

# OWNER'S MANUAL

## PALLET INVERTER

Model: SC-75P

Serial #: PI-23238, PI-23239

Customer: Sigma Equipment

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# WELCOME TO CHERRY'S MATERIAL HANDLING SOLUTIONS

Cherry's products reduce your costs in production, storage, retrieval and distribution with a wide variety of material handling solutions. We combine years of experience with state-of-the-art technology to bring a range of products that solve your lifting, rotating, tilting and transferring problems.



## 180° Pallet Inverter

Cherry's Industrial Equipment would like to extend our thanks for your purchase of the 180° Pallet Inverter. We strive to provide industrial equipment that is reliable and easy to operate.

Cherry's 180° forklift-loaded free-standing Pallet Inverter is designed for quick product damage recovery, pallet-to-pallet load transfer and simple inversion.

**Product applications.** Cherry's Pallet Inverter creates an efficient warehouse operation, reducing labor costs with fully-automated functions. With its compact design, the inverter takes up minimal floor space and is easy to use and install.

Typical applications for the Cherry's Pallet Inverter include:

- wood-to-plastic pallet load transfer
- shipping pallet to rental pallet load transfer
- simple inversion for product orientation
- product damage recovery
- replacement of defective or worn pallets.

Heavy gauge steel construction means the Pallet Inverter will be durable and dependable for 24/7 operation in plant and warehouse settings.

**Operating versions.** Cherry's Pallet Inverters can be purchased for operation with hand lever or push button pendant controls.

This manual includes separate installation and operating content for each version.

## Maximum load Capacities

- SC Series: 4400lbs
- DC Series: 4400lbs
- GL Series: 4400lbs
- PC Series: 4400lbs

**Safety features.** Cherry's offers standard components and safety upgrades that can be purchased separately:

- UL508 listed electrical panels and components
- Lockout/tagout switch gear
- Lockout/maintenance stops
- Perimeter hard guards for pedestrian protection
- Bollards and forklift crash guards
- Type 4 safety circuits.
- Automatic machine disabling during loading/unloading
- Type 4 light curtains and safety scanners

To learn more, contact your Cherry's sales team at **800.350.0011** or **[sales@cherrysind.com](mailto:sales@cherrysind.com)**.

**Disclaimer.** Cherry's Pallet Inverter may be used in a wide variety of industrial and warehouse settings. We have addressed the most common applications for our products within this manual, but we cannot anticipate all conditions or unique situations. If you are unsure of any instructions or guidelines, please contact our product support team at **877.350.2748** or **service@cherrysind.com**.

**Terms used in this manual.**

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

**Safety!** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components, which, for functional purposes, cannot be guarded.

**Warning!** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

**Remember to be responsible.** The instructions included in this manual are not necessarily all-inclusive, because Cherry's Industrial Equipment Corp. cannot anticipate all conceivable or unique situations. Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or equipment operation you do not understand, contact your supervisor or Cherry's Support Team at **877.350.2748** or **service@cherrysind.com**.

**Warranty.** This Owner's Manual is not intended to be or to create any other warranty, express or implied, including any implied warranty of merchantability or fitness for a particular purpose, all of which are hereby expressly excluded. As set forth more specifically in the product warranty, Cherry's obligation under that warranty is limited to the repair or replacement of defective components, which shall be the buyer's sole remedy, and Cherry's shall not be liable for any loss, injury or damage to persons or property, not for any direct, indirect, or consequential damage of any kind resulting from product inversion, load transfer or retrieving damaged pallets.

**For details about Cherry's product warranty, see the Warranty section of this manual.**



# PRECAUTIONS



## **SAFETY**

In order to provide for safe operation of this Pallet Inverter, Cherry's has identified certain hazards that may occur during the installation, maintenance and use of this machine. To prevent injury, any person handling this Pallet Inverter must:

- Always follow the safe working practices as recommended by your Company, and all state and/or federal legal requirements that apply to the installation of machinery.
- Always visually check for hydraulic leaks before starting the machine at the beginning of each shift.
- Visually check that the machine is clear of any debris or tools, particularly in the loading area.
- Upon starting the machine, repeat the check for any visual fluid leaks.
- If leaks are apparent as stated above, lock-out/tagout and immediately inform the individual(s) responsible for maintenance.
- Always be certain any safety guards are in place, before commencing any movement cycle.
- Always check that personnel, transporters, forklift and static loads are clear of the machine before starting the cycle.
- Never try to adjust loads by hand while the machine is in motion or while the motor is running.
- Refer to the attached MSDS sheet on handling of, disposal of and treatment to exposure of MEDALLION PLUS® AW32 hydraulic oil.
- Consult with Cherry's in the event of any serious malfunction, or any visible or audible defect.

Contact our Support team at **877.350.2748** or **service@cherrysind.com**.



## **WARNING**

Your well-being is of the utmost importance to Cherry's Industrial Equipment Corporation. We have determined that the following precautions and environmental conditions will assure maximum safety standards:

- Personnel must always wear safety glasses and steel-toe reinforced safety shoes when operating or servicing the unit.
- Personnel must be properly trained in the safe use and maintenance of the total system.
- A preventative maintenance program should be established by your Company and then adhered to by trained personnel.
- A program to periodically review safety procedures should be established by your Company.
- A well-lit working environment must be provided.
- A safe method of transporting and loading pallets to and from the unit must be established.
- Cherry's Industrial Equipment accident prevention labels must never be blocked by any peripheral equipment.
- This Pallet Inverter must never be overloaded or misused in any manner.



## CAUTION

Cherry's has established the following set of precautions to be followed by all operators of this Pallet Inverter:

**Guarding.** Safety guards should be provided if the unit is adjacent to aisle ways or other equipment.

Caution should be used around all pinch, shear, crush and trip points and guarded if needed.

Peripheral equipment that presents a hazard to individuals operating the unit must be redesigned. If redesign is not possible, then guarding should be considered.

**Electrical.** All equipment must be properly lockedout/tagged-out during any maintenance procedure to prevent accidental start up.

**Safe servicing.** All peripheral equipment must be properly positioned to allow for safe servicing of this unit. All technicians must be properly trained to safely service the unit.

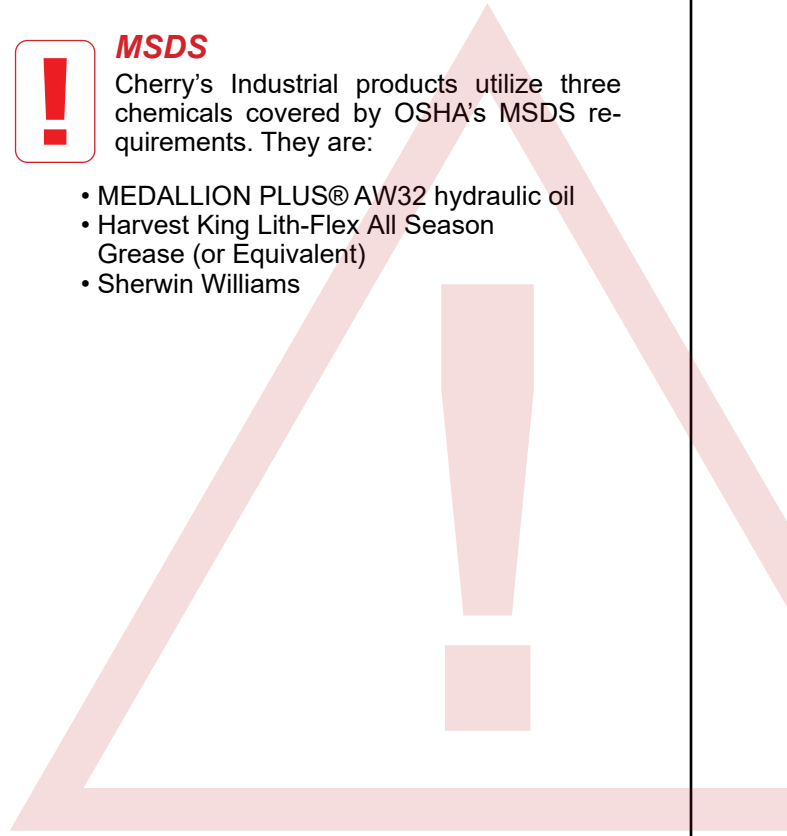
**Placement.** The safety of operational or maintenance personnel must be considered when other equipment is installed near or incorporated with this Pallet Inverter. The environment must be free of potential hazards, and all installation precautions must be followed.



## MSDS

Cherry's Industrial products utilize three chemicals covered by OSHA's MSDS requirements. They are:

- MEDALLION PLUS® AW32 hydraulic oil
- Harvest King Lith-Flex All Season Grease (or Equivalent)
- Sherwin Williams



## LOCKOUT/TAGOUT PROCEDURES

Occupational Safety & Health Administration (OSHA) requires employers to establish a program and utilize procedures for affixing appropriate lockout devices or tagout devices to energy isolating devices, and to otherwise disable machines or equipment to prevent unexpected energization, start up or release of stored energy in order to prevent injury to employees.

When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.

Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

Lockout or tagout shall be performed only by the authorized employees who are performing the servicing or maintenance.

