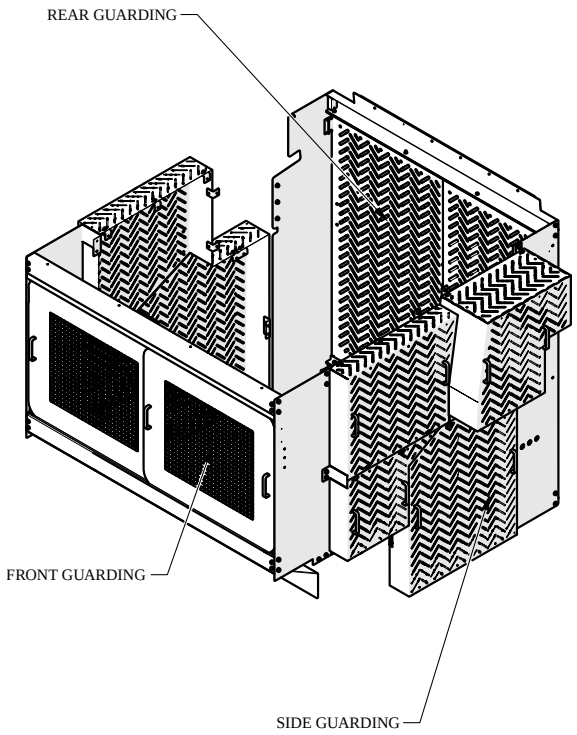


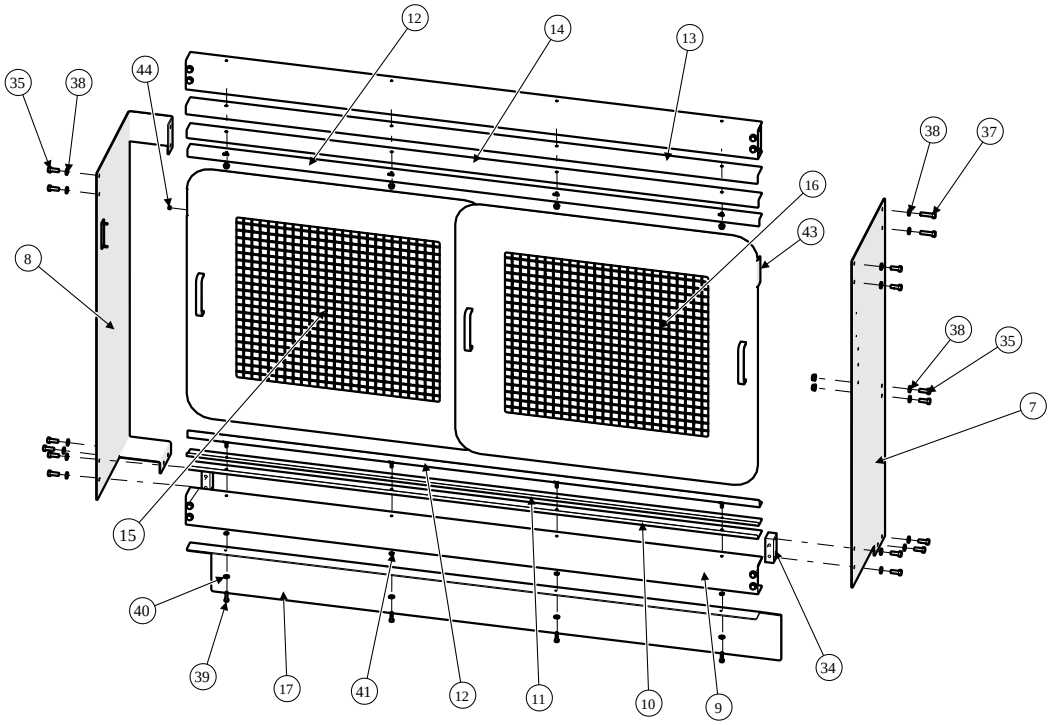
Table 46. AY, ELECTRONICS - 2023.8013

Item	Part Number	Description	Quantity
1	3370.3000.001	AY,PRO 440V CONTROLS ENCLOSURE	1
2	0001.9030.5	STDOFF,RND 3/8-16 1.0L SANI	6

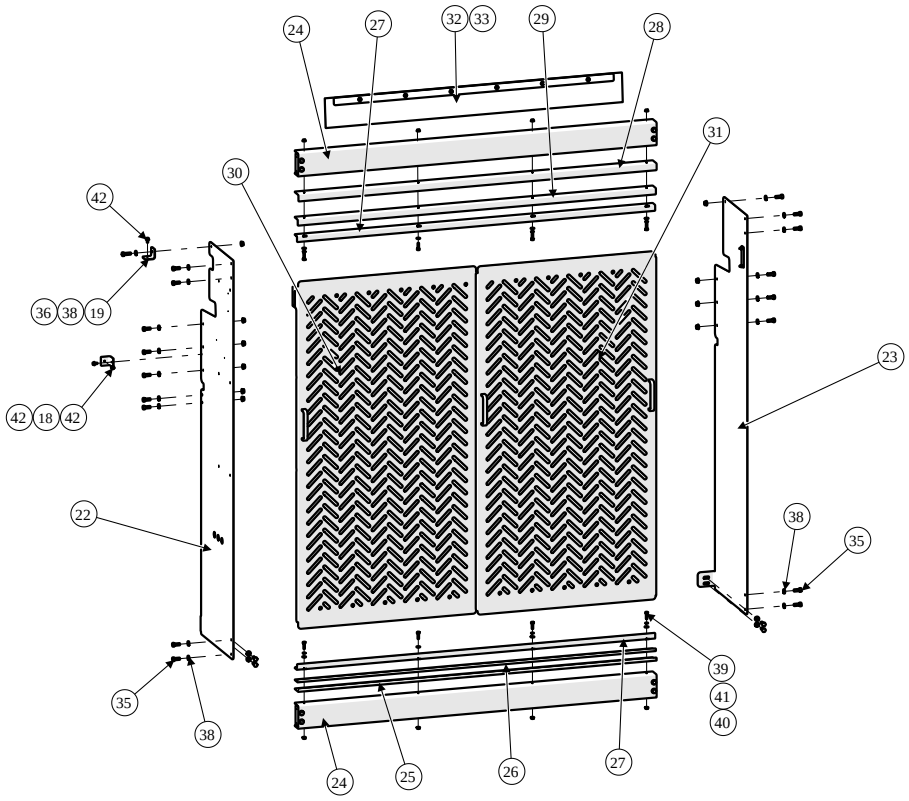
Item	Part Number	Description	Quantity
3	0001.5805	NUT,HXJSLFLKG 3/8-16 x9/16 SS*	6
4	3370.2238	BRACKET MOUNTING PB STATION	1
5	0001.0280	SCR,HCS 5/16-18 x 3/4 SS	3
6	0001.4120	WSHR,LK 5/16 SS	3
7	6900.0856	ADAPTOR PLATE,PEAR BOX	1
8	0001.5710	NUT,HXSLFLKG 10-32 x 3/8 SS *	2
9	0001.1088	SCR,SCS 8-32 x 3/4 SS	4
10	0001.4258	WSHR,FLT .188 x .438 x .047 SS	6
11	0001.5705	NUT,HXSLFLKG 8-32 x 11/32 SS *	4
12	7900.1031.1	ENCLOSURE	1
13	9502.0016	CLAMP,CABLE 1"CUSHIONED	1
14	0001.3525	SCR,SBHCS 10-32 x 3/8 SS	3
15	0005.3166	STRN RLF,1/2 NPT STRT .31-.56	1
16	9501.9326	CORD GRIP,1/2"	2
17	0005.3100	WATERPROOF WASH T&B 5262 1/2	3
18	9501.9329	LOCKNUT,ELEC 1/2" NON METALLIC	3
19	9501.9324	CORD GRIP,3/4 IN L'TITE*	3
20	9501.9330	LOCKNUT,ELEC 3/4" NON METALLIC	3
21	9502.7014	CABLE, 3 CONDUCTOR TEFLON	120
22	9502.7127	CABLE,16AWG 4COND FOIL/BRAID *	360
23	9501.8031.002	CONN LEVER NUT 2COND 24-12AWG	4
24	9501.8031.003	CONN LEVER NUT 3COND 24-12AWG	2
25	9501.9272.102	LABEL,WHITE 4" BLANK	1
26	9501.9272.001	RIBBON,BLACK LABEL PRINTER	1

2023.8015 - CE GUARD ASSEMBLY, PRO

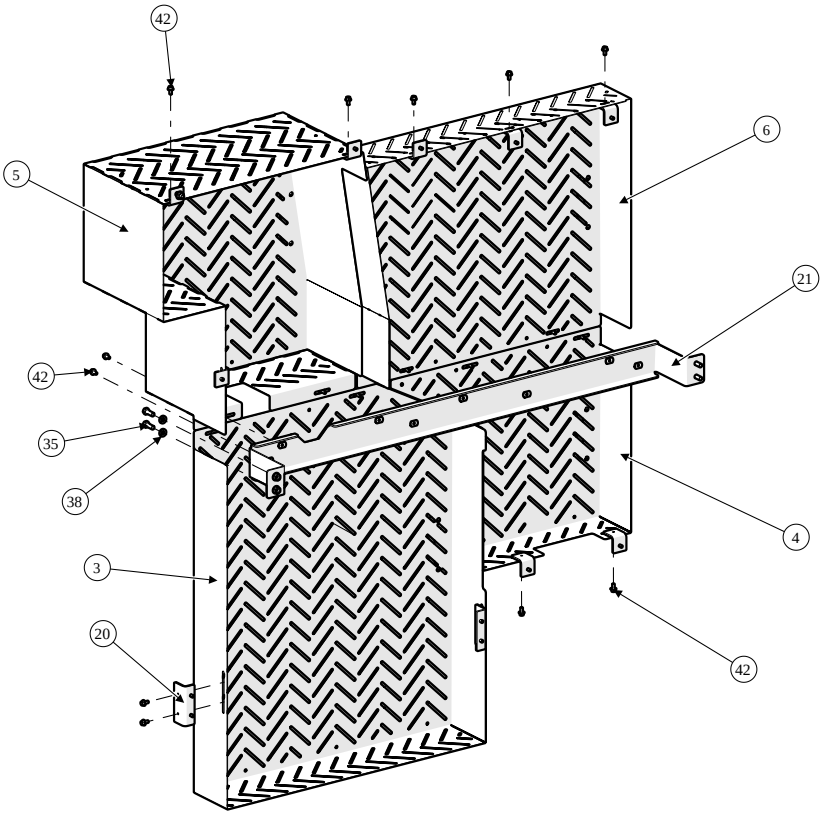




FRONT GUARDING



REAR GUARDING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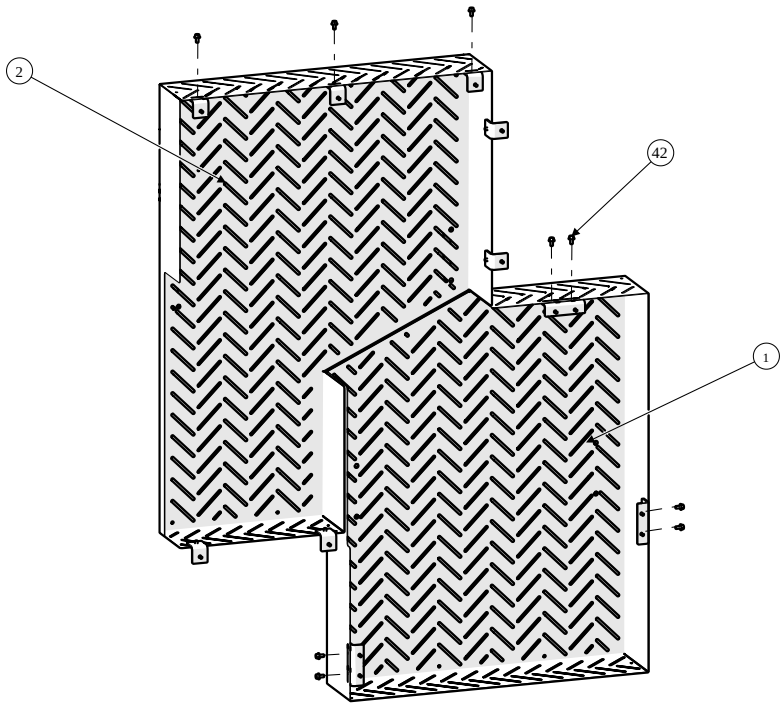