**Preparation for shutdown.** Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.

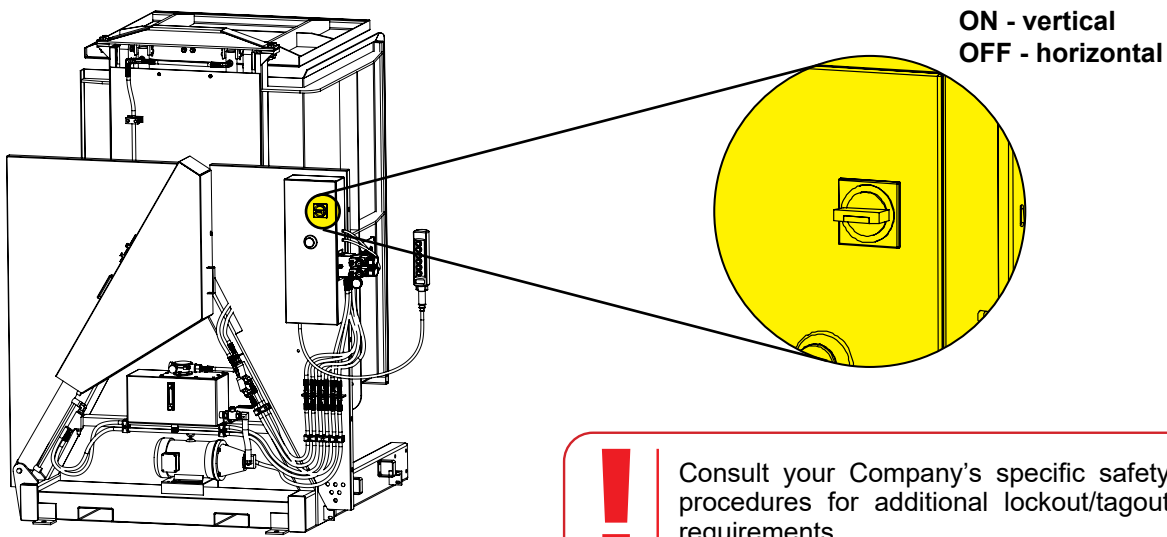
**Machine or equipment shutdown.** The machine or equipment shall be turned off or shut down using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.

**Device application.** Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees. Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe.

**Verification of isolation.** Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished.

**Release from lockout/tagout.** After lockout or tagout devices have been removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tagout device(s) have been removed.

Taken from OSHA 1910.147 *The Control of Hazardous Energy (lockout/tagout)*. Consult your Company's specific safety procedures for additional lockout/tagout requirements.



Consult your Company's specific safety procedures for additional lockout/tagout requirements.

# INSTALLATION & REINSTALLATION

## CHERRY'S ONSITE SERVICES

Most customers take advantage of Cherry's onsite installation, start-up, and training services. A Cherry's support crew also can assist with moving services if a new location is desired. If using light curtains (optional), Cherry's recommends installation by a Cherry's qualified installation technician. To learn more, contact Cherry's Tech Support team at **877.350.2748** or **service@cherrysind.com**.

Customers performing their own installation and relocation should refer to the instructions provided in the hardware box (included in shipment of machine). If using light curtain sticks (optional), set aside and protect during machine set-up process and refer the light curtain installation instructions that follow.

## PRE-INSTALLATION SET-UP

**Damage report.** Cherry's Industrial Equipment assembly team inspects every piece of equipment prior to shipment. This includes running and testing machine in the factory. This testing may result in marking on or scratching of machine. If structural damage or missing parts are apparent and this damage occurred during shipping, a freight claim must be filed with the freight company. Verify fluid levels.

**Unloading and inspecting.** Upon receipt of Pallet Inverter, inspect the equipment completely to determine if there has been any shipping damage and to ensure that the unit is complete. Unbolt guarding from machine, inspect it, and set it off to the side.

**A complete shipment** consists of: Pallet Inverter, power unit, guarding, and operator control unit. Refer to the Bill of Materials for additional components that may have been purchased.

**Optional Light Curtains Kit.** If light curtains kit (optional) was purchased, set parts aside to avoid damage. Kit includes:

- 2 light sticks
- 2 mounting posts with anchor pads
- 2 cables
- 8 floor anchors 3/8" x 5"

**NOTE:** Cherry's recommends installation of light curtains by a trained Cherry's technician.

**Electrical power.** A dedicated, 230-460 VAC 60 kHz 3 phase grounded power source is required.

**Installation equipment checklist.** The following items are required to perform the installation of Cherry's Pallet Inverter:

- 5,000 lb. capacity forklift
- 1/2 drive Socket set 3/8-1 1/18
- Allen wrench set
- Standard and Phillips screwdrivers
- Pneumatic or electric impact wrench
- Hammer drill.
- Masonry drill bits - 3/8 & 3/4
- 3/8-1 1/8 wrench set
- Tape measure
- Cutoff wheel, hacksaw or portable bandsaw
- Mini sledge or weighted mallet
- Shop vacuum
- Grease gun
- Electrical multimeter

**Product testing.** For machine start-up and training, be sure to have empty pallets on hand and samples of all pallet load variations: tallest/shortest, heaviest/lightest. If your operation involves difficult or unique loads, include those in test samples as well.

Personnel to be trained include forklift driver(s), mechanical technician(s), and electrical technician(s). Individuals who are trained will earn operator permits upon successful completion of training.

## MACHINE PLACEMENT

1. With a forklift, position machine where it will be installed. Always ask for plant layout drawings, if available, to confirm what is beneath the installation location and to ensure that there are no obstructions (pipes, electrical lines, water lines, etc.) beneath the chosen site.
2. Placement should not be near any flooring cracks or freeze lines.
3. As a general practice, the back of machine should be no closer than 36" from a wall, and machine should be no closer than 36" from an aisle way or door. Also, disconnect panels should have a minimum of 36" in front of the electrical box for machine maintenance. Keep in mind if you have guarding you will need to add the width of the guarding to the 36" clearance.
4. Check state and local codes for additional setback requirements.
5. Your Company may have additional requirements. Refer to your Company's safety manager and/or plant manager for placement.
6. Confirm all warning labels are in place.

**Operator/maintenance training** is available for a nominal fee. If you've purchased this service at Cherry's Industrial Equipment representative will schedule on site training sessions once the installation is complete. To maximize equipment operation uptime, it is essential to have all operators and maintenance personnel at these sessions. For maintenance reference after training, one Owner's Manual (on CD) is included with each unit.

**Safety apparel and other safety precautions.** As with any piece of heavy equipment, operators of Cherry's Inverter should have operator permits and wear standard safety apparel including hard hat, safety glasses, gloves, steel-toe shoes and yellow or orange safety vest. Your Company may have additional requirements. Refer to your Company's safety and/or regulations manual for details.



### CAUTION!

Placement of Cherry's Pallet Inverter should be on a concrete floor with a minimum thickness of six inches (6"). Machine anchor bolts must be installed no closer than eight inches (8") to crack or joint in the floor.



### CAUTION!

The unit systems are designed to operate on a flat, level surface. If the floor is not completely level, steel shims can be added up to a maximum thickness of one-quarter inch (1/4"). If leveling cannot be obtained with 1/4" of shims, please contact Chery's product support team at **877.350.2748** or **service@cherrysind.com**.

## MACHINE RUN-THROUGH PRIOR TO ANCHORING

Check for signs of damage, especially to the electrical and hydraulic components. Check all connections for tightness. Check for any bent or damaged metal parts.

1. Confirm the correct line voltage. Check to see if power for machine is ready for the installation and that electrician is on site to help. Check for the nearest 110V power source for use with hand tools.
2. Have a qualified electrician connect 3 phase power to the supplied motor starter or disconnect panel. Verify pump/motor rotation by pressing the start, then stop button on the operator panel, check that the pump is running in the direction of the arrow. To determine direction, remove the orange cover to view the motor.
3. If machine utilizes a light curtain, temporarily add a jumper across this circuit.
4. Power up and do a run through of all machine movements clamp, unclamp, invert and rotate.
5. Remove temporary jumper once step #4 is completed.
6. Power down machine and use Lockout/Tag out to ensure that the power is turned off completely if left unattended.



### CAUTION!

If the motor is running in the wrong direction stop immediately. Operating the motor backwards will cause severe damage to the hydraulic pump.



### WARNING!

Cherry's Industrial machinery is designed for heavy-duty use, anticipating constant interaction with manual forklifts and motorized pallet trucks. Inverter base unit must be lagged to the floor in four (4) locations. Do not use equipment until completely anchored to the floor.

## MACHINE ANCHOR INSTALLATION



### **WARNING!**

Failure to use the correct design could result in unstable machine.

An anchor systems kit designed for your application has been supplied with your machine. Determine your environmental conditions and select an appropriate anchor.

### DRY ROOM

Drill to 6" depth. Use shop vac to remove all dust from holes. Check the hole for a solid bottom. If the hole is deeper than 6", then fill the hole with a wooden dowel pin. If the drill breaks through the slab at less than 6", do not proceed. Contact Cherry's product support team at **877.350.2748** or **service@cherrysind.com**.

### Wet or Extreme Cold Rooms

Always follow the anchor manufacturer's instructions. Cherry's recommends that epoxy/anchor designed for wet or cold areas below 25°F be used. Consult the anchor manufacturer's direction before proceeding. Insure that all anchors in all base plates are installed before operating machine.

Always follow manufacturer's instructions. Operate machine for five (5) cycles then retighten.



Do not use Cherry's Pallet Inverter if there appears to be any damage. In the event of any malfunction, any visible or audible defect, or any other serious problem, immediately consult Cherry's product support team at **877.350.2748** or **service@cherrysind.com**.

## PREPARING TO ANCHOR

1. Confirm that the surroundings are adequate for an installation, that they are clean and dry, and that they are free of any activity or traffic.
2. Install supplied forklift guards or optional High Style perimeter guards per drawing. Initially hand tighten all securing bolts.
3. Double check with supervisor that machine is in correct location. If machine is not in correct location, reposition machine in accordance with the supervisor's criteria. Ensure that machine placement instructions (page #9) are followed. Once machine is in correct position, proceed to step 4.
4. Tighten guarding system per the instructions in the hardware box (included in shipment of Pallet Inverter).
5. Use 3/4" anchors for machine and use (2) 3/8" anchors, diagonally across, per floor base for the guards. Confirm correct drill bit size. Do not substitute drill bit size.
6. Check for complete contact of machine base to floor, machine should be squared to its surroundings. Basket should be in vertical position. Ensure that machine is sitting flat and level.
7. Confirm that the floor can be drilled into at a depth of six inches (6"). Confirm that cooling lines, electrical lines and drainpipes are not present under the location of the equipment.
8. Drill the holes in the floor and anchor the back of machine following the manufacturer's instruction on the anchors.
9. If machine utilizes a light curtain then complete "light curtain installation" instructions before proceeding to step #10.
10. Locate and install the pendant holder, secure all extra cords to guarding.
11. Power up and do a run through of all machine movements (clamp, unclamp, invert and rotate).
12. Turn the basket to allow enough clearance to drill and anchor the front of the machine.
13. Proceed with training all personnel.

### ANCHOR INSTALLATION INFORMATION

	Symbol	Units	Nominal Anchor Diameter (in.)			
			3/8*	3/4**		
Anchor outer diameter	$d_0$	in	0.375	0.750		
Nominal carbide bit diameter	$d_{bit}$	in	3/8	3/4		
Effective embedment depth	$h_{ef}$	in	1-3/4	2-5/8	3-1/2	4-3/4
Min hole depth	$h_o$	in	2-1/2	3-3/8	4-3/4	6
Min slab thickness	$h_{min}$	in	4	5	6	8
Installation torque	$T_{inst}$	ft-lb	25	110		
Min hole diameter in fixture	$d_h$	in	7/16	13/16		

\* anchors for the guards

\*\* anchors for the machine



# LIGHT CURTAIN INSTALLATION

The light curtains require sensitive calibrations. Cherry's recommends that customers purchasing optional light curtains have them installed by a Cherry's qualified technician. Contact Cherry's technical services group at 877.350.2748 or [service@cherrysind.com](mailto:service@cherrysind.com).

**Improper installation could create additional hazards.**

The following instructions assume:

- Floor is flat and leveled. If not, the floor will need work to comply; small amount of shims can be added if necessary.
- Guarding has been assembled and anchored properly
- Left and right orientation when facing loading side of machine

1. Check that 2 brackets are attached to each post and have not moved during shipping. (Photo 1).
2. Lay down each post.

Assemble light curtain as follows:

3. Slide emitter onto left post and receiver onto right post with connector ends down. Position the bottom of each light curtain, 10" up from ground level and tighten down. (Photo 2).
4. Connect yellow emitter cable to emitter quick disconnect located on the bottom of the main panel. Connect the black receiver cable to the receiver quick disconnect located on the bottom of the main panel (if quick disconnect supplied).
5. Route emitter and receiver cables from panel through the bottom of the high style guards utilizing the "through holes" (Photo 4).
6. Connect light curtain to panel, Emitter to Emitter cable and Receiver to Receiver cable.
7. Carefully stand up each post 1/2" away from high style guard end with brackets from each post facing each other (Photo 5).
8. Power up machine.
9. Light Curtain Alignment Check: Rotate posts with the light curtain components facing each other until the proper alignment is achieved. Consult the follow table for proper light sequence.

Light Curatin Operating LED (Photo 3A & 3B):

- I. Emitter: "TST" = Yellow LED,  
"PWR" = Green LED.
- II. Receiver: "PWR" = Green LED,  
"OSD" = Yellow LED,  
"LEVEL" = 1 Red LED and  
3 Green LEDs

9. Once correct alignment is verified, mark off and install one anchor of each post then check alignment again.
10. Remove light curtain from each post.
11. Drill and install the second anchor, diagonally across from the first, on each post. Replace the light curtain and check alignment again.
12. Remove light curtain from each post.
13. Install the third and fourth anchors.
14. Tighten down all anchors and replace the light curtain. Verify proper light curtain alignment.
15. Remove light curtain jumper wires
16. Verify operation with a run through of all machine movements.
17. The light curtain installation is complete.

## Light Curtain Parts:

1. 1 Left Post and 1 Right Post (Pre-Assembled-with Brackets)
2. 1 Emitter Curtain (Left side) and 1 Receiver Curtain (Right side)
3. 1 Pendant Holder (On Post (OPTIONAL))
4. 8 (3/8" X 5" Anchors)





PHOTO 1

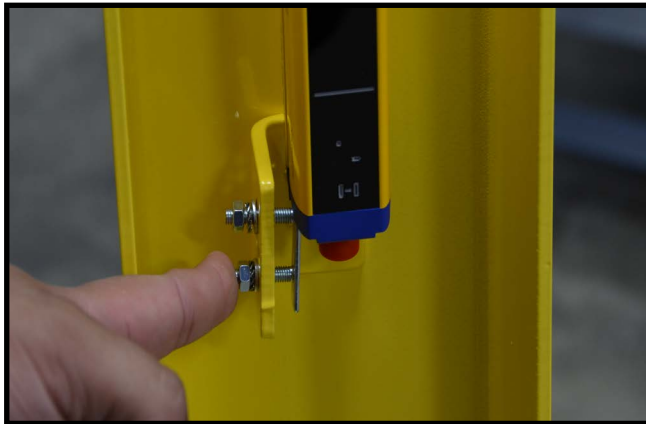


PHOTO 2



PHOTO 4



PHOTO 3A



PHOTO 3B



PHOTO 5

# SAFETY MAT INSTALLATION (OPTIONAL)

Each 4-wire Universal Safety Mat operates on a low-power DC, signal. A signal is transmitted through the upper and lower plates separately through the two wires connected to each plate. These signals are monitored by the Safety Mat Controller.

When the weight on the Safety Mat is insufficient to activate the mat, the signals are unimpaired. The output relays in the controller are energized permitting the guarded machine to run. When sufficient pressure is applied to the active mat area, the conductive plates touch causing the output relays in the controller to de-energize and a stop signal is sent to the guarded machine.

If a wire should break, or separate from a plate, or become disconnected from the controller the Safety Outputs in the controller will de-energize and a stop signal will be sent. If the Safety Mat is punctured, the plates may short together in a manner similar to the mat being stepped on. The controller will not restart until the damaged mat is replaced.

1. The surface on which the safety mat(s) will be placed should be flat, smooth and free of debris. Any debris left under the mat may, in time, work its way through the PVC (Polyvinyl Chloride) housing and eventually contact the electrode assembly. This may affect the mechanical switching of the electrode assembly and will provide a path for moisture to enter the mat. These conditions may lead to a mat failure.
2. Before lifting a safety mat, tilt the mat to a vertical position on the longest side. Hold the vertical edge of the mat while lifting and carrying the mat. Carrying the mat in a vertical position will prevent the mat from bending across its width or length, which could damage the mat by causing a bend or kink in the electrode assembly. A small bow along the length of the mat may be allowed. Assistance may be required to lift and carry because the weight and flexibility of these mats can be awkward for one person to handle.
3. After the mat is in place, use care in routing the mat cables to prevent damage to the insulation or damage to the internal wires. Make sure that the cable wire ways are free of burrs and sharp edges. If cables are to exit the trim, make sure that all notches or cutouts are large enough to allow the wiring to exit the trim without causing damage to the cables.
4. A safety mat must be fixed in position to prevent its removal or relocation. A relocated mat may not be in position to detect the operator, or other personnel, before they reach the hazard.

A safety mat must not, of itself, create a hazard. Pre-drill mounting holes into the perimeter trim and arrange the mat(s), cables, and trim system into the desired position. Check that all gaps are closed and all components of the sensing area are snug and properly oriented. Use the pre-drilled holes in perimeter trim as a template to mark drill points on the mounting surface. Never drill through the safety mat! Any holes in the mat will destroy the seal, impair the reliable operation of the mat and void the warranty. After marking drill points, remove perimeter trim and drill holes into mounting surface (use a 3/16 inch or 5mm bit). Insert the supplied plastic anchors into the mounting holes, position the perimeter trim pieces in alignment with the predrilled mounting holes and secure to the mounting surface using the supplied Phillips head screws.

5. Safety mats are shipped without the cable attached. The mat connector assembly is covered to protect the contact area during shipment and installation. To prevent contamination of the contact area, this covering material should not be removed until the cable is ready to be connected to the mat. The cable assembly includes the 3 stainless steel 6-32 mounting screws (attached to the cable assembly). When properly installed the cable and connector assembly provide an IP67 seal to the mat and connector assembly.

**NOTE:** When attaching the cable **DO NOT STAND ON THE MAT.**

**NOTE:** The torque applied to the #6-32 screws on the connector must be 7-8 in.lb.

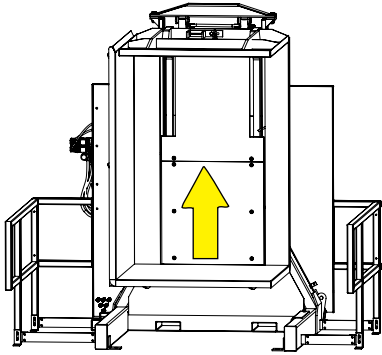


**FIGURE 1:**  
Safety Mat  
without Cable  
Attached



**FIGURE 2:**  
Safety Mat with  
Cable Attached

# OPERATION INSTRUCTIONS

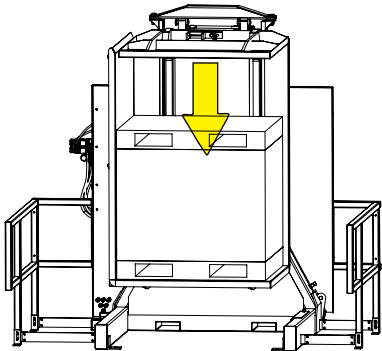


**HOME POSITION:** Turning basket is fully rotated and resting on the invert prox switch, with the clamp plate in the UP position.

- Operator loads the machine with a forklift using the sidewall to guide the pallet load close to the sidewall.