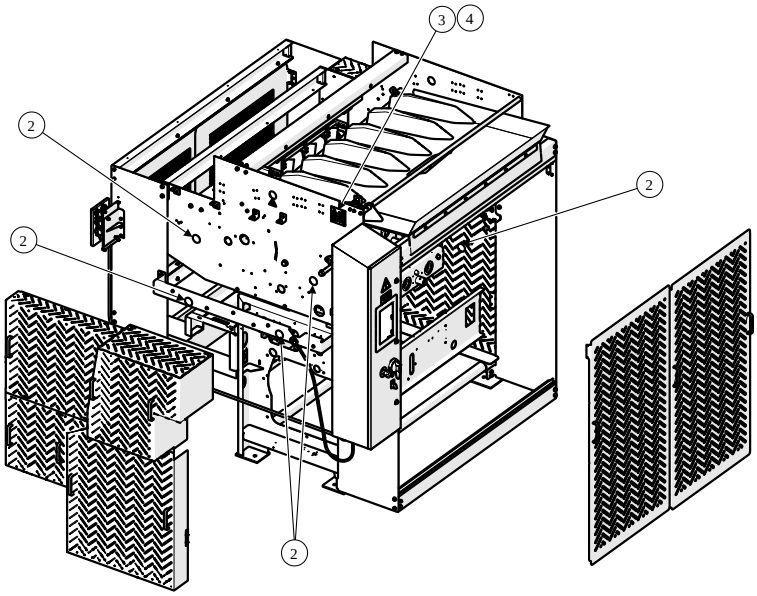
SIDE GUARDING

Table 47. CE ASSEMBLY, PRO - 2023.8015

Item	Part Number	Description	Quantity
1	2023.0001	GUARD,PRO CE LOWER LEFT	1
2	2023.0002	GUARD,PRO CE UPPER LEFT	1
3	2023.0003	GUARD,PRO CE LOWER RIGHT	1
4	2023.0004	GUARD,PRO CE LOWER RIGHT	1
5	2023.0005	GUARD,PRO CE UPPER RIGHT	1
6	2023.0006	GUARD,PRO CE UPPER RIGHT	1
7	2023.0007	GUARD,PRO CE RIGHT WALL	1
8	2023.0008	GUARD,PRO CE LEFT WALL	1
9	2023.0009	GUARD,PRO CE FRONT BEAM	2
10	2023.0010	GUARD,PRO CE TRACK 1	1
11	2023.0011	GUARD,PRO CE TRACK 2	1
12	2023.0012	GUARD,PRO CE TRACK 3	2
13	2023.0013	GUARD,PRO CE TRACK 4	1
14	2023.0014	GUARD,PRO CE TRACK 5	1

Item	Part Number	Description	Quantity
15	2023.0015	GUARD,PRO CE FRONT DOOR LEFT	1
16	2023.0016	GUARD,PRO CE FRONT DOOR RIGHT	1
17	2023.0017	GUARD,PRO CE APRON	1
18	2023.0018	GUARD,PRO CE BRACKET	14
19	2023.0019	GUARD,PRO CE .38 BRACKET	1
20	2023.0020	GUARD,PRO CE DBL BRACKET	5
21	2023.0021	GUARD,PRO CE STAND OFF	1
22	2023.0022	GUARD,PRO CE REAR LEFT PANEL	1
23	2023.0023	GUARD,PRO CE REAR RIGHT PANEL	1
24	2023.0024	GUARD,PRO CE REAR BEAM	2
25	2023.0025	GUARD,PRO CE REAR TRACK 1	1
26	2023.0026	GUARD,PRO CE REAR TRACK 2	1
27	2023.0027	GUARD,PRO CE REAR TRACK 3	2
28	2023.0028	GUARD,PRO CE REAR TRACK 4	1
29	2023.0029	GUARD,PRO CE REAR TRACK 5	1
30	2023.0030	GUARD,PRO CE REAR LEFT DOOR	1
31	2023.0031	GUARD,PRO CE REAR RIGHT DOOR	1
32	2023.0032	GUARD,RUBBER FINGER	1
33	2023.0033	HOLDER,RUBBER FINGER GUARD	1
34	2010.4202.1	BRKT,CONTROL BAR MTG SST	8
35	0001.0570	SCR,HCS 3/8-16 x 1 SS	51
36	0001.0600	SCR,HCS 3/8-16 x 1 1/4 SS	1
37	0001.0630	SCR,HCS 3/8-16 x 1 1/2 SS	2
38	0001.4160	WSHR,LK 3/8 HVY SS	54
39	0001.0150	SCR,HCS 1/4-20 x 1 SS	20
40	0001.4350	WSHR,FLT .281 x .625 x .063 SS	20
41	0001.4100	WSHR,LK 1/4 SS	20
42	0001.0062	SCR,HCS FLGLK 1/4-20 x 1/2 SS	63
43	9502.3103.001	SW,GUARD PAIR MAG SAFETY	4
44	0001.5705	NUT,HXSLFLKG 8-32 x 11/32 SS *	16

2023.8016 - AY, PRO CE LABEL



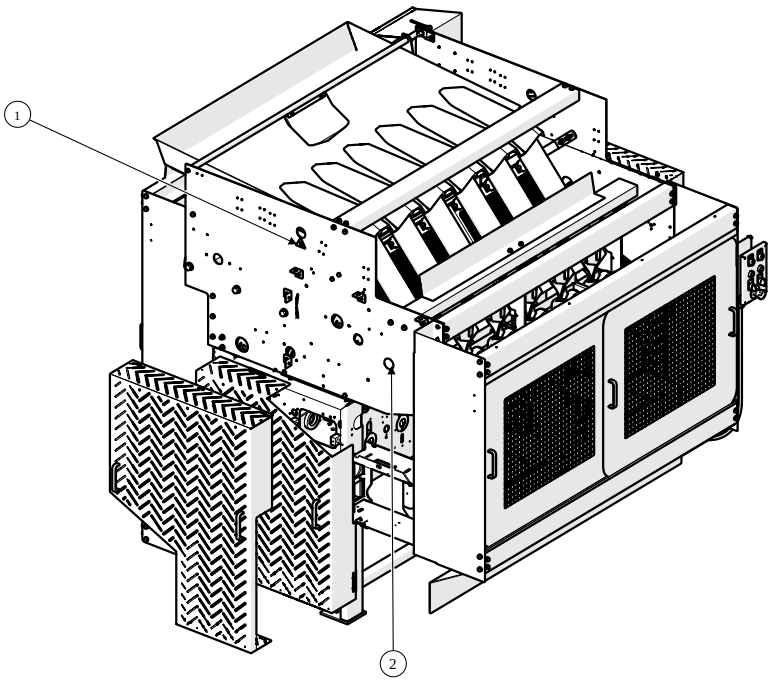


Table 48. AY, PRO CE LABEL - 2023.8016

Item	Part Number	Description	Quality
1	7590.0635	LABEL,PINCH POINT CE	2
2	7590.0631	LABEL,DO NOT OP W/O GUARD GEAR	6
3	0009.0032	NAMEPLATE,ATLAS PRO - CE	1
4	0001.9026	RIVET,RND 3/16 x 1/2 MONEL	4

3370.1892 - AY, JACKSHAFT

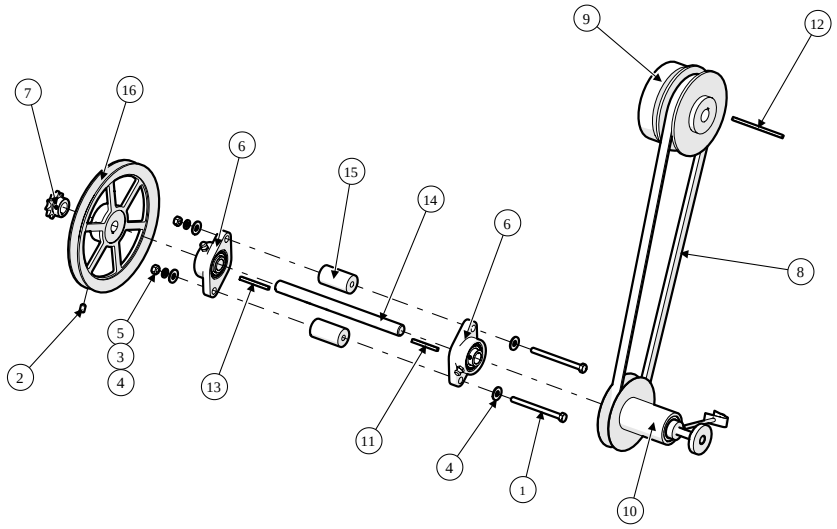


Table 49. AY, JACKSHAFT - 3370.1892

Item	Part Number	Description	Quantity
1	0001.0490	SCR,HCS 5/16-18 x 4 SS	2
2	0001.2539	SCR,SSS 5/16-18 x 1/2 SS CPPT	1
3	0001.4120	WSHR,LK 5/16 SS	2
4	0001.4371.1	WSHR,FLT .375 x .875 x .078 SS	4
5	0001.5200	NUT,HX 5/16-18 x 1/2 SS	2
6	0002.5020	BRG,FLG BRN VF2S212	2
7	0006.1095.1	SPRKT,40B10SS x .750 W/KEYWAY	1
8	0006.2181	V-BELT,BP-51	1
9	0006.3173	VARIABLE DRIVE #57TBR x 7/8"	1
10	0006.3174	PULLEY,HI-LO MCV-500 3/4 BORE	1
11	0006.7022	KEY,SQ 3/16 x 2 SS	1
12	0006.7024	KEY,SQ 3/16 x 4 SS	1
13	0006.7027	KEY,SQ 3/16 x 2 1/4 SS	1
14	3370.1542	SHAFT,BELT DR	1

Item	Part Number	Description	Quantity
15	3370.2003	SPACER,JACK SHAFT BRG	2
16	3370.2005	SHEAVE,JACK SHAFT	1

3370.3067 - MOUNTING ANGLES ASSEMBLY

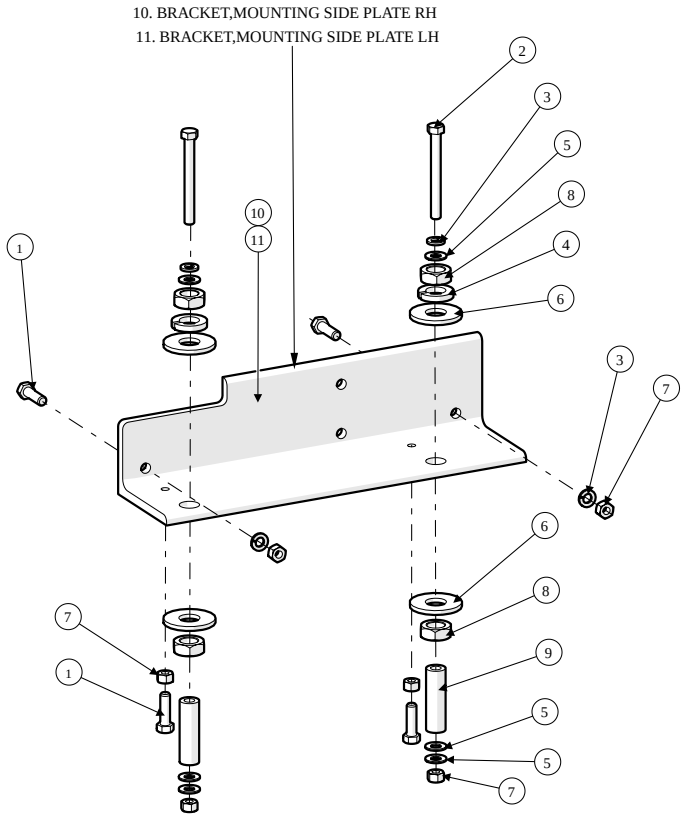


Table 50. MOUNTING ANGLES ASSEMBLY - 3370.3067

Item	Part Number	Description	Quantity
1	0001.0600	SCR,HCS 3/8-16 x 1 1/4 SS	8
2	0001.0748.1	SCR,HCS 3/8-16 x 3 1/2 SS	4
3	0001.4161	WSHR,LK 3/8 SS	8
4	0001.4225.2	WSHR,LK 3/4 SS	4
5	0001.4500	WSHR,FLT .406 x .813 x .063 SS	14
6	0001.4604	WSHR,FLT .812 x 2.0 x.177 SS	8
7	0001.5220	NUT,HX 3/8-16 x 9/16 SS	12
8	0001.5640	NUT,HXJ 3/4-16 x 1 1/8 SS	8
9	3370.1493	STUD,MOUNTING	4
10	3370.3068	BRACKET,MOUNT SIDE PLATE-RH	1

Item	Part Number	Description	Quantity
11	3370.3069	BRACKET,MOUNT SIDE PLATE-LH	1

3370.1711 - CUPS, TRANSFER & MECHANISM

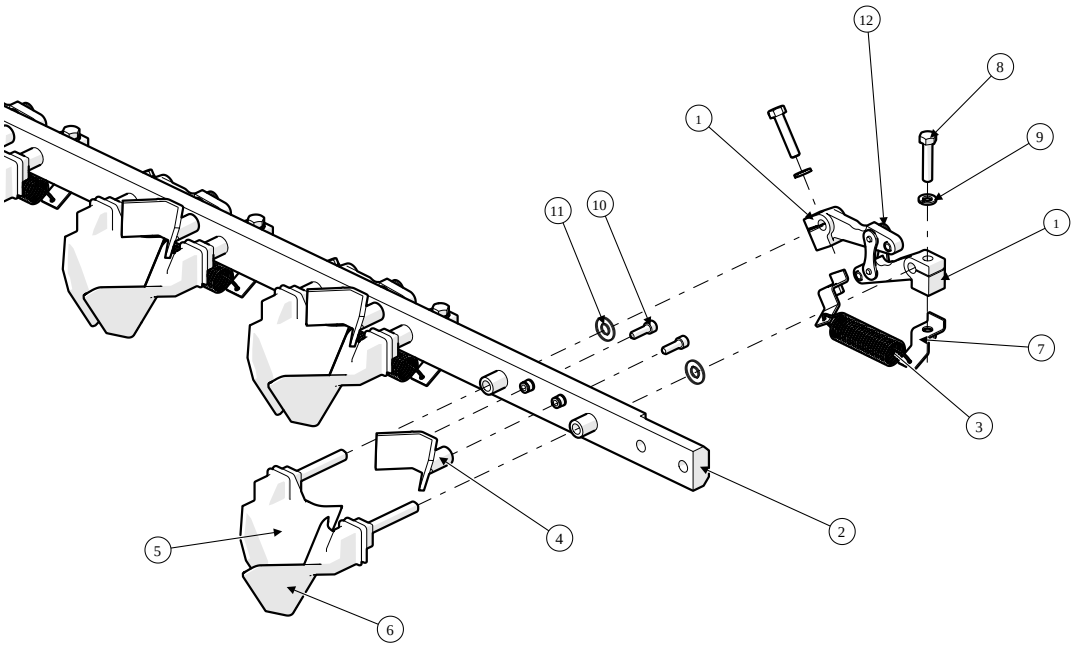


Table 51. CUPS, TRANSFER & MECHANISM - 3370.1711

Item	Part Number	Description	Quantity
1	3370.1483.1	LEVER,TRANSFER CUPS	12
2	3370.1509	BAR AY,TRANSFER CUP	1
3	3370.1683	SPRING,SIDE ORIENTOR CUP	6
4	3370.1608	GUIDE,CENTER TRANSFER	6
5	3370.1612.L	CUP,TRANSFER LH	6
6	3370.1612.R	CUP, TRANSFER RH	6
7	3370.1633	BRACKET,SPRING	12
8	0001.0390	SCR,HCS 5/16-18 x 1 1/2 SS	12
9	0001.4120	WSHR,LK 5/16 SS	12
10	0001.1160	SCR,SCS 1/4-20 x 3/4 SS	12
11	0001.4710	WSHR,FLT .380 x .812 x.062 NYL	12

Item	Part Number	Description	Quantity
12	0006.0085	CHAIN,ML RC2050 SS CLIP PIN	6

3370.1700.50 - DRIVE MOTOR AY, 50Hz

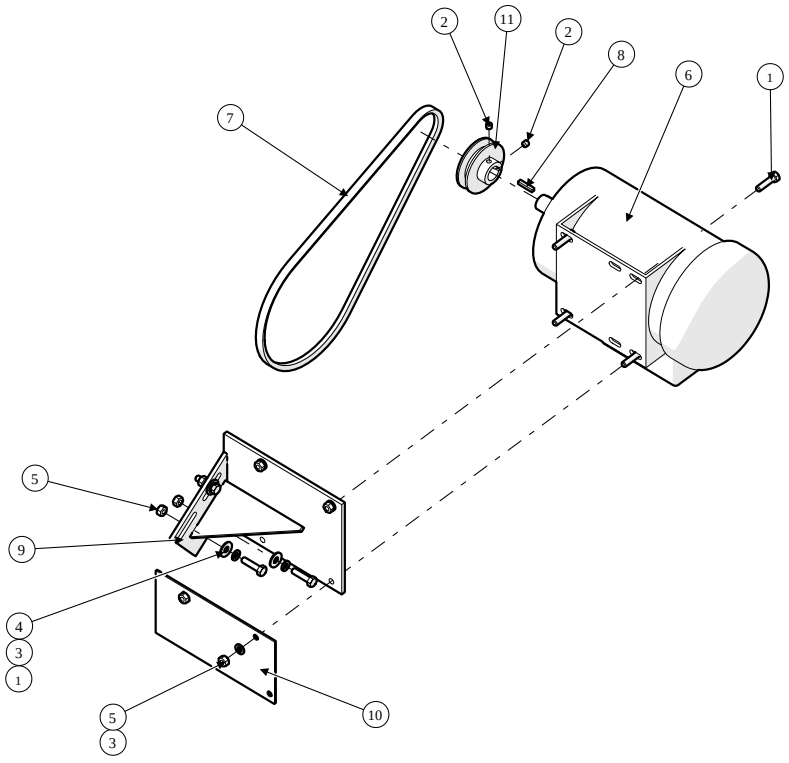


Table 52. DRIVE MOTOR AY, 50Hz - 3370.1700.50

Item	Part Number	Description	Quantity
1	0001.0370	SCR,HCS 5/16-18 x 1 1/4 SS	7
2	0001.2450	SCR,SSS 5/16-18 x 5/16 SS	2
3	0001.4120	WSHR,LK 5/16 SS	7
4	0001.4371.1	WSHR,FLT .375 x .875 x .078 SS	3
5	0001.5200	NUT,HX 5/16-18 x 1/2 SS	7
6	0005.1055	MTR LINC 1 HP T145(F) 7/8S	1
7	0006.2182	V-BELT,AP-37	1
8	0006.7005	KEY,SQ 3/16 x 1 SS	1
9	3370.1549.002	MTR BASE,EXT	1
10	3370.1750	HOLDER,TORQUE ARM	1
11	3370.2109	PULLEY,MOTOR DRIVE 50 Hz	1

3370.3020 - AY, ROLL ORIENT

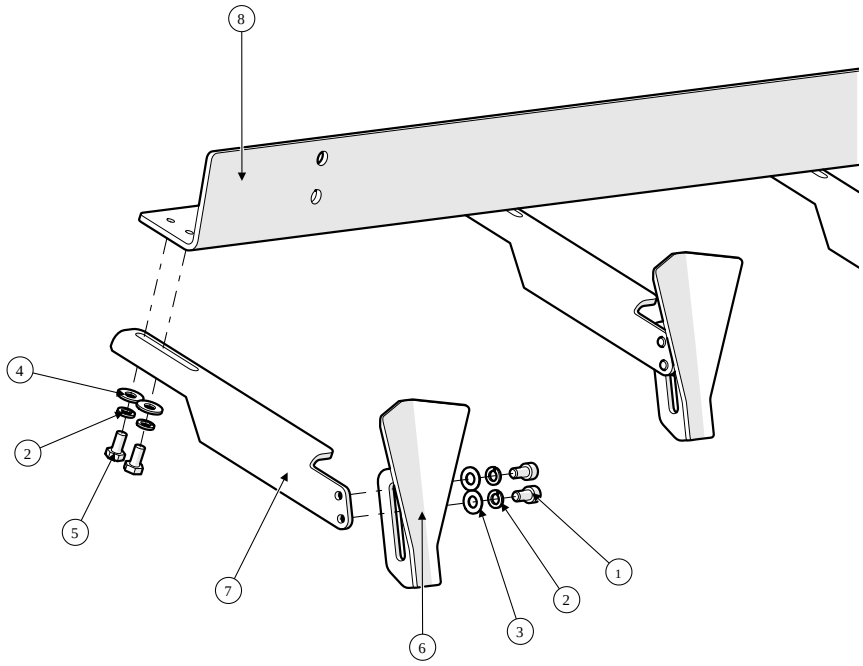


Table 53. AY, ROLL ORIENT - 3370.3020

Item	Part Number	Description	Quantity
1	0001.1090	SCR,SCS 10-32 x 3/8 SS	12
2	0001.4052	WSHR,LK 10 SS	24
3	0001.4290	WSHR,FLT .218 x .437 x .031 SS	12
4	0001.4300	WSHR,FLT .219 x .500 x .047 SS	12
5	143.514	SCR,HCS 10-24 x 3/8 SS	12
6	2010.3684.800	SHOE,STOP	6
7	2010.3685	SUPT,PEAR STOP SHOE	6
8	3370.3024	BAR,SHOE STOP SUPPORT	1

Part Lookup Index

Part Number	Part Description	Used In	Assembly	Item	Page Number
0001.0060	SCR,HCS 1/4-20 x 1/2 SS	2023.8008	AY, ORIENT ROLL	1	136
0001.0062	SCR,HCS FLGLK 1/4-20 x 1/2 SS	2023.2010	AY, PNEUMATICS	1	144
"	"	2023.8011	AY, LUBRICATION	1	150
"	"	2023.8012	AY, WATER	1	155
"	"	2023.8015	AY, PRO CE LABEL	42	163
0001.0150	SCR,HCS 1/4-20 x 1 SS	2023.8007	AY, FRONT ROLL	1	128
"	"	2023.8008	AY, ORIENT ROLL	2	136
"	"	2023.8015	AY, PRO CE LABEL	39	163
0001.0166	SCR,HCS FLGLK 1/4-20 x 3/4 SS	2023.8009	AY, FEEDER	1	142
0001.0185	SCR,HCS 1/4-20 x 1 1/2 SS	2023.8004	AY, LINKAGE, TRANSFER FINGER	1	119
"	"	2023.8005	AY, PADDLES	1	120
"	"	2023.8011	AY, LUBRICATION	2	150
0001.0190	SCR,HCS 1/4-20 x 1 3/4 SS	2023.8004	AY, LINKAGE, TRANSFER FINGER	2	119
0001.0194	SCR,HCS 1/4-20 x 2 1/4 SS	2023.8005	AY, PADDLES	2	120
0001.0280	SCR,HCS 5/16-18 x 3/4 SS	2023.8008	AY, ORIENT ROLL	3	136
"	"	2023.8013	AY, ELECTRONICS	5	157
0001.0330	SCR,HCS 5/16-18 x 1 SS	2023.8004	AY, LINKAGE, TRANSFER FINGER	3	119
"	"	2023.8005	AY, PADDLES	3	120
"	"	2023.8007	AY, FRONT ROLL	2	128
"	"	2023.8008	AY, ORIENT ROLL	4	136
"	"	2023.8009	AY, FEEDER	2	142
"	"	2023.8011	AY, LUBRICATION	3	150
0001.0337	SCR,HCS FLGLK 5/16-18x1-3/4 SS	2023.8007	AY, FRONT ROLL	4	128
0001.0370	SCR,HCS 5/16-18 x 1 1/4 SS	2023.8007	AY, FRONT ROLL	3	128
"	"	2023.8008	AY, ORIENT ROLL	5	136
"	"	3370.1700.50	AY, DRIVE MOTOR, 50Hz	1	169