**CAUTION:** Bring the load into the basket slowly and safely. Once in position, lower the load gently down onto the basket. DO NOT exert excessive or downward pressure on the basket, with the forklift, once the load is already resting on the plate. DO NOT drop the load once inside the basket! This type of mis-use will result in the bending of the clamping plate(s), leading to the potential of over squeezing and crushing product on the un-even end. Evidence of this type of mis-use will void any warranty and is not covered by CHERRY'S INDUSTRIAL EQUIPMENT.

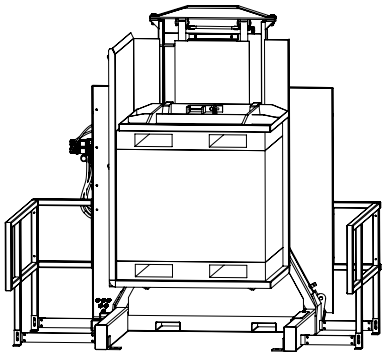


- Operator pulls out all the E-Stop buttons.
- Operator presses the blue **RESET BUTTON** on the operator pendant to clear all safety faults.
- Operator then presses and maintains the **CLAMP** ➡ ➡ ➡ **BUTTON**, which lowers the clamping plate to secure the load.

**NOTE:** All movement buttons are press and maintain.

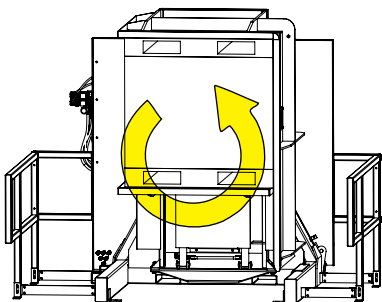




**CAUTION:** Clamping pressure is factory set at 1800 PSI. Be careful not to oversqueeze the load.



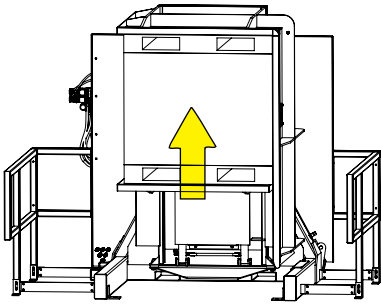
- If you are handling more sensitive products it may require that the operator cinch up the plate slowly to make contact with the top of the load but not meet maximum set pressure.


**Note:** A pressure relief valve is used in the clamp circuit which allows oil to dump back to tank once maximum set pressure is achieved.



- Operator presses and maintains the **INVERT**  **BUTTON** on the operator pendant, turning the basket 180°.
- Operator presses and maintains the **UNCLAMP**  **BUTTON** until the inverter unclamps six inches, releasing the pressure on the pallet and freeing up space.
- Operator removes the pallet and replaces with a new pallet with a forklift.

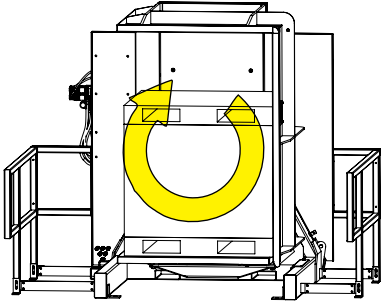
**Work can be performed on inverted load (IE: REPLACING WOODEN PALLET WITH PLASTIC PALLET, REMOVING DAMAGED PRODUCT FROM BOTTOM OF LOAD, ETC.)**




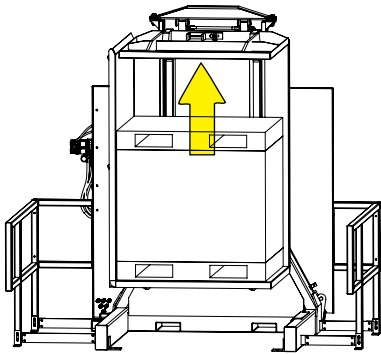
- Operator presses the blue **“RESET”** **BUTTON** on the operator pendant to clear all safety faults.
- The operator presses and maintains the **CLAMP**  **BUTTON** to cinch the new pallet up against the bottom of the load.




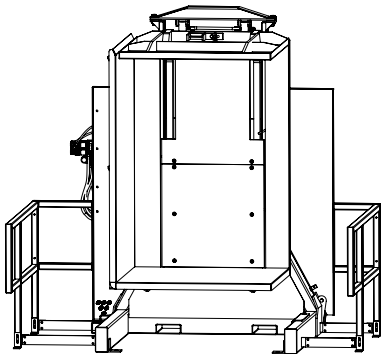
**CAUTION:** Clamping pressure is factory set at 1800 PSI, allowing enough flow to lift the heavy load. Be careful not to over-squeeze the load.



- Operator presses and maintains the **ROTATE**  **BUTTON** on the operator pendant, which turns the basket counter clockwise back to the load/unload position.



- Operator presses and maintains the **UNCLAMP**  **BUTTON** on the operator pendant to move clamping plate off of the load.



- Operator unloads the machine with a forklift. Operator backs away clear of the machine.

**The machine is back in the HOME POSITION, ready to receive the next load.**



**CAUTION:** Never leave loads semi-inverted. Always remove loads during long periods of inactivity (i.e. annual shutdown periods).

# MAINTENANCE

## ROUTINE MAINTENANCE

Cherry's has established the following series of maintenance activities that will help to keep Cherry's Pallet Inverter in good operating order. Refer to the maintenance illustration, next page.



**WARNING:** Follow Lockout/Tagout and mechanical lockout procedures as detailed in this manual before performing any maintenance on this machine. Furthermore, follow and comply with any company procedures in addition to those detailed in this manual. Failure to follow any of these Lockout/Tagout procedures while performing any maintenance on this machine could result in bodily injury or damage to the machine.

### WEEKLY

1. Sweep and clean in and around the machine.
2. Ensure the internal load area and approach to the machine is clear and free from debris.
3. Confirm that the emergency stop button is functioning correctly.
4. Check all electrical cables and conduits for signs of wear and abrasions.
5. Confirm that all limit or proximity switches are operating correctly.
6. Check that all gauges are working correctly.
7. Grease all points, with particular attention to the central shaft which must be kept running smoothly at all times

### EVERY 6 WEEKS

1. Check and tighten all bolts on the machine.
2. Lubricate and grease all fittings, paying particular attention to the clamp slides assembly and rack & pinion. Refer to the Machine Breakdown layout for locations.
3. Check all hydraulic hoses and fittings for signs of wear and abrasions.
4. Check all fluid levels and check filter gauge (when needle is in red replace filter).
5. Confirm that all internal mechanical slides and components are secure.



Maintenance intervals are recommended based on single shift usage. If usage changes contact Cherry's product support team for recommended maintenance schedules: **877.350.2748 or service@cherrysind.com.**

### EVERY SIX MONTHS

1. Change return filter.
2. Check the condition of the hydraulic oil. If replacement or additional hydraulic fluid is needed, use MEDALLION PLUS® AW32 hydraulic oil or equivalent. Some cold environment or food processing facilities may require ATF or food grade oil, please verify type of oil required. Oil level should be approximately two inches below the top of the tank, or at the top black line marker on the site / temperature gauge.

### EVERY TWELVE MONTHS

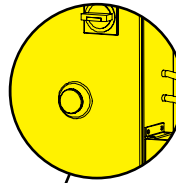
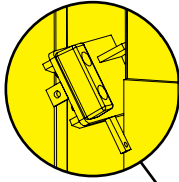
1. Change return filter and suction filter. Drain and replace the hydraulic oil, using MEDALLION PLUS® AW32 hydraulic oil or equivalent. Some cold environment or food processing facilities may require ATF or food grade oil, please verify type of oil required. Oil level should be approximately two inches below the top of the tank, or at the top black line marker on the site / temperature gauge.



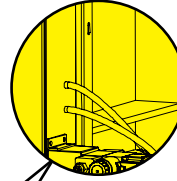
In the event of any malfunction, any visible or audible defect, or any other serious problem, immediately consult Cherry's product support team at **877.350.2748 or service@cherrysind.com.**



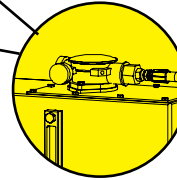
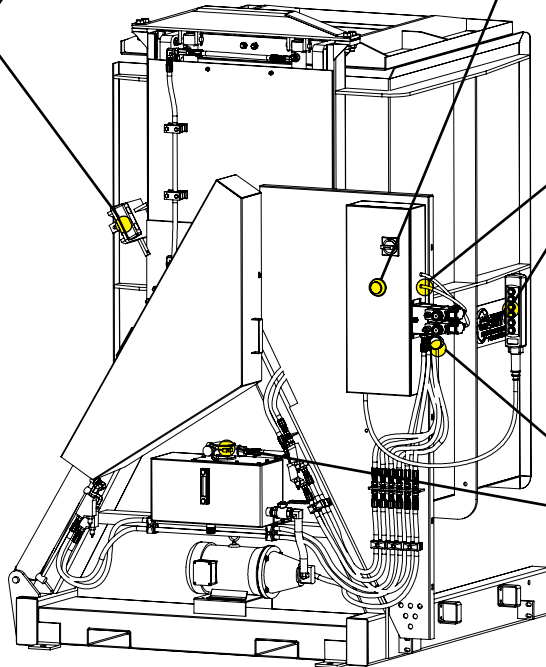
## MAINTENANCE INTERVALS



Confirm that the emergency stop button is functioning correctly. **(WEEKLY)**

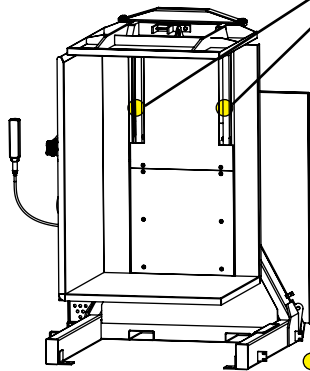


Check all electrical cables and conduits for signs of wear and abrasions. **(WEEKLY)**



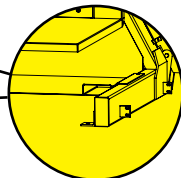
Check return filter cap for tightness and oil level on gauge. Check that all gauges are working correctly. **(WEEKLY)**