Part Number	Part Description	Used In	Assembly	Item	Page Number
0001.0390	SCR,HCS 5/16-18 x 1 1/2 SS	3370.1711	CUPS, TRANSFER & MECHANISM	8	168
0001.0410	SCR,HCS 5/16-18 x 1 3/4 SS	2023.8008	AY, ORIENT ROLL	6	136
0001.0490	SCR,HCS 5/16-18 x 4 SS	3370.1892	AY, JACKSHAFT	1	166
0001.0499	SCR,HCS 5/16-24 x 5/8 SS	2023.8009	AY, FEEDER	4	142
0001.0540	SCR,HCS 3/8-16 x 3/4 SS	2023.8002	AY, TRANSFER MECHANISM	9	116
0001.0570	SCR,HCS 3/8-16 x 1 SS	2023.8001	AY, FRAME	1	114
"	"	2023.8015	CE GUARD ASSEMBLY, PRO	35	163
0001.0600	SCR,HCS 3/8-16 x 1 1/4 SS	2023.8001	AY, FRAME	2	114
"	"	2023.8008	AY, ORIENT ROLL	8	136
"	"	2023.8015	CE GUARD ASSEMBLY, PRO	36	163
"	"	3370.3067	MOUNTING ANGLES ASSEMBLY	1	167
0001.0610	SCR,HCS 3/8-16 x 1 1/4 SS *	2023.8007	AY, FRONT ROLL	5	128
0001.0630	SCR,HCS 3/8-16 x 1 1/2 SS	2023.8006	AY, MAIN CAM SHAFT	1	122
"	"	2023.8015	AY, PRO CE LABEL	37	163
0001.0670	SCR,HCS 3/8-16 x 2 SS	2023.8002	AY, TRANSFER MECHANISM	1	115
0001.0690	SCR,HCS 3/8-16 x 2 1/4 SS	2023.8011	AY, LUBRICATION	4	150
0001.0741	SCR,HCS 3/8-16 x 3 1/4 SS	2023.8008	AY, ORIENT ROLL	9	136
0001.0761	SCR,HCS 1/2-13 x 3/4 SS	2023.8009	AY, FEEDER	6	142
0001.0780	SCR,HCS 1/2-13 x 1 SS	2023.8005	AY, PADDLES	4	120
0001.0810	SCR,HCS 1/2-13 x 1 1/4 SS	2023.8002	AY, TRANFER MECHANISM	2	115
0001.0840	SCR,HCS 1/2-13 x 1 1/2 SS	2023.8009	AY, FEEDER	7	142
0001.0963	SCR,HCS 1/2-13 x 4 1/4 SS	2023.8006	AY, MAIN CAM SHAFT	2	122
0001.0981	SCR,HCS 5/8-11 x 1 1/4 SS	2023.8009	AY, FEEDER	8	142
0001.1088	SCR,SCS 8-32 x 3/4 SS	2023.8013	AY, ELECTRONICS	9	157

Part Number	Part Description	Used In	Assembly	Item	Page Number
0001.1090	SCR,SCS 10-32 x 3/8 SS	3370.3020	AY, ROLL ORIENT	1	170
0001.1101	SCR,SCS 10-32 x 1/2 SS	2023.8008	AY, ORIENT ROLL	10	136
"	"	2023.8009	AY, FEEDER	11	142
0001.1141	SCR,SCS 1/4-20 x 5/8 SS	2023.8008	AY, ORIENT ROLL	11	136
0001.1160	SCR,SCS 1/4-20 x 3/4 SS	3370.1711	AY, ROLL ORIENT	10	167
0001.1200	SCR,SCS 1/4-20 x 1 SS	2023.8008	AY, ORIENT ROLL	12	135
0001.2402	SCR,SSS 5/16-18 x 3/8 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	2	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	2	118
0001.2450	SCR,SSS 5/16-18 x 5/16 SS	3370.1700.50	AY, DRIVE MOTOR	2	169
0001.2539	SCR,SSS 5/16-18 x 1/2 SS CPPT	3370.1892	AY, JACKSHAFT	2	166
0001.3525	SCR,SBHCS 10-32 x 3/8 SS	2023.8013	AY, ELECTRONICS	14	157
0001.4052	WSHR,LK 10 SS	2023.8008	AY, ORIENT ROLL	14	136
"	"	3370.3020	AY, ROLL ORIENT	2	170
0001.4100	WSHR,LK 1/4 SS	2023.8004	AY, LINKAGE, TRANFER FINGER	4	119
"	"	2023.8005	AY, PADDLES	5	120
"	"	2023.8007	AY, FRONT ROLL	13	128
"	"	2023.8008	AY, ORIENT ROLL	15	137
"	"	2023.8015	CE GUARD ASSEMBLY, PRO	41	163
0001.4120	WSHR,LK 5/16 SS	2023.8005	AY, PADDLES	6	120
"	"	2023.8007	AY, FRONT ROLL	14	128
"	"	2023.8008	AY, ORIENT ROLL	16	137
"	"	2023.8009	AY, FEEDER	13	142
"	"	2023.8011	AT, LUBRICATION	6	150
"	"	2023.8013	AY, ELECTRONICS	6	157
"	"	3370.1700.50	AY, DRIVE MOTOR	3	169
"	"	3370.1711	CUPS, TRANSFER & MECHANISM	9	168
"	"	3370.1892	AY, JACKSHAFT	3	166
0001.4160	WSHR,LK 3/8 HVY SS	2023.8001	AY, FRAME	3	114

Part Number	Part Description	Used In	Assembly	Item	Page Number
"	"	2023.8002	AY, TRANSFER MECHANISM	7	115
"	"	2023.8007	AY, FRONT ROLL	15	128
"	"	2023.8011	AY, LUBRICATION	3	150
"	"	2023.8015	CE GUARD ASSEMBLY, PRO	38	163
0001.4161	WSHR,LK 3/8 SS	2023.8001	AY, FRAME	4	114
"	"	2023.8002	AY, TRANSFER MECHANISM	4	115
"	"	2023.8006	AY, MAIN CAM SHAFT	3	122
"	"	2023.8008	AY, ORIENT ROLL	17	137
"	"	3370.3067	MOUNTING ANGLES ASSEMBLY	3	167
0001.4200	WSHR,LK 1/2 SS	2023.8002	AY, TRANSFER MECHANISM	5	115
"	"	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	4	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	4	118
"	"	2023.8005	AY, PADDLES	7	120
"	"	2023.8006	AY, MAIN CAM SHAFT	4	122
"	"	2023.8007	AY, FRONT ROLL	16	129
"	"	2023.8009	AY, FEEDER	14	142
0001.4220	WSHR,LK 5/8 SS	2023.8009	AY, FEEDER	15	143
0001.4251	WSHR,FLT .516 x 1.688x .090 SS	2023.8002	AY, MAIN CAM SHAFT	6	115
0001.4258	WSHR,FLT .188 x .438 x .047 SS	2023.2013	AY, ELECTRONICS	10	157
0001.4290	WSHR,FLT .218 x .437 x .031 SS	3370.3020	AY, ROLL ORIENT	3	170
0001.4300	WSHR,FLT .219 x .500 x .047 SS	2023.8008	AY, ORIENT ROLL	18	137
"	"	3370.3020	AY, ROLL ORIENT	4	170
0001.4350	WSHR,FLT .281 x .625 x .063 SS	2023.8004	AY, LINKAGE, TRANSFER FINGER	5	119
"	"	2023.8005	AY, PADDLES	16	121
"	"	2023.8007	AY, FRONT ROLLS	17	129
"	"	2023.8008	AY, ORIENT ROLL	19	137
"	"	2023.8015	CE GUARD ASSEMBLY, PRO	40	163
0001.4390	WSHR,FLT .344 x .688 x .063 SS	2023.8005	AY, PADDLES	8	121

Part Number	Part Description	Used In	Assembly	Item	Page Number
"	"	2023.8007	AY, FRONT ROLL	18	129
"	"	2023.8008	AY, ORIENT ROLL	20	137
"	"	2023.8009	AY, FEEDER	18	143
"	"	2023.8011	AY, LUBRICATION	8	150
0001.4500	WSHR,FLT .406 x .813 x .063 SS	2023.8001	AY, FRAME	5	114
"	"	2023.8002	AY, TRANSFER MECHANISM	7	115
"	"	2023.8006	AY, MAIN CAM SHAFT	5	122
"	"	2023.8007	AY, FRONT ROLL	20	129
"	"	2023.8008	AY, ORIENT ROLL	21	137
"	"	2023.8011	AY, LUBRICATION	9	150
"	"	3370.3067	MOUNTING ANGLES ASSEMBLY	5	167
0001.4570	WSHR,FLT .531 x 1.063 x.094 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	5	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	5	118
"	"	2023.8006	AY, MAIN CAM SHAFT	6	122
"	"	2023.8009	AY, FEEDER	19	143
0001.4590	WSHR,FLT .656 x 1.313 x.094 SS	2023.8009	AY, FEEDER	20	143
0001.4604	WSHR,FLT .812 x 2.0 x.177 SS	3370.3067	MOUNTING ANGLES ASSEMBLY	6	167
0001.4649	WSHR,FLT .317 x .739 x .060 SS	2023.8007	AY, FRONT ROLL	21	129
0001.4654	WSHR,FLT .510 x .968 x .060 SS	2023.8007	AY, FRONT ROLL	22	129
0001.4710	WSHR,FLT .380 x .812 x.062 NYL	3370.1711	CUPS, TRANSFER & MECHANISM	11	168
0001.4716	WSHR,FLT .505 x .875 x.062 NYL	2023.8007	AY, FRONT ROLL	23	129
0001.4802	WSHR,FLT .315 x .750 x.031 NYL	2023.8007	AY, FRONT ROLL	24	129
0001.5120	NUT,HX 1/4-20 x 7/16 SS	2023.8004	AY, LINKAGE, TRANSFER FINGER	6	119
"	"	2023.8005	AY, PADDLES	9	121
"	"	2023.8007	AY, FRONT ROLL	25	129
0001.5200	NUT,HX 5/16-18 x 1/2 SS	2023.8007	AY, FRONT ROLL	26	129
"	"	2023.8008	AY, ORIENT ROLL	22	137
"	"	2023.8009	AY, FEEDER	21	143

Part Number	Part Description	Used In	Assembly	Item	Page Number
"	"	2023.8011	AY, LUBRICATION	11	150
"	"	3370.1892	AY, JACKSHAFT	5	166
"	"	3370.1700.50	AY, DRIVE MOTOR	5	169
0001.5220	NUT,HX 3/8-16 x 9/16 SS	20203.8001	AY, FRAME	6	114
"	"	2023.8002	AY, TRANSFER MECHANISM	8	116
"	"	2023.8006	AY, MAIN CAM SHAFT	8	122
"	"	2023.8007	AY, FRONT ROLL	27	129
"	"	3370.3067	MOUNTING ANGLES ASSEMBLY	7	167
0001.5240	NUT,HX 3/8-24 x 9/16 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	6	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	6	118
0001.5310	NUT,HX 1/2-13 x 3/4 SS	2023.8006	AY, MAIN CAM SHAFT	11	122
0001.5341	NUT,HX 5/8-11 x 15/16 SS	2023.8009	AY, FEEDER	22	143
0001.5440	NUT,HXJ 1/4-28 x 7/16 SS	2023.8008	AY, ORIENT ROLL	23	137
0001.5484	NUT,HXJ 5/16-24 x 1/2 SS	2023.8005	AY, PADDLES	10	121
"	"	2023.8008	AY, ORIENT ROLLS	25	137
0001.5500	NUT,HXJ 3/8-16 x 9/16 SS	2023.8011	AY, LUBRICATION	5	150
0001.5560	NUT,HXJ 1/2-13 x 3/4 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	7	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	7	118
0001.5601	NUT,HXJ 1/2-20 x 3/4 SS	2023.8007	AY, FRONT ROLL	28	129
0001.5622	NUT,HXJ 5/8-18 x 15/16 SS	2023.8011	AY, LUBRICATION	12	150
0001.5633	NUT,HXJ 3/4-10 x 1 1/8 SS	2023.8009	AY, FEEDER	24	143
0001.5640	NUT,HXJ 3/4-16 x 1 1/8 SS	3370.3067	MOUNTING ANGLES ASSEMBLY	8	167
0001.5679	NUT,FLGLK 1/4-20 x 7/16 SS	2023.8009	AY, FEEDER	25	143
"	"	2023.8011	AY, LUBRICATION	13	150
0001.5680	NUT,FLGLK 5/16-18 x 1/2 SS	2023.8004	AY, LINKAGE, TRANSFER FINGER	7	119
"	"	2023.8006	AY, MAIN CAM SHAFT	9	122

Part Number	Part Description	Used In	Assembly	Item	Page Number
"	"	2023.8007	AY, FRONT ROLL	29	129
"	"	2023.8009	AY, FEEDER	26	143
"	"	2023.8011	AY, LUBRICATION	14	150
0001.5688	NUT,FLGLK 3/8-16 x 9/16 SS	2023.8006	AY, MAIN CAM SHAFT	10	122
0001.5705	NUT,HXSLFLKG 8-32 x 11/32 SS *	2023.8007	AY, FRONT ROLL	30	129
"	"	2023.8013	AY, ELECTRONICS	11	157
"	"	2023.8015	CE GUARD ASSEMBLY, PRO	44	163
0001.5710	NUT,HXSLFLKG 10-32 x 3/8 SS *	2023.8013	AY, ELECTRONICS	8	157
0001.5712	NUT,HXSLFLKG 1/4-20 x 7/16 SS*	2023.8004	AY, LINKAGE, TRANSFER FINGER	8	120
"	"	2023.8005	AY, PADDLES	11	121
0001.5805	NUT,HXJSLFLKG 3/8-16 x9/16 SS*	2023.8013	AY, ELECTRONICS	3	157
0001.7210	RING,EXT 1.250 SS	2023.8006	AY, MAIN CAM SHAFT	12	122
0001.7268	RING,EXTERNFRCD .250 SS	2023.8005	AY, PADDLES	12	121
"	"	2023.8008	AY, ORIENT ROLL	26	137
0001.7430	RING,EXTE .375 SS	2023.8007	AY, FRONT ROLL	32	129
0001.7542	CLR,SLD 1/2 x 1 SS	2023.8007	AY, FRONT ROLL	33	129
0001.7704	CLR,DBLSPLT 3/4 x 1 1/2 SS	2023.8008	AY, ORIENT ROLL	27	137
0001.7706	CLR,DBLSPLT 1 x 1 3/4 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	9	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	9	118
"	"	2023.8007	AY, FRONT ROLL	34	129
"	"	2023.8008	AY, ORIENT ROLL	28	137
0001.7733	CLR,DBLSPLT 3 x 4 1/2 SS	2023.8006	AY, MAIN CAM SHAFT	13	122
0001.9026	RIVET,RND 3/16 x 1/2 MONEL	2023.8016	AY, PRO CE LABEL	4	165
0002.0027	RODEND,1/4 x M1/4-28 RH SST	2023.8008	AY, ORIENT ROLL	29	137
0002.0028	RODEND,1/4 x M1/4-28 LH SST	2023.8008	AY, ORIENT ROLL	30	137
0002.0210	RODEND,5/16 x F5/16-24 BK	2023.8005	AY, PADDLES	13	121
"	"	2023.8008	AY, ORIENT ROLL	31	137

Part Number	Part Description	Used In	Assembly	Item	Page Number
0002.5020	BRG,FLG BRN VF2S212	3370.1892	AY, JACKSHAFT	6	166
0002.5044	BRG,FLG BRN VF2S220	2023.8006	AY, MAIN CAM SHAFT	14	122
"	"	2023.8009	AY, FEEDER	28	143
0002.9015	ECCENTRIC-PAC 1-S 3/16 THROW	2023.8009	AY, FEEDER	29	143
0003.1031	BRG,OILSLV 3/8 x 1/2 x 7/16	2023.8007	AY, FRONT ROLL	35	129
0003.1033	BRG,OILSLV 3/8 x 7/16 x 3/8	2023.8007	AY, FRONT ROLL	36	129
0003.4117	BRG,PLSTCFLG 1 x 1 1/4 x 1 1/2	2023.8007	AY, FRONT ROLL	37	129
0004.1329	O-RING,5/8 x 13/16 x 3/32	2023.8011	AY, LUBRICATION	15	151
0005.1055	MTR LINC 1 HP T145(F) 7/8S	3370.1700.50	AY, DRIVE MOTOR	6	169
0005.3064	CABLE 2 CONDUCTOR SHIELD 18AWG	2023.8011	AY, LUBRICATION	16	151
0005.3100	WATERPROOF WASH T&B 5262 1/2	2023.8013	AY, ELECTRONICS	17	157
0005.3150	TY-RAP TIES #TY-25-M	2023.8011	AY, LUBRICATION	17	151
0005.3166	STRN RLF,1/2 NPT STRT .31-.56	2023.8013	AY, ELECTRONICS	15	157
0006.0010	CHAIN,RC35 SS	2023.8007	AY, FRONT ROLL	38	129
"	"	2023.8009	AY, FEEDER	30	143
0006.0024	CHAIN,RC40 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	11	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	10	118
0006.0058	HEAD,CONN-3/4-10 #11344 RH	2023.8009	AY, FEEDER	31	143
0006.0059	HEAD,CONN 3/4-10 #11344 LH	2023.8009	AY, FEEDER	33	143
0006.0085	CHAIN,ML RC2050 SS CLIP PIN	3370.1711	CUPS, TRANSFER & MECHANISM	12	169
0006.1500	SHAFT,DRIVE TENS.-UNIV. #SO-2	2023.8006	AY, MAIN CAM SHAFT	20	123
0006.1501	BASE,DRIVE TENS.-UNIV. #SM	2023.8006	AY, MAIN CAM SHAFT	17	123
0006.2181	V-BELT,BP-51	3370.1892	AY, JACKSHAFT	8	166
0006.2182	V-BELT,AP-37	3370.1700.50	AY, DRIVE MOTOR	7	169
0006.3173	VARIABLE DRIVE #57TBR x 7/8"	3370.1892	AY, JACKSHAFT	9	166

Part Number	Part Description	Used In	Assembly	Item	Page Number
0006.3174	PULLEY,HI-LO MCV-500 3/4 BORE	3370.1892	AY, JACKSHAFT	10	166
0006.7004	KEY,SQ 3/16 x 3/4 SS	2023.8009	AY, FEEDER	36	143
0006.7005	KEY,SQ 3/16 x 1 SS	3370.1700.50	AY, DRIVE MOTOR	8	169
0006.7012	KEY,SQ 1/4 x 2 SS	2023.8006	AY, MAIN CAM SHAFT	18	123
0006.7014	KEY,SQ 1/4 x 3 SS	2023.8009	AY, FEEDER	37	143
0006.7020	KEY,SQ 1/4 x 2 1/2 SS	2023.8006	AY, MAIN CAM SHAFT	19	123
0006.7022	KEY,SQ 3/16 x 2 SS	3370.1892	AY, JACKSHAFT	11	166
0006.7024	KEY,SQ 3/16 x 4 SS	3370.1892	AY, JACKSHAFT	12	166
0006.7027	KEY,SQ 3/16 x 2 1/4 SS	3370.1892	AY, JACKSHAFT	13	166
0006.7141	KEY,SQ 3/8 x 3 SS	2023.8006	AY, MAIN CAM SHAFT	21	123
0007.1041	FTG,PAST 4MPT x 4TUQR	2023.8011	AY, LUBRICATION	19	151
0007.1067	FTG,PAEN 6TUQR x 6TUQR PLSTC	2023.8012	AY, WATER	2	155
0007.1099	FTG,WAS 2MPT x 4TUQR SS	2023.8011	AY, LUBRICATION	21	151
0007.1322	FTG,GAEN 2MPT x2.5TUQR MSW BRS	2023.8011	AY, LUBRICATION	22	151
0007.1802	FTG,GAS 2MBSPT x 2.5TUQR SS	2023.8011	AY, LUBRICATION	23	151
0007.2005	FTG,PAEN 2MPT x 2.5TUQR * FLOW	2023.8005	AY, PADDLES	14	121
"	"	2023.8008	AY, ORIENT ROLL	32	137
0007.2009	FTG,PAT 2.5TU x 2.5TU x 2.5TU*	2023.8010	AY, PNEUMATICS	2	144
0007.2017	FTG,PAS 2MPT x 2.5TUQR	2023.8011	AY, LUBRICATION	24	151
0007.2086	TUBING IMP POLYFLOW #44P-1/4	2023.8011	AY, LUBRICATION	25	151
0007.2113	NYLON TUBE 1/8 OD (2500 PSI)	2023.8011	AY, LUBRICATION	26	151
0007.2114	TUBING IMP #66P 3/8 OD	2023.8012	AY, WATER	6	155
0007.2121	TUBING,WTHD PT24008 1/2"	2023.8012	AY, WATER	7	155
0007.2127	TUBING,5/32 OD NYLON	2023.8010	AY, PNEUMATICS	4	145
0007.2558	FTG,PAS 2MPT x 2TUQR BRS	2023.8011	AY, LUBRICATION	27	151
0007.3032	FTG,WAPN 4MPT x CLOSE SS	2023.8012	AY, WATER	9	155

Part Number	Part Description	Used In	Assembly	Item	Page Number
0007.3144	FTG,WAPN 12MPT x 8MPT PLSTC	2023.8011	AY, LUBRICATION	28	151
0007.3221	FTG,WAPB 4FPT x 6MPT SS BUSHNG	2023.8012	AY, WATER	19	156
0007.3433	FTG,PAP 4 TUQR PLSTC	2023.8010	AY, PNEUMATICS	5	145
0007.3444	FTG,PAP 2.5 TUQR PLSTC	2023.8010	AY, PNEUMATICS	6	145
0007.3508	FTG,WAC 12FPT PVC SCH40	2023.8011	AY, LUBRICATION	30	151
0007.3544	HOUSING,5" COMPACT FILTER	2023.8012	AY, WATER	10	155
0007.3545	FILTER,4-7/8" CARTRIDGE	2023.8012	AY, WATER	11	155
0007.4105	USE UP THEN 0007.4105.001	2023.8012	AY, WATER	12	155
0007.4203	BRSH,SHANK ROTO 3Ø X 1W NYL	2023.8011	AY, LUBRICATION	31	151
0007.4222	GREASE PUMP,MLP,15PORT,2K	2023.8011	AY, LUBRICATION	32	151
0007.4224	INJECTOR,MLP 0.04CC	2023.8011	AY, LUBRICATION	33	151
0007.4229	PLUG,RING,MLP	2023.8011	AY, LUBRICATION	34	151
0007.4691	FTG,PAU 8TUQR x 8 TUQR	2023.8012	AY, WATER	13	155
0007.4692	FTG,PAN 6TUQR x 8 PLUG	2023.8012	AY, WATER	14	155
0007.4693	FTG,PAT 8TUQR x8TUQR x8TUQR	2023.8012	AY, WATER	15	156
0007.4694	USE UP THEN 0007.4694.001	22023.8012	AY, WATER	16	156
0007.4695	USE UP THEN 0007.4695.001	2023.8012	AY, WATER	17	156
0007.4917	FTG,PAT 4FPT x 4FPT x 4FPT SS	2023.8012	AY, WATER	18	156
0007.4959	INJECTOR,LUBRICANT, 4 UNIT	2023.8011	AY, LUBRICATION	35	151
0009.0032	NAMEPLATE,ATLAS PRO - CE	2023.8016	AY, PRO CE LABEL	3	165
0009.2080	GROMT,RBR .188 x .313 x .375	2023.8011	AY, LUBRICATION	43	151
0009.9232	SPACER,.315ID x .750 x1.00L SS	2023.8007	AY, FRONT ROLL	43	129
0009.9236	SPACER,.25 ID .50 OD .188 L S	2023.8007	AY, FRONT ROLL	42	129