Front View

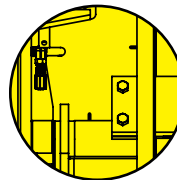


Check for metal shaving around clamp slide assembly. **(WEEKLY)**

Check clamp tables slide rollers. **(WEEKLY)**

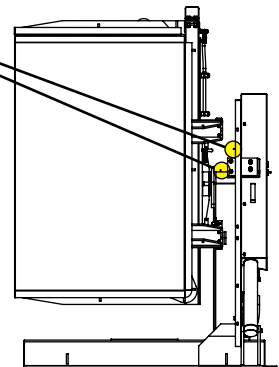


Sweep and clean in and around the machine. Ensure the internal load area and approach to the machine is clear and free from debris. **(DAILY)**



Grease all points, with particular attention to the central shaft which must be kept running smoothly at all times. **(WEEKLY)**

Right View

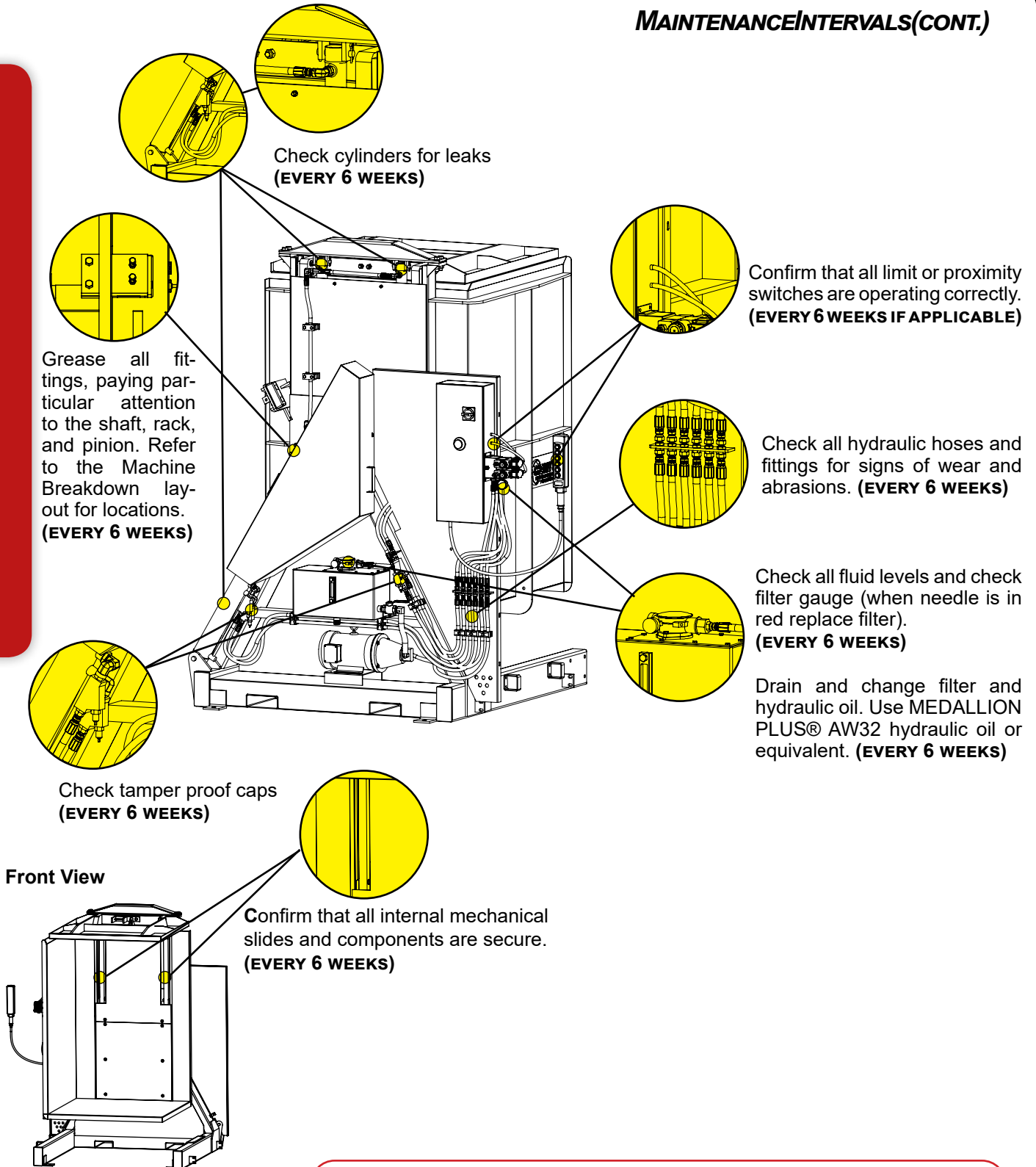


### WARNING

Check and tighten or replace all missing bolts.

In the event of any malfunction, visible or audible defect, or other serious problem, consult the manufacturer or their representative immediately.

## MAINTENANCE INTERVALS (CONT.)

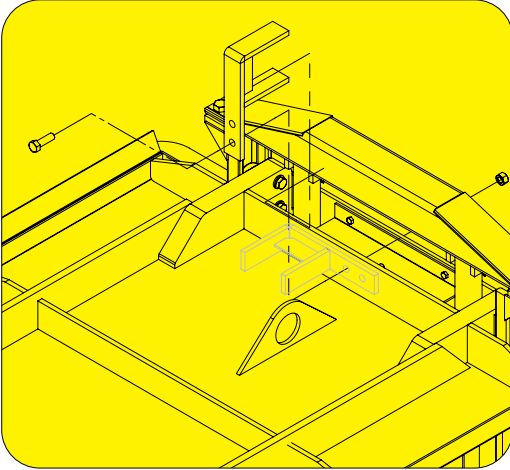


It is strongly recommended to follow the PM schedule as detailed above. Lack of routine maintenance will cause mechanical failure and may void manufacturer warranty.

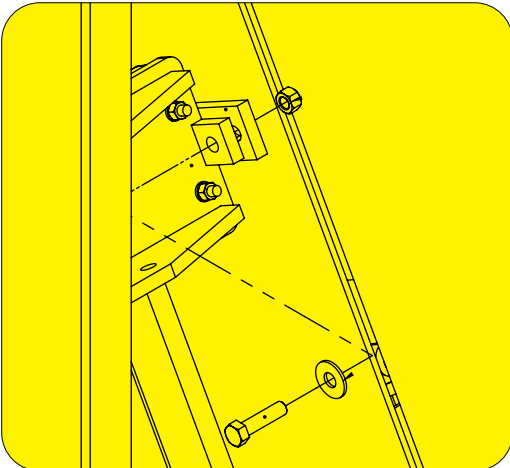


**MAINTENANCE LOCKOUT PROCEDURES**

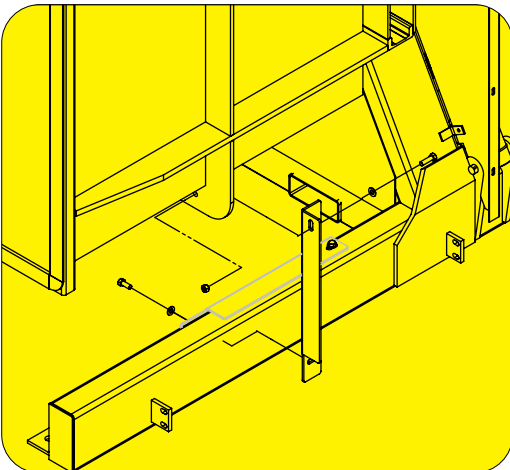
The Inverter was designed to accommodate three maintenance lockout positions.



**A. Clamp lockout.** Put the basket with clamping plate in a horizontal position (90°). Remove lock bar and rotate 90°. Rebolt to header tube using bolt and nut.



**B. Invert or Rotate lockout.** Rotate basket to 180°. Take bolt from storage location and secure in lockout location. Reverse process when work is complete, replacing bolt in storage hole for future use.



**C. Basket lockout.** Place basket in horizontal position. Remove lock bar. While under the basket, bolt lock bar to basket. Reverse process when complete.