Part Number	Part Description	Used In	Assembly	Item	Page Number
0009.9237	SPACER,.380ID x .750 x 2.0L SS	2023.8008	AY, ORIENT ROLL	34	137
0009.9239	SPACER,.315ID x .750 x.750L SS	2023.8008	AY, ORIENT ROLL	35	137
121.593	SCR,HCS 5/8-11 x 4 SS	2023.8009	AY, FEEDER	38	143
143.514	SCR,HCS 10-24 x 3/8 SS	3370.3020	AY, ROLL ORIENT	5	170
241.119	KEY,SQ 1/8 x 3/4 SS	2023.8007	AY, FRONT ROLL	44	129
0316.0037	BRG,PLSTCFLG 3/4 x 7/8 x 7/16	2023.8009	AY, FEEDER	39	143
0316.0062	BRG,PLSTCFLG 1 x 1 3/16 x *	2023.8008	AY, ORIENT ROLL	36	137
0426.0023	CHAIN,ML RC40 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	10	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	11	118
0519.0039	FTG,PAS 2FPT x 2MPT BRS BH	2023.8011	AY, LUBRICATION	36	151
2010.3621	SHAFT, FRONT ROLL END	2023.8007	AY, FRONT ROLL	48	129
2010.3650	PIN,PIVOT ROLL OPEN	2023.8007	AY, FRONT ROLL	49	129
2010.3685	SUPT,PEAR STOP SHOE	3370.3020	AY, ROLL ORIENT	7	170
2010.3686	BSHG, PEAR HOLDER DRV	2023.8008	AY, ORIENT ROLL	39	137
2010.3694	LEVER,FRONT ROLL ADJ WIDTH	2023.8007	AY, FRONT ROLL	51	129
2010.3720	BRKT,TRIP	2023.8009	AY, FEEDER	41	143
2010.3732	PIVOT,AIR CYL	2023.8005	AY, PADDLES	20	121
2010.3759	CHUTE	2023.8008	AY, ORIENT ROLL	40	137
2010.3781	CHUTE,FEEDER CANOE LH/RH	2023.8009	AY, FEEDER	43	143
2010.3792	BLADE,ROLL CLEAN	2023.8007	AY, FRONT ROLL	53	129
2010.3820	SPACER,ISOLATOR PADDLE	2023.8005	AY, PADDLES	22	121
2010.4927	MOD,OIL RESERVOIR	2023.8011	AY, LUBRICATION	37	151
2010.9011	SUPT,REAR ROLLS ORIENT	2023.8008	AY, ORIENT ROLL	43	137
2010.9012	SUPT,PEAR ORIENT ROLL	2023.8008	AY, ORIENT ROLL	44	137
2010.9013	CLAMP,LOWER CONNECTING HEAD	2023.8009	AY, FEEDER	45	143
2010.9014	PLATE,FRAME LH SIDE	2023.8001	AY, FRAME	8	114

Part Number	Part Description	Used In	Assembly	Item	Page Number
2010.9015	PLATE,FRAME RH SIDE	2023.8001	AY, FRAME	9	114
2010.9021	ADJ,ROLL OPEN	2023.8007	AY, FRONT ROLL	54	130
2010.9022	FINGER AY,TRANS SUPPORT	2023.8004	AY, LINKAGE, TRANSFER FINGER	9	120
2010.9039	SHAFT,PEAR HOLD	2023.8008	AY, ORIENT ROLL	45	137
2010.9040	PEAR HOLD	2023.8008	AY, ORIENT ROLL	46	137
2010.9054	RESERVOIR & SUPPORT AY,SHORT	2023.8009	AY, FEEDER	46	143
2010.9066	LINK,ADJUST STOP SHOE	2023.8008	AY, ORIENT ROLL	47	137
2010.9085	SUPPORT,PEAR STOP CYLINDER	2023.8008	AY, ORIENT ROLLER	48	137
2010.9086	ARM,FRONT ROLL OPEN SHORT PAN	2023.8007	AY, FRONT ROLL	57	130
2010.9108	SPRKT,STUB SHAFT	2023.8003.50	AY, ADJUSTMENT,SPEED,50 Hz	12	117
"	"	2023.8003.60	AY, ADJUSTMENT,SPEED,60 Hz	12	118
2010.9111	ROW ORIENTOR DRV CHAIN TU CLMP	2023.8007	AY, FRONT ROLL	58	130
2010.9112	CHAIN,ROLLER T.U.	2023.8007	AY, FRONT ROLL	59	130
2010.9114	SPRKT AY,STUB SHAFT	2023.8003.50	AY, ADJUSTMENT,SPEED,50 Hz	13	117
"	"	2023.8003.60	AY, ADJUSTMENT,SPEED,60 Hz	13	118
2010.9115	LEVER,PEAR HOLD DRIVE	2023.8008	AY, ORIENT ROLL	49	137
2010.9138	PIN,PADDLE SHAFT	2023.8005	AY, PADDLES	23	121
2010.9153	SHAFT,ORIENT ROLLS	2023.8008	AY, ORIENT ROLLS	51	137
2010.9157	WSHR,BVLD	2023.8009	AY, FEEDER	47	143
2010.9191	SPRKT,FRONT ROLL DRIVE	2023.8007	AY, FRONT ROLL	60	130
2010.9201	SHAFT,ECCENTRIC DRIVEN OLD CWT	2023.8009	AY, FEEDER	48	143
2010.9202	SHAFT,ECCENTRIC DRIVE	2023.8009	AY, FEEDER	49	143
2010.9205	SUPPORT,RESERVOIR & DRIVE	2023.8015	CE GUARD ASSEMBLY, PRO	50	143

Part Number	Part Description	Used In	Assembly	Item	Page Number
2010.9219	CHAIN,TAKE UP	2023.8015	CE GUARD ASSEMBLY, PRO	51	143
2010.9223	COUNTERWEIGHT AY	2023.8015	CE GUARD ASSEMBLY, PRO	52	143
2010.9901	ORIENT ROLLER	2023.8008	AY, ORIENT ROLL	52	137
2023.0001	GUARD,PRO CE LOWER LEFT	2023.8015	CE GUARD ASSEMBLY, PRO	1	162
2023.0002	GUARD,PRO CE UPPER LEFT	2023.8015	CE GUARD ASSEMBLY, PRO	2	162
2023.0003	GUARD,PRO CE LOWER RIGHT	2023.8015	CE GUARD ASSEMBLY, PRO	3	162
2023.0004	GUARD,PRO CE LOWER RIGHT	2023.8015	CE GUARD ASSSEMBLY, PRO	4	162
2023.0005	GUARD,PRO CE UPPER RIGHT	2023.8015	CE GUARD ASSEMBLY, PRO	5	162
2023.0006	GUARD,PRO CE UPPER RIGHT	2023.8015	CE GUARD ASSEMBLY, PRO	6	162
2023.0007	GUARD,PRO CE RIGHT WALL	2023.8015	CE GUARD ASSEMBLY, PRO	7	162
2023.0008	GUARD,PRO CE LEFT WALL	2023.8015	CE GUARD ASSEMBLY, PRO	8	162
2023.0009	GUARD,PRO CE FRONT BEAM	2023.8015	CE GUARD ASSEMBLY, PRO	9	162
2023.0010	GUARD,PRO CE TRACK 1	2023.8015	CE GUARD ASSEMBLY, PRO	10	162
2023.0011	GUARD,PRO CE TRACK 2	2023.8015	CE GUARD ASSEMBLY, PRO	11	162
2023.0012	GUARD,PRO CE TRACK 3	2023.8015	CE GUARD ASSEMBLY, PRO	12	162
2023.0013	GUARD,PRO CE TRACK 4	2023.8015	CE GUARD ASSEMBLY, PRO	13	162
2023.0014	GUARD,PRO CE TRACK 5	2023.8015	CE GUARD ASSEMBLY, PRO	14	162
2023.0015	GUARD,PRO CE FRONT DOOR LEFT	2023.8015	CE GUARD ASSEMBLY, PRO	15	163
2023.0016	GUARD,PRO CE FRONT DOOR RIGHT	2023.8015	CE GUARD ASSEMBLY, PRO	16	163
2023.0017	GUARD,PRO CE APRON	2023.8015	CE GUARD ASSEMBLY, PRO	17	163
2023.0018	GUARD,PRO CE BRACKET	2023.8015	CE GUARD ASSEMBLY, PRO	18	163
2023.0019	GUARD,PRO CE .38 BRACKET	2023.8015	CE GUARD ASSEMBLY, PRO	19	163

Part Number	Part Description	Used In	Assembly	Item	Page Number
2023.0020	GUARD,PRO CE DBL BRACKET	2023.8015	CE GUARD ASSEMBLY, PRO	20	163
2023.0021	GUARD,PRO CE STAND OFF	2023.8015	CE GUARD ASSEMBLY, PRO	21	163
2023.0022	GUARD,PRO CE REAR LEFT PANEL	2023.8015	CE GUARD ASSEMBLY, PRO	22	163
2023.0023	GUARD,PRO CE REAR RIGHT PANEL	2023.8015	CE GUARD ASSEMBLY, PRO	23	163
2023.0024	GUARD,PRO CE REAR BEAM	2023.8015	CE GUARD ASSEMBLY, PRO	24	163
2023.0025	GUARD,PRO CE REAR TRACK 1	2023.8015	CE GUARD ASSEMBLY, PRO	25	163
2023.0026	GUARD,PRO CE REAR TRACK 2	2023.8015	CE GUARD ASSEMBLY, PRO	26	163
2023.0027	GUARD,PRO CE REAR TRACK 3	2023.8015	CE GUARD ASSEMBLY, PRO	27	163
2023.0028	GUARD,PRO CE REAR TRACK 4	2023.8015	CE GUARD ASSEMBLY, PRO	28	163
2023.0029	GUARD,PRO CE REAR TRACK 5	2023.8015	CE GUARD ASSEMBLY, PRO	29	163
2023.0030	GUARD,PRO CE REAR LEFT DOOR	2023.8015	CE GUARD ASSEMBLY, PRO	30	163
2023.0031	GUARD,PRO CE REAR RIGHT DOOR	2023.8015	CE GUARD ASSEMBLY, PRO	31	163
2023.0032	GUARD,RUBBER FINGER	2023.8015	CE GUARD ASSEMBLY, PRO	32	163
2023.0033	HOLDER,RUBBER FINGER GUARD	2023.8015	CE GUARD ASSEMBLY, PRO	33	163
2023.8001	AY, FRAME	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	1	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	1	113
2023.8002	AY, TRANSFER MECHANISM	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	2	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	2	113
2023.8004	AY, LINKAGE, TRANSFER FINGER	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	4	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	4	113
2023.8005	AY, PADDLES	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	5	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	5	113

Part Number	Part Description	Used In	Assembly	Item	Page Number
2023.8006	AY, MAIN CAM SHAFT	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	6	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	6	113
2023.8007	AY, FRONT ROLL	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	7	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	7	113
2023.8008	AY, ORIENT ROLL	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	8	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	8	113
2023.8009	AY, FEEDER	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	9	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	9	113
2023.8010	AY, PNEUMATICS	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	10	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	10	113
2023.8011	AY, LUBRICATION	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	11	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	11	113
2023.8012	AY, WATER	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	12	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	12	114
2023.8013	AY, ELECTRONICS	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	13	112
"	"	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	13	114
2023.8014	AY,GUARDING	2023.8000.60	AY, GUARDING	14	113
2023.8015	CE GUARD ASSEMBLY,PRO	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	14	112
2023.8016	AY, PRO CE LABEL	2023.8000.50	PEAR ROLL ORIENTOR 50Hz	15	113
3370.1943	STUD,MOUNTING	3370.3067	MOUNTING ANGLES ASSEMBLY	9	167
3370.1500	SPROCKET,LOWER	2023.8006	AY, MAIN CAM SHAFT	33	123
3370.1509	BAR AY,TRANSFER CUP	3370.1711	CUPS, TRANSFER & MECHANISM	2	168
3370.1520	BEARING PIVOT,1" ID	2023.8004	AY, LINKAGE,TRANSFER FINGER	10	120

Part Number	Part Description	Used In	Assembly	Item	Page Number
3370.1542	SHAFT,BELT DR	3370.1892	AY, JACKSHAFT	14	166
3370.1574	SPACER,3/4 OD x 13/32 ID x 2.5	2023.8003.50	AY, ADJUSTMENT,SPEED,50 Hz	14	117
"	"	2023.8003.60	AY, ADJUSTMENT,SPEED,60 Hz	14	118
3370.1608	GUIDE,CENTER TRANSFER	3370.1711	CUPS, TRANSFER & MECHANISM	4	168
3370.1623	IDLER,TAKE-UP BELT DRIVE	2023.8003.50	AY, ADJUSTMENT, SPEED,50Hz	15	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED,60Hz	15	117
3370.1633	BRACKET,SPRING	3370.1711	CUPS, TRANSFER & MECHANISM	7	168
3370.1650	SHAFT,TRANS FIN CAM LH	2023.8006	AY, MAIN CAM SHAFT	22	123
3370.1683	SPRING,SIDE ORIENTOR CUP	3370.1711	CUPS, TRANSFER & MECHANISM	3	168
3370.1699	FINGER ASSEMBLY,TRANSFER	2023.8004	AY, LINKAGE, TRANSFER FINGER	11	120
3370.1711	CUPS,TRANSFER & MECHANISM	2023.8002	AY, TRANSFER MECHANISM	10	116
3370.1750	HOLDER,TORQUE ARM	3370.1700.50	AY, DRIVE MOTOR	10	169
3370.1751	ROLLER,PLUNGER & TRANS FINGER	2023.8007	AY, FRONT ROLL	61	130
3370.1752	SHAFT	2023.8007	AY, FRONT ROLL	62	130
3370.1841	ARM,TRANSFER FINGER	2023.8006	AY, MAIN CAM SHAFT	23	123
3370.1866	IDLER,PLASTIC	2023.8006	AY, MAIN CAM SHAFT	24	123
3370.1881	LINKAGE,TRANSFER FINGER	2023.8004	AY, LINKAGE, TRANSFER FINGERS	12	120
3370.1892	AY,JACKSHAFT	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	17	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	17	119
3370.1936	AY,ROD CONN TRANS CUP	2023.8002	AY, TRANSFER MECHANISM	15	116
3370.1938	CUP,TRANSFER STOP	2023.8002	AY, TRANSFER MECHANISM	16	116
3370.2003	SPACER,JACK SHAFT BRG	3370.1892	AY, JACKSHAFT	15	167
3370.2005	SHEAVE,JACK SHAFT	3370.1892	AY, JACKSHAFT	16	167

Part Number	Part Description	Used In	Assembly	Item	Page Number
3370.2072	BRACKET,CHUTE STOP CHAIN IDLER	2023.8005.50	AY, ADJUSTMENT, SPEED, 50Hz	18	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	18	119
3370.2109	PULLEY,MOTOR DRIVE 50 HZ	3370.1700.50	AY, DRIVE MOTOR	11	169
3370.2238	BRACKET MOUNTING PB STATION	2023.8013	AY, ELECTRONICS	4	157
3370.3001	PIN,PIVOT ROLL .25OD x 1.25 SS	2023.8008	AY, ORIENT ROLL	53	138
3370.3003	SHAFT,63 IN SENSOR	2023.8009	AY, FEEDER	53	144
3370.3004	SUPPORT,SENSOR SHAFT	2023.8009	AY, FEEDER	54	144
3370.3006	SHAFT,FRONT ROLL END	2023.8007	AY, FRONT ROLL	63	130
3370.3007	SUPPORT,FRONT ROLL	2023.8007	AY, FRONT ROLL	64	130
3370.3008	SHAFT,FRONT ROLL DRIVE CENTRAL	2023.8007	AY, FRONT ROLL	65	130
3370.3009	SHAFT,FRONT ROLL CENTER	2023.8007	AY, FRONT ROLL	66	130
3370.3010	BAR,FRONT ROLL ADJ. UPPER	2023.8007	AY, FRONT ROLL	67	130
3370.3011	BAR,FRONT ROLL ADJ. LOWER	2023.8007	AY, FRONT ROLL	68	130
3370.3012	PAD,WEAR	2023.8007	AY, FRONT ROLL	69	130
3370.3013	BASE,FRAME WELDMENT	2023.8001	AY, FRAME	10	115
3370.3014	BAR,SUPPORT SHAKER	2023.8001	AY, FRAME	11	115
3370.3015	BAR,CONTROL MTG FRONT	2023.8001	AY, FRAME	12	115
3370.3016	SHAFT,PEAR CONTROL	2023.8005	AY, PADDLES	26	121
3370.3017	SHAFT,PEAR CONTROL,MID	2023.8005	AY, PADDLES	27	121
3370.3018	RM,RND 1" 304 SST	2023.8005	AY, PADDLES	28	121
3370.3019	PADDLE,9.13 x 4.12 RIBBED	2023.8005	AY, PADDLELS	29	121
3370.3020	AY,ROLL ORIENT	2023.8008	AY, ORIENT ROLL	54	138
3370.3021	GUARD,ORIENT ROLL	2023.8005	AY, PADDLES	55	138
3370.3022	BRKT,ADJ,ROLL ORIENT	2023.8005	AY, PADDLES	56	138
3370.3023	BRKT,ADJ,ROLL ORIENT,LWR	2023.8005	AY, PADDLES	57	138

Part Number	Part Description	Used In	Assembly	Item	Page Number
3370.3024	BAR,SHOE STOP SUPPORT	3370.3020	AY, FRONT ROLL	8	170
3370.3026	BRG,PLSTCFLG 1 x1 1/2 x1 1/4	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	19	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	19	119
3370.3027	BRKT,RH TRANSFER BAR CARRIER	2023.8002	AY, TRANSFER MECHANISM	17	116
3370.3028	BRKT,LH TRANSFER BAR CARRIER	2023.8002	AY, TRANSFER MECHANISM	18	116
3370.3029	SPROCKET ASSEMBLY,SST	2023.8007	AY, FRONT ROLL	70	
3370.3030	BRKT,SIDE PLATE SUPPORT	2023.8001	AY, FRAME	13	115
3370.3031	SUPPORT,SWEEP SHAFT	2023.8005	AY, PADDLES	30	121
3370.3032	VALVE AY,STACK PRO	2023.8010	AY, PNEUMATICS	7	145
3370.3034	FILTER REG,AY PRO	2023.8010	AY, PNEUMATICS	8	145
3370.3039	LINK,8.0 IN ECCENTRIC DRIVE	2023.8009	AY, FEEDER	55	144
3370.3040	LINK,15.75 IN ECCENTRIC DRIVE	2023.8009	AY, FEEDER	56	144
3370.3041	BRKT,PROX SENSOR	2023.8006	AY, MAIN CAM SHAFT	25	123
3370.3043	SUPPORT,CHAIN T.V.	2023.8007	AY, FRONT ROLL	71	130
"	"	2023.8008	AY, ORIENT ROLL	58	138
3370.3045	BRKT,LEVEL PROX SENSOR	2023.8009	AY, FEEDER	57	144
3370.3046	SPRK,35B30 x .50 x 1/4KEY SS	2023.8007	AY, FRONT ROLL	72	130
3370.3053	SPACER,ECCENTRIC SHAFT	2023.8009	AY, FEEDER	58	144
3370.3054	PLATE,MTG,GREASE	2023.8011	AY, LUBRICATION	38	150
3370.3056	LINK,4 IN ECCENTRIC DRIVE	2023.8009	AY, FEEDER	59	144
3370.3057	BRACKET,WATER MANIFOLD PRO	2023.8012	AY, WATER	20	156
3370.3058	BRKT,FRNT SPRAY NOZZLE PRO	2023.8012	AY, WATER	21	156
3370.3059	GUARD,PEAR DROP LH	2023.8008	AY, ORIENTOR ROLL	59	138
3370.3060	GUARD,PEAR DROP RH	2023.8008	AY, ORIENT ROLL	60	138
3370.3061	CAM SHAFT,MAIN	2023.8006	AY, MAIN CAM SHAFT	26	123

Part Number	Part Description	Used In	Assembly	Item	Page Number
3370.3065	SUPPORT,CHUTE,UPPER	2023.8008	AY, ORIENT ROLL	61	138
3370.3066	SUPPORT,CHUTE,LOWER	2023.8008	AY, ORIENT ROLL	62	138
3370.3067	MOUNTING ANGLES ASSEMBLY	2023.8001	AY, FRAME	14	115
3370.3068	BRACKET,MOUNT SIDE PLATE-RH	3370.3067	MOUNTING ANGLES ASSEMBLY	10	167
3370.3069	BRACKET,MOUNT SIDE PLATE-LH	3370.3067	MOUNTING ANGLES ASSEMBLY	11	168
3370.3070	AY,ROLL CAM OPEN NYL	2023.8006	AY, MAIN CAM SHAFT	27	123
3370.3067	AY,TRANSFER CAM NYL	2023.8006	AY, MAIN CAM SHAFT	30	123
3370.3085	BRKT,ROTO BRUSH	2023.8011	AY, MAIN CAM SHAFT	39	151
3370.3086	BRKT,LUBE,ESSENTRIC	2023.8011	AY, MAIN CAM SHAFT	40	151
3370.3087	BRKT,LUBE,ADJUSTMENT SPEED	2023.8011	AY, MAIN CAM SHAFT	41	151
3370.3088	BRKT,LUBE,MAIN CHAIN	2023.8011	AY, MAIN CAM SHAFT	42	151
6900.0856	ADAPTOR PLATE,PEAR BOX	2023.8013	AY, ELECTRONICS	7	157
7571.2047	FTG,PAN 4TUBELOCK x 4MPT	2023.8012	AY, WATER	22	156
7571.2052	FTG,PAN 6TUBELOK x 4MPT	2023.8012	AY, WATER	23	156
7579.0008	CLAMP,HOSE CRIMP-1/2	2023.8012	AY, WATER	24	156
7590.0631	LABEL,DO NOT OP W/O GUARD GEAR	2023.8016	AY, PRO CE LABEL	2	165
7590.0635	LABEL,PINCH POINT CE	2023.8016	AY, PRO CE LABEL	1	165
9501.9324	CORD GRIP,3/4 IN L'TITE*	2023.8013	AY, ELECTRONICS	19	157
9501.9326	CORD GRIP,1/2"	2023.8013	AY, ELECTRONICS	16	157
9501.9329	LOCKNUT,ELEC 1/2" NON METALLIC	2023.8013	AY, ELECTRONICS	18	157
9501.9330	LOCKNUT,ELEC 3/4" NON METALLIC	2023.8013	AY, ELECTRONICS	20	157
9502.0016	CLAMP,CABLE 1"CUSHIONED	2023.8013	AY, ELECTRONICS	13	157
9502.7014	CABLE, 3 CONDUCTOR TEFLON	2023.8013	AY, ELECTRONICS	21	157