**CAUTION:** be sure machine is not operated while technician is under the basket.

# TROUBLESHOOTING

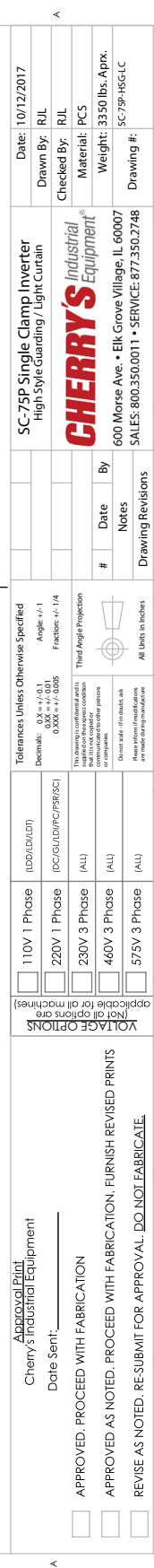
Fault	Possible Cause
Motor will not start.	<ul style="list-style-type: none"> <li>Check that all emergency stops are released, check that main motor isolator is in "on" position, and check input power supply. (See relevant Lockout/Tagout Procedures)</li> </ul>
Motor runs but machine fails to operate.	<ul style="list-style-type: none"> <li>Check that maintenance lockout bolt has been removed. (See Maintenance Lockout Procedures)</li> <li>Check the motor rotation as labeled on motor. (See Tank/Motor/Pump Assembly)</li> <li>Confirm correct system pressure settings (2,200 PSI)</li> </ul>
Motor runs and machine will clamp/unclamp, but will not turn in one/both directions.	<ul style="list-style-type: none"> <li>Check the rotate and invert flow control valves have not been adjusted and the tamper caps still remain intact. (See Hose and Flow Control Assembly)</li> </ul>
Motor runs machine will turn, but not clamp/unclamp or both.	<ul style="list-style-type: none"> <li>Check that the clamp and unclamp flow control valves have not been adjusted and that the tamper caps still remain intact. (See Hose and Flow Control Assembly)</li> </ul>
Motor runs and machine inverts but clamps slowly if load is placed on moving table.	<ul style="list-style-type: none"> <li>Confirm clamp pressure on gauge. (Minimum 600 PSI, Maximum 2,000 PSI)</li> </ul>
Excessive noise from hydraulic pump.	<ul style="list-style-type: none"> <li>Check the motor rotation as labeled on motor and hydraulic oil levels. (See Tank/Motor/Pump Assembly)</li> </ul>
Excessive noise when turning.	<ul style="list-style-type: none"> <li>Check turning basket assembly for obstructions.</li> <li>Check level of lubrication/grease on rack, pinion, and bushings. Inspect for broken welds or visible cracks.</li> <li>Check tension on ACM wear plate.</li> </ul> <p>(See Turnover Cylinder Assembly)</p>
Excessive noise from clamp assembly.	<ul style="list-style-type: none"> <li>Check for excessive wear on rollers (See Clamp Cylinder Assembly)</li> </ul>
Loss of hydraulic oil.	<ul style="list-style-type: none"> <li>Check machine for leaks.</li> </ul>
Fall in hydraulic pressure after any complete movement.	<ul style="list-style-type: none"> <li>Check for worn hydraulic pump. (See Tank/Motor/Pump Assembly)</li> </ul>



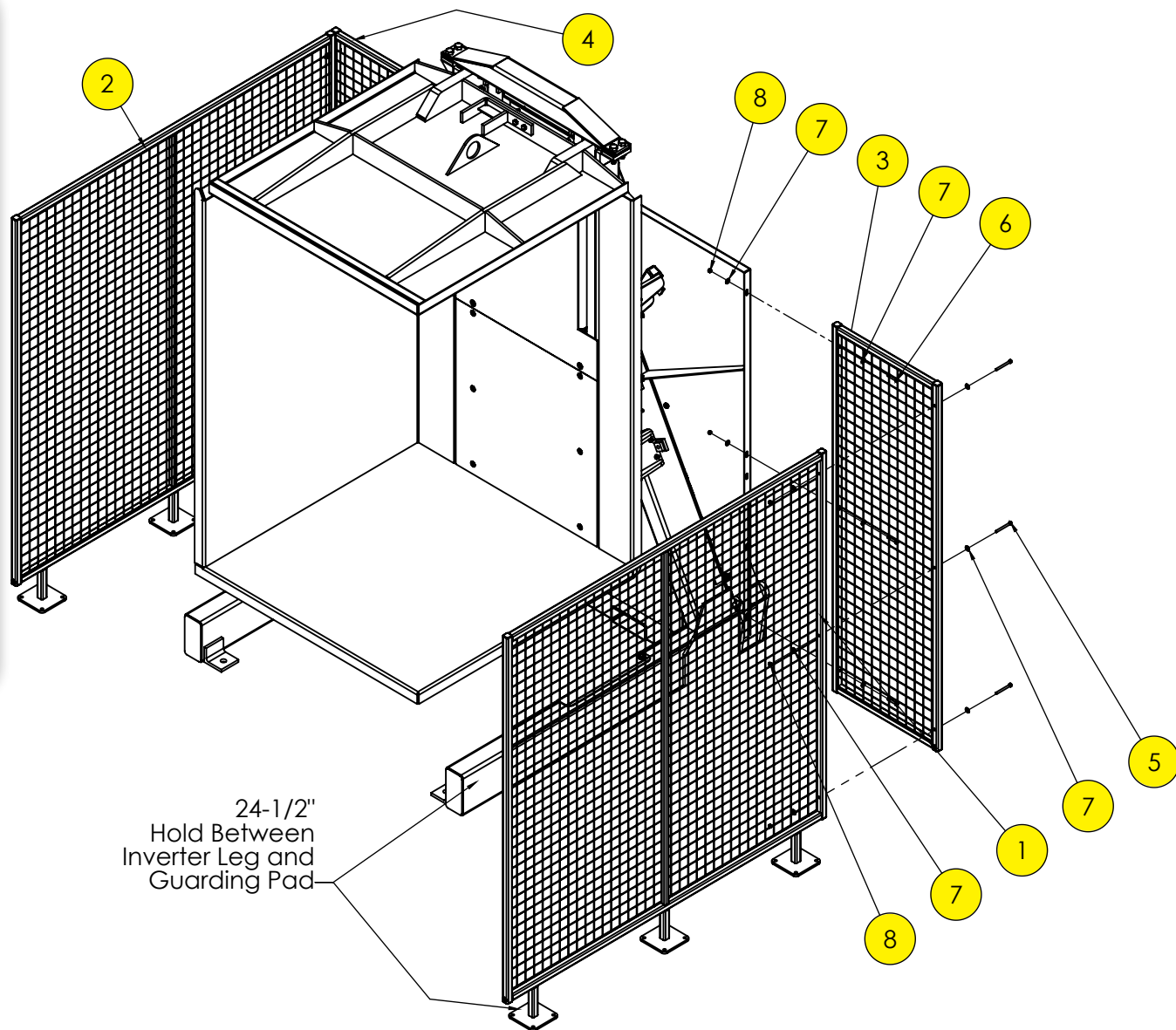
This troubleshooting guide addresses the most common machine faults and does not encompass all possible faults.

In the event that these recommendations do not rectify the fault please consult the factory immediately at **877.350.2748** or **service@cherrysind.com**.

# Layout<sup>8</sup>

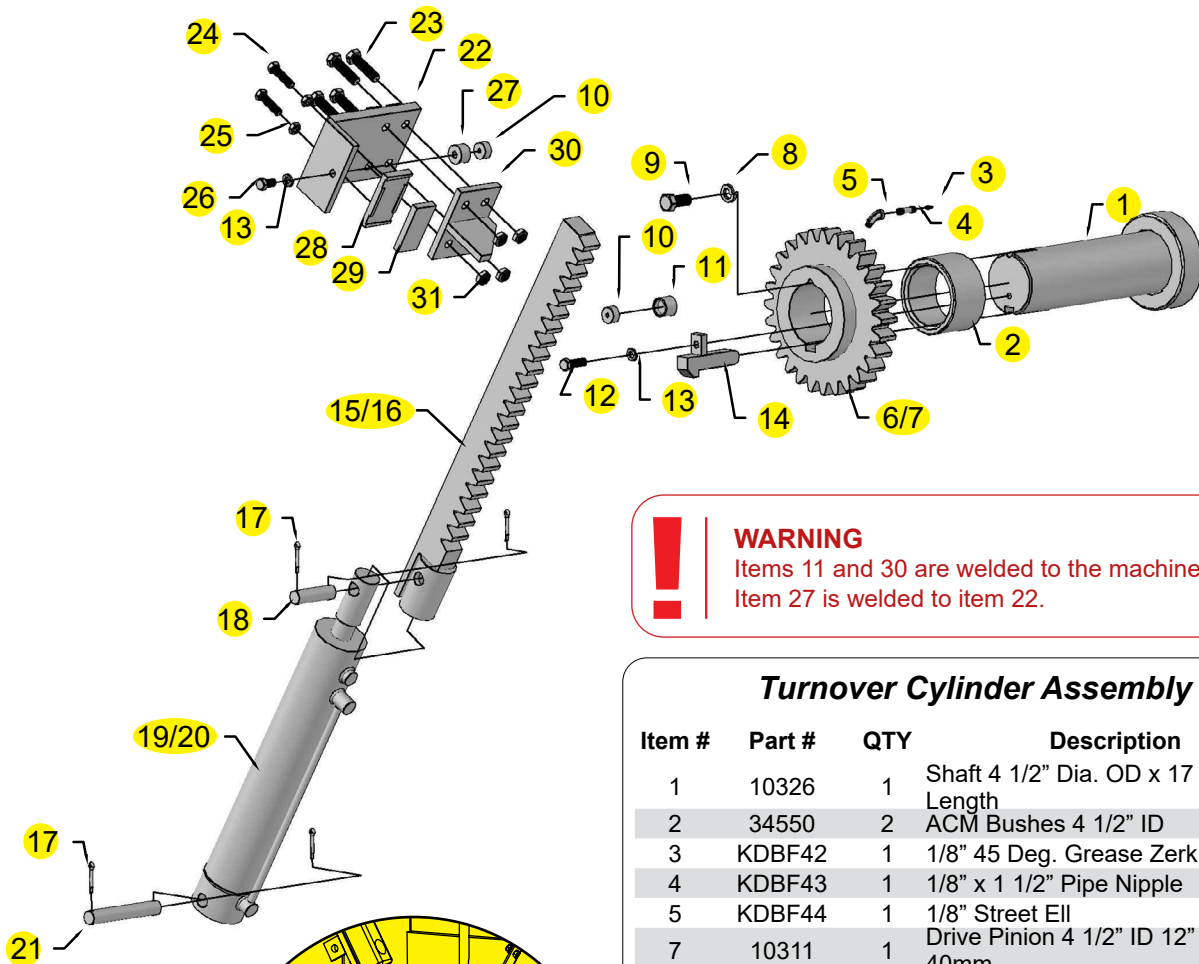


# PARTS LIST



## High Style Guarding

Item #	Part #	QTY	Description
1	SC-HSG01a-R1	1	SC Side Right Guard
2	SC-HSG02a-R1	1	SC Side Left Guard
3	SC75-HSG01a-R1	1	SC63-SC75 Back Right Guard
4	SC75-HSG02a-R1	1	SC63-SC75 Back Left Guard
5		6	5/16" x 3-1/4" Bolt
6		6	5/16" x 2" Bolt
7		24	5/16" Flat Washer
8		12	5/16" Lock Nut

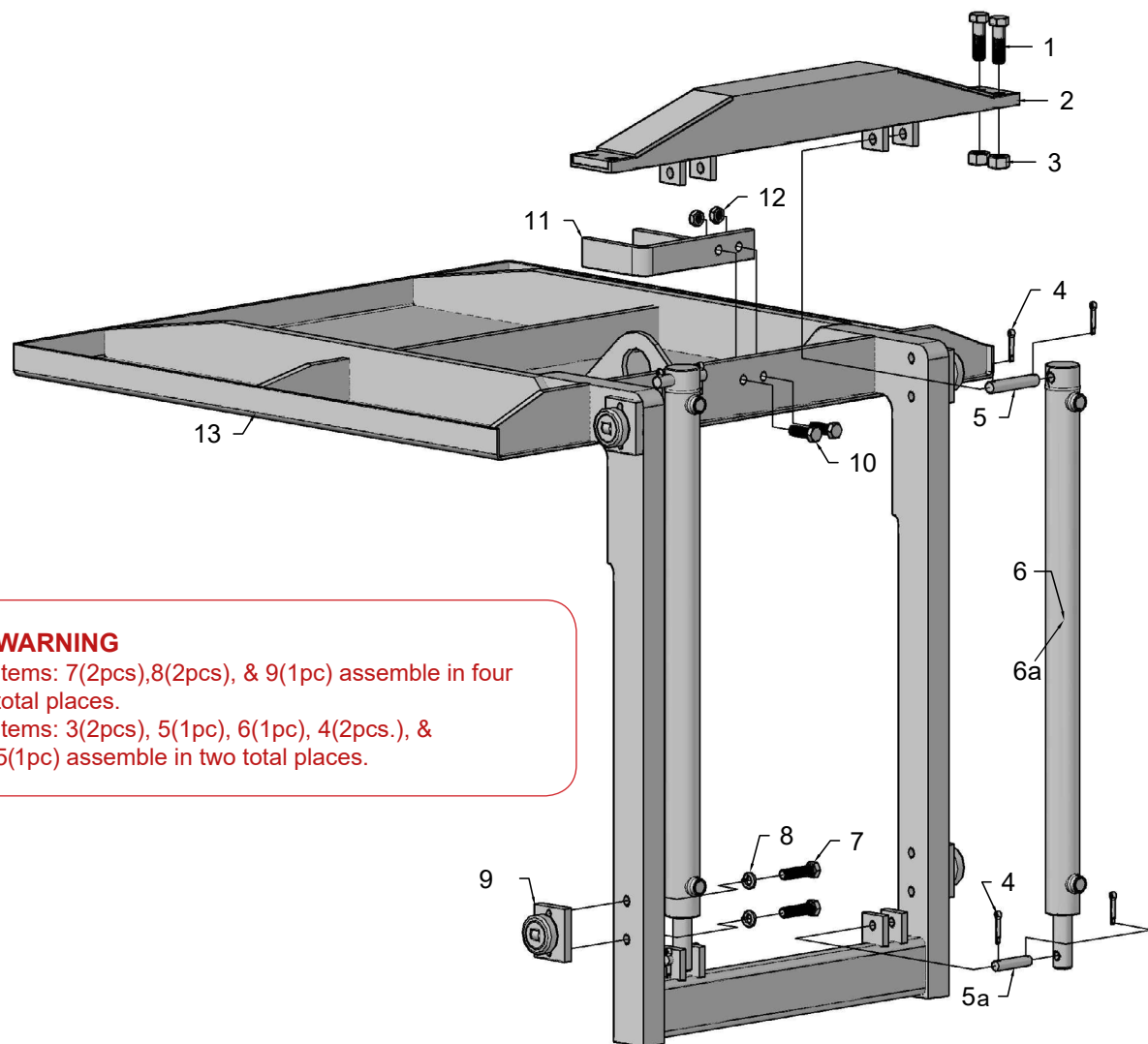


## WARNING

Items 11 and 30 are welded to the machine frame.  
Item 27 is welded to item 22.

## Turnover Cylinder Assembly

Item #	Part #	QTY	Description
1	10326	1	Shaft 4 1/2" Dia. OD x 17 1/2" Length
2	34550	2	ACM Bushes 4 1/2" ID
3	KDBF42	1	1/8" 45 Deg. Grease Zerk
4	KDBF43	1	1/8" x 1 1/2" Pipe Nipple
5	KDBF44	1	1/8" Street Ell
6/7	10311	1	Drive Pinion 4 1/2" ID 12" OD x 40mm
8	KDBW22	1	3/4" Lock Washer
9	KDBW21	1	3/4" x 2" Grade 8 Bolt
10	10325-4	2	Round Wear Pad
11	KDBF23	1	Round Wear Pad Mount
12	KDBW23	1	1/2" x 1 3/4" Grade 5 Bolt
13	KDBW24	2	1/2" Lock Washer
14	10360	1	Drive Key
15	10320	1	Short Rack 40mm thick x 34" Long
17	10265	2	Cotter Pins 1/4" x 1 1/2"
18	10390	1	Retaining Pin 1" dia x 3-3/8"
19	10314/G	1	3 1/2" bore x 18" stroke turnover cylinder
20	10314/G-SK	1	3 1/2" Bore Seal Kit
21	10389	1	Retaining Pin 1" dia x 6-1/2"
22	10320/1	1	Rack Guide Assembly
23	KDBF54	4	5/8" x 2 1/4" Bolt
24	KDBF49	2	1/2" x 2" Tap Bolt
25	KDBF52	2	1/2" Jam Nut
26	KDBF48	1	1/2" x 1" Bolt
27	KDBF22	1	Round Wear Plate Mount
28	10325/1	1	Wear Pad Holder
29	10325/2	1	ACM Side Wear Pad
30	KDBF28	1	Rack Guide Mount
31	10255	4	5/8" Lock Nut



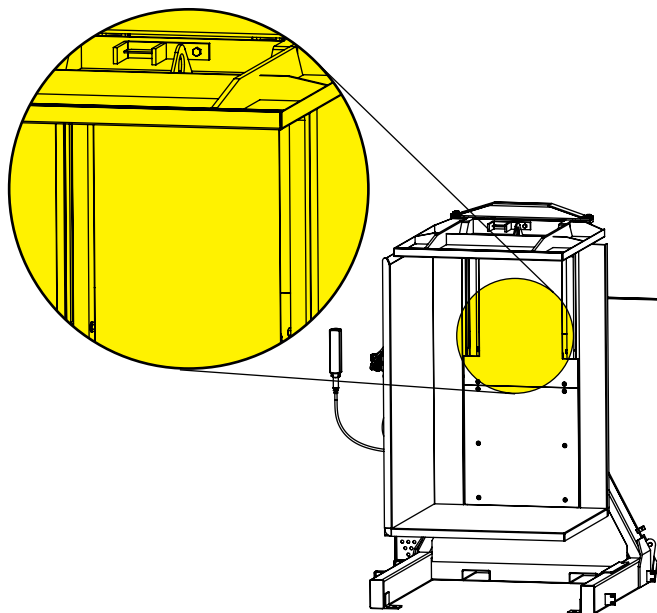
## WARNING

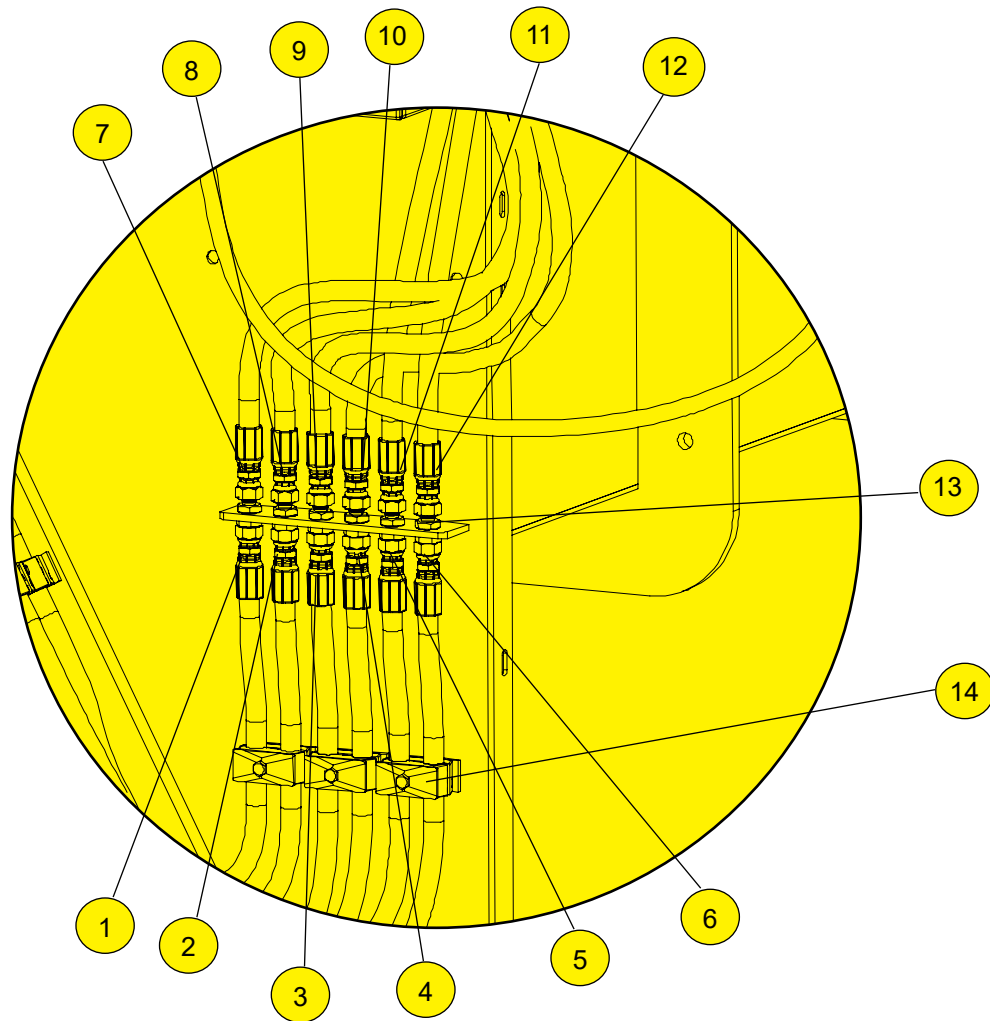
Items: 7(2pcs), 8(2pcs), & 9(1pc) assemble in four total places.

Items: 3(2pcs), 5(1pc), 6(1pc), 4(2pcs.), & 5(1pc) assemble in two total places.

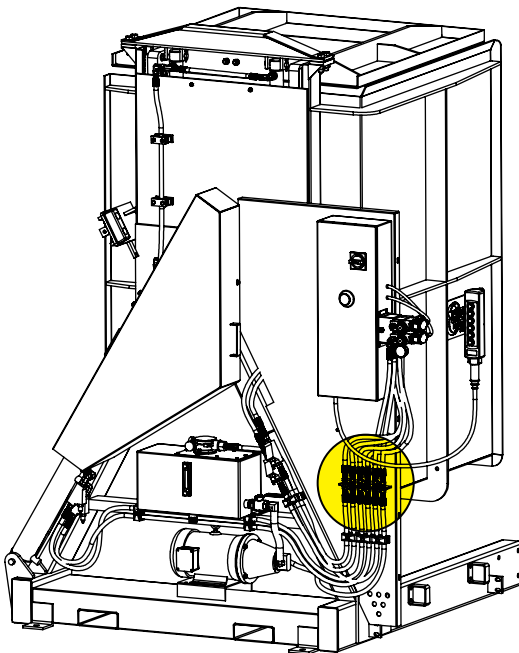
## Clamp Cylinder Assembly

Item #	Part #	QTY	Description
1	10380	4	3/4" x 2 3/4" Grade 8 Bolt
2	10260	1	Header Tube Assembly
3	10262	4	3/4" Lock Nut
4	10265	4	Cotter Pins 1/4" x 1 1/2"
5	10240	2	Retaining Pin 3/4" dia. x 4-3/8" L
5a	10230	2	Retaining Pin 5/8" dia. x 3-1/4" L
6	10224/G	2	2" bore x 33" Stroke Clamp Cylinder
6a	10224/G-SK	2	2" Bore Seal Kit
7	10232	8	M16-2.0 x 70mm Tap Bolt
8	10235	8	M16 Lock Washer
9	104610	4	70 mm Faro Bearing w/Mounting Plate
10	10245	2	5/8" x 2" Bolt
11	10248	1	Clamp maintenance bar
12	10255	2	5/8" Lock Nut
13	10210	1	Clamping Plate (50" x 50" tables)





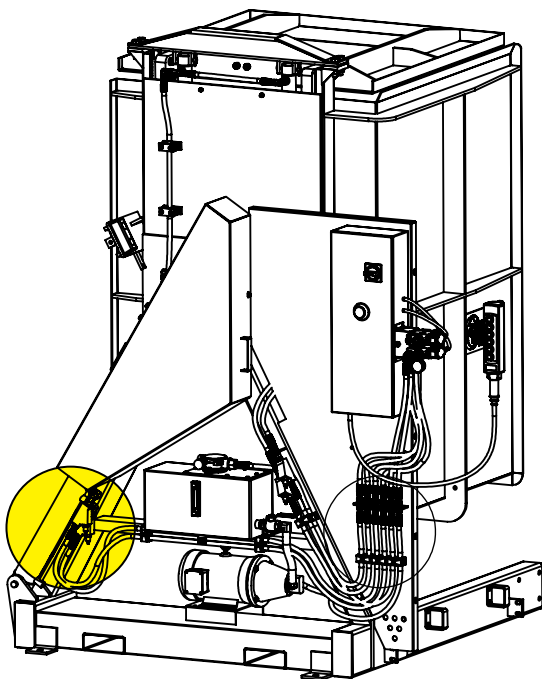
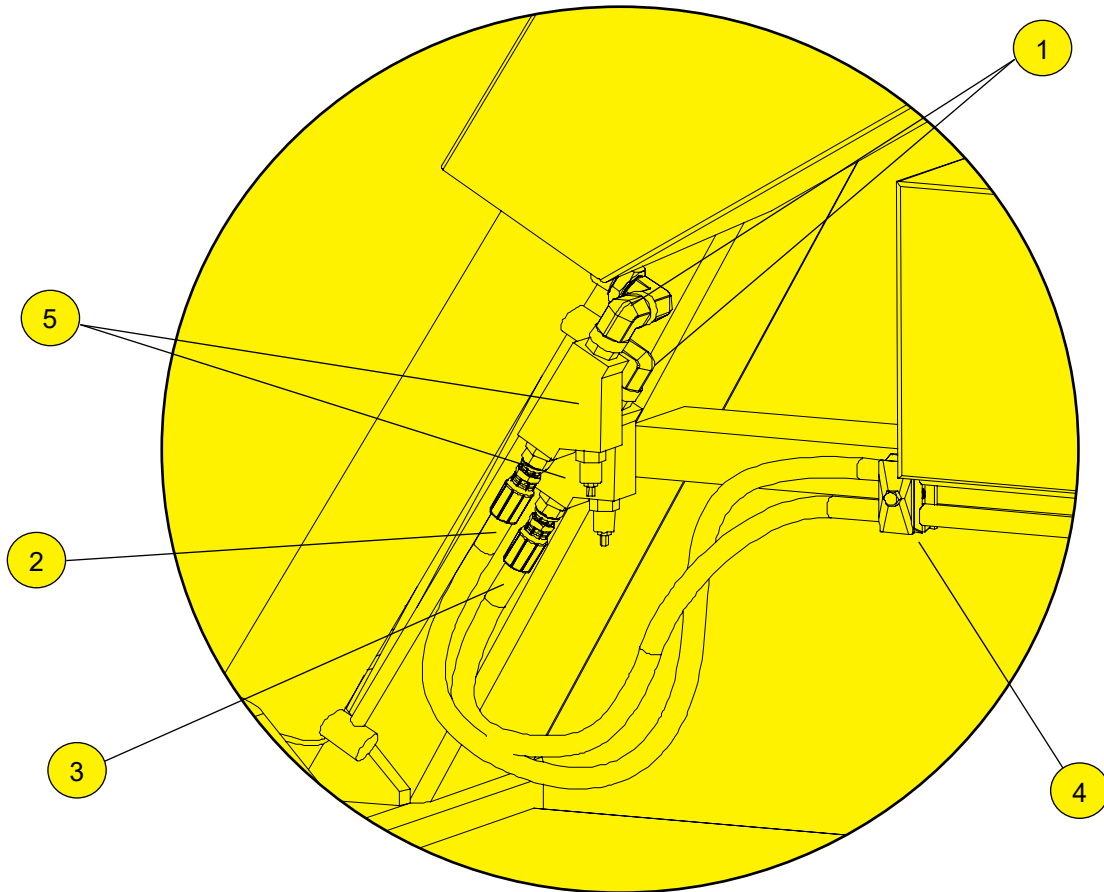
Please provide lengths when requesting replacement hoses.



## Hose and Flow Control Assembly

Item #	Part #	QTY	Description
1	B3-387-XX-S-S	1	Unclamp hose (flow control - bulk head)
2	A3-387-XX-S-S	1	Clamp hose (flow control - bulk head)
3	F1-387-XX-S-S	1	Rotate hose (flow control - bulkhead)
4	E1-387-XX-S-S	1	Invert hose (flow control - bulkhead)
5	C1-387-XX-S-S90	1	Tank hose (connector - bulkhead)
6	D1-387-XX-S-S90	1	Pump hose (connector - bulkhead)
7	B4-M-387-XX-S-S90	1	Unclamp hose (Bulkhead - manifold)
8	A4-M-387-XX-S-S90	1	Clamp hose (Bulkhead - manifold)
9	F2-M-387-XX-S-S	1	Rotate hose (Bulkhead - manifold)
10	E2-M-387-XX-S-S	1	Invert hose (Bulkhead - manifold)
11	C2-M-387-XX-S-S90	1	Tank hose (Bulk head - manifold)
12	D2-M-387-XX-S-S90	1	Pump hose (Bulk head - manifold)
13	0353-8-8-P	6	Bulk Head (Bulk Head adapter)
14	T-2006HC	3	Double Hose Cushion

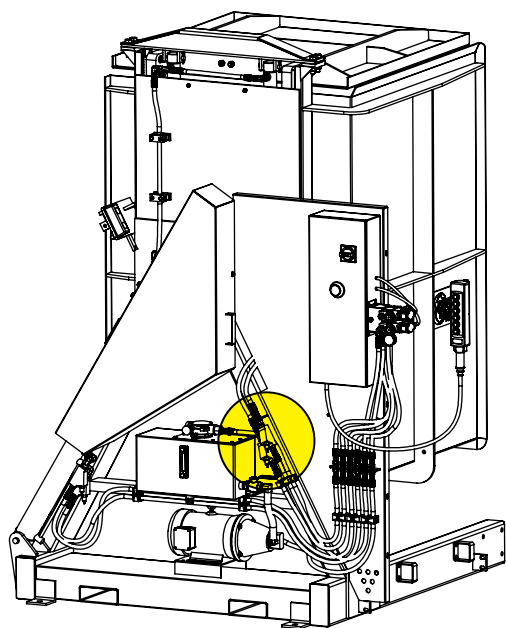