Part Number	Part Description	Used In	Assembly	Item	Page Number
9502.7127	CABLE,16AWG 4COND FOIL/BRAID *	2023.8013	AY, ELECTRONICS	22	157
9502.8087	SENSOR CABLE 5M M12 4P	2023.8006	AY, MAIN CAM SHAFT	31	123
"	"	2023.8009	AY, FEEDER	61	144
9502.8151	SENSOR,INDUCT 3 OR 2W QD	2023.8008	AY, ORIENT ROLL	32	123
"	"	2023.8009	AY, FEEDER	60	144
0001.0489.5	SCR,HCS 5/16-18 x 3 3/4 SS	2023.8008	AY, ORIENT ROLL	7	136
"	"	2023.8009	AY, FEEDER	3	142
0001.0499.1	SCR,HCS 5/16-24 x 1 SS	2023.8009	AY, FEEDER	5	142
0001.0730.1	SCR,HCS 3/8-16 x 2 3/4 SS *	2023.8007	AY, FRONT ROLL	6	128
0001.0748.1	SCR,HCS 3/8-16 x 3 1/2 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	1	116
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	1	118
"	"	3370.3067	MOUNTING ANGLES ASSEMBLY	2	167
0001.0988.1	SCR,HCS 5/8-11 x 3 3/4 SS	2023.8009	AY, FEEDER	9	142
0001.1001.5	SCR,HCS 3/4-10 x 2 1/2 SS	2023.8009	AY, FEEDER	10	142
0001.2538.2	SCR,SSS 5/16-18 x1 1/4 SS CNPT	2023.8007	AY, FRONT ROLL	7	128
0001.3051.1	SCR,RHMS 8-32 x 1/2 SS	2023.8007	AY, FRONT ROLL	8	128
0001.3900.10	SCR,SHSCS 3/8x 3/4x 5/16-18 SS	2023.8007	AY, FRONT ROLL	10	128
"	"	2023.8008	AY, ORIENT ROLL	13	136
"	"	2023.8009	AY, FEEDER	12	142
0001.3900.5	SCR,SHSCS 3/8x 1/2x 5/16-18 SS	2023.8007	AY, FRONT ROLL	9	128
0001.3901.1	SCR,SHSCS 5/16x 3/8x 1/4-20 SS	2023.8007	AY, FRONT ROLL	11	128
0001.3901.2	SCR,SHSCS 5/16x 1/4x 1/4-20 SS	2023.8007	AY, FRONT ROLL	12	128
0001.3905.1	SCR,SHSCS 5/8x1 1/4x 1/2-13 SS	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	3	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	3	118

Part Number	Part Description	Used In	Assembly	Item	Page Number
0001.4225.2	WSHR,LK 3/4 SS	2023.8009	AY, FEEDER	16	143
"	"	3370.3067	MOUNTING ANGLES ASSEMBLY	4	167
0001.4371.1	WSHR,FLT .375 x .875 x .078 SS	2023.8009	AY, FEEDER	17	143
"	"	3370.1892	AY, JACKSHAFT	4	169
"	"	3370.1700.50	AY, DRIVE MOTOR	4	169
0001.4433.1	WSHR,FLT .395 x 1.000 x.060 SS	2023.8007	AY, FRONT ROLL	19	129
0001.4585.4	WSHR,FLT .641 x 1.000 x.031 SS	2023.8011	AY, LUBRICATION	10	150
0001.4656.1	WSHR,FLT 1.260 x 1.875x.060 SS	2023.8006	AY, MAIN CAM SHAFT	7	122
0001.5440.001	NUT,HXJ 1/4-28 x 7/16 LH SS	2023.8008	AY, ORIENT ROLL	24	137
0001.5601.1	NUT,HXJ 1/2-20 x 3/4 SS LH	2023.8003.50	AY, ADJUSTMENT, SPEED, 50Hz	8	117
"	"	2023.8003.60	AY, ADJUSTMENT, SPEED, 60Hz	8	118
0001.5631.2	NUT,HXJ 3/4-10 x 1 1/8 SS LH	2023.8009	AY, FEEDER	23	143
0001.7130.1	RING,EXT .500 HVY SST	2023.8007	AY, FRONT ROLL	31	129
0001.9030.5	STDOFF,RND 3/8-16 1.0L SANI	2023.8013	AY, ELECTRONICS	2	156
0002.4015.2	PILLOW BLOCK,C-25K1-14	2023.8009	AY, FEEDER	27	143
0006.0026.1	CHAIN,RC50 SS	2023.8006	AY, MAIN CAM SHAFT	15	123
0006.0058.2	HEAD,CONN-3/4-10 #11344 RH MOD	2023.8009	AY, FEEDER	32	143
0006.0059.1	CHAIN,ML RC35 SS	2023.8007	AY, FRONT ROLL	39	129
0006.0094.2	CHAIN,ML RC50 SS	2023.8006	AY, MAIN CAM SHAFT	16	123
0006.0096.2	CHAIN,ML RC-25 SS	2023.8007	AY, FRONT ROLL	40	129
0006.0098.1	CHAIN,RS25SS 304SS CHAIN	2023.8007	AY, FRONT ROLL	41	129
0006.1061.1	SPRKT,35BS12SS x .625 SS	2023.8009	AY, FEEDER	34	143
0006.0106.5	SPRKT,35BS18SS x .875 SS	2023.8009	AY, FEEDER	35	143
0006.1095.1	SPRKT,40B10SS x .750 W/KEYWAY	3370.1892	AY, JACKSHAFT	7	166
0007.1039.1	TUBING,5/32 OD 2500 PSI NYLON	2023.8011	AY, LUBRICATION	18	151

Part Number	Part Description	Used In	Assembly	Item	Page Number
0007.1096.1	FTG,PAEN 2MPT x 4TUQR PLSTC	2023.8011	AY, LUBRICATION	20	151
0007.1376.6	STRAINER,DISC 100 MESH SS	2023.8012	AY, WATER	3	155
0007.1379.2	USE UP THEN 0007.1379.201	2023.8012	AY, WATER	4	155
0007.1379.4	NOZZLE,SPRAY FOGGER PLSTC	2023.8012	AY, WATER	5	155
0007.2019.001	FTG,PAY 2.5TUQR x 2.5TUQR(2)	2023.8010	AY, PNEUMATICS	3	144
0007.2527.001	FTG,PAS 3/4-16 x 4FPT SS BH	2023.8012	AY, WATER	8	155
0007.3190.2	FTG,PRST 2FPT x 2FPT BRS	2023.8011	AY, LUBRICATION	29	151
0007.4325.2	BIMBA,AIR CYL 1.06D x 1.05	2023.8005	AY, PADDLES	15	121
"	"	2023.8007	AY, FRONT ROLL	33	137
2010.3606.001	SUPT,FRONT ROLL BSHG MOD	2023.8007	AY, FRONT ROLL	45	129
2010.3606.800	SUPT,FRONT ROLL BSHG	2023.8007	AY, FRONT ROLL	46	129
2010.3618.1	SPROCKET,REAR ROLL DRIVE	2023.8008	AY, ORIENT ROLL	37	137
2010.3620.800	ROLL,FRONT ORIENTOR	2023.8007	AY, FRONT ROLL	47	129
2010.3652.1	ROLL,TAKE UP 35 PITCH	2023.8007	AY, FRONT ROLL	50	129
"	"	2023.8008	AY, ORIENT ROLL	38	137
"	"	2023.8009	AY, FEEDER	40	143
2010.3684.800	SHOE,STOP	3370.3020	AY, FRONT ROLL	6	170
2010.3723.1	LEVER,1 1/4 5/16-18 SS	2023.8005	AY, PADDLES	17	121
2010.3731.1	SUPPORT,AIR CYL PIVOT	2023.8005	AY, PADDLES	18	121
2010.3731.2	SUPPORT,AIR CYL PIVOT	2023.8005	AY, PADDLES	19	121
2010.3744.800	PLATE,PLASTIC SENSOR	2023.8009	AY, FEEDER	42	143
2010.3751.800	DRIVER,ADJ FRON ROLL	2023.8007	AY, FRONT ROLL	52	129
2010.3764.1	CLAMP,PEAR HOLD SST	2023.8008	AY, ORIENT ROLL	41	137

Part Number	Part Description	Used In	Assembly	Item	Page Number
2010.3370.002	FINGER,ORIENTING	2023.8008	AY, ORIENT ROLL	42	137
2010.3781.800	CHUTE,FEEDER CANOE	2023.8009	AY, FEEDER	44	143
2010.3814.001	PADDLE,5.88 x 6 RIBBED	2023.8005	AY, PADDLELS	21	121
2010.3815.001	PADDLE,6.88 x 4.12 RIBBED	2023.8005	AY, PADDLELS	24	121
2010.3816.001	PADDLE,4.88 x 4.12 RIBBED	2023.8005	AY, PADDLELS	25	121
2010.4202.1	BRKT,CONTROL BAR MTG SST	2023.8001	AY, FRAME	7	114
"	"	2023.8015	AY, PRO CE LABEL	34	163
2010.9042.1	STUB SHAFT,FRONT ROLL SUP,LH	2023.8007	AY, FRONT ROLL	55	130
2010.9042.2	STUB SHAFT,FRONT ROLL SUP,RH	2023.8007	AY, FRONT ROLL	56	130
2010.9122.1	BSHG,SUPPORT	2023.8008	AY, ORIENT ROLL	50	137
2023.8003.50	AY,ADJUSTMENT,SPEED,50Hz	2023.8000.50	PEAR ROLL ORIETNOR 50Hz	3	112
2023.8003.60	AY,ADJUSTMENT,SPEED,60Hz	2023.8000.60	PEAR ROLL ORIENTOR 60Hz	3	113
3370.1483.1	LEVER,TRANSFER CUPS	3370.1711	CUPS, TRANSFER & MECHANISM	1	168
3370.1549.002	MTR BASE,EXT	3370.1700.50	AY, DRIVE MOTOR	9	169
3370.1612.L	CUP,TRANSFER LH	3370.1711	CUPS, TRANSFER & MECHANISM	5	168
3370.1612.R	CUP,RH TRANSFER	3370.1711	CUPS, TRANSFER & MECHANISM	6	168
3370.1700.50	DRIVE MOTOR AY,50Hz	2023.8003.50	AY, ADJUSTMRNT, SPEED, 50Hz	16	117
3370.1700.60	DRIVE MOTOR AY,60Hz	2023.8003.60	AY, ADJUSTMRNT, SPEED, 50Hz	16	119
3370.1728.L	ARM,LH TRANSFER CUP	2023.8002	AY, TRANSFER MECHANISM	11	116
3370.1728.R	ARM,RH TRANSFER CUP	2023.8002	AY, TRANSFER MECHANISM	12	116
3370.1875.L	AY,LH TRANSFER CUP CAM ARM	2023.8002	AY, TRANSFER MECHANISM	13	116
3370.1875.R	AY,RH TRANSFER CUP CAM ARM	2023.8002	AY, TRANSFER MECHANISM	14	116

Part Number	Part Description	Used In	Assembly	Item	Page Number
3370.3000.001	AY,PRO 440V CONTROLS ENCLOSURE	2023.8013	AY, ELECTRONICS	1	156
3370.3073.L	AY,TRANSFER CAM CUP NYL LH	2023.8006	AY, MAIN CAM SHAFT	28	123
3370.3073.R	AY,TRANSFER CAM CUP NYL RH	2023.8006	AY, MAIN CAM SHAFT	29	123
7900.1031.1	ENCLOSURE	2023.8013	AY, ELECTRONICS	12	157
9501.8031.002	CONN LEVER NUT 2COND 24-12AWG	2023.8013	AY, ELECTRONICS	23	157
9501.8031.003	CONN LEVER NUT 3COND 24-12AWG	2023.8013	AY, ELECTRONICS	24	157
9501.9272.001	RIBBON,BLACK LABEL PRINTER	2023.8013	AY, ELECTRONICS	26	157
9501.9272.102	LABEL,WHITE 4" BLANK	2023.8013	AY, ELECTRONICS	25	157
9502.3103.001	SW,GUARD PAIR MAG SAFETY	2023.8015	AY, PRO CE LABEL	43	163

Notes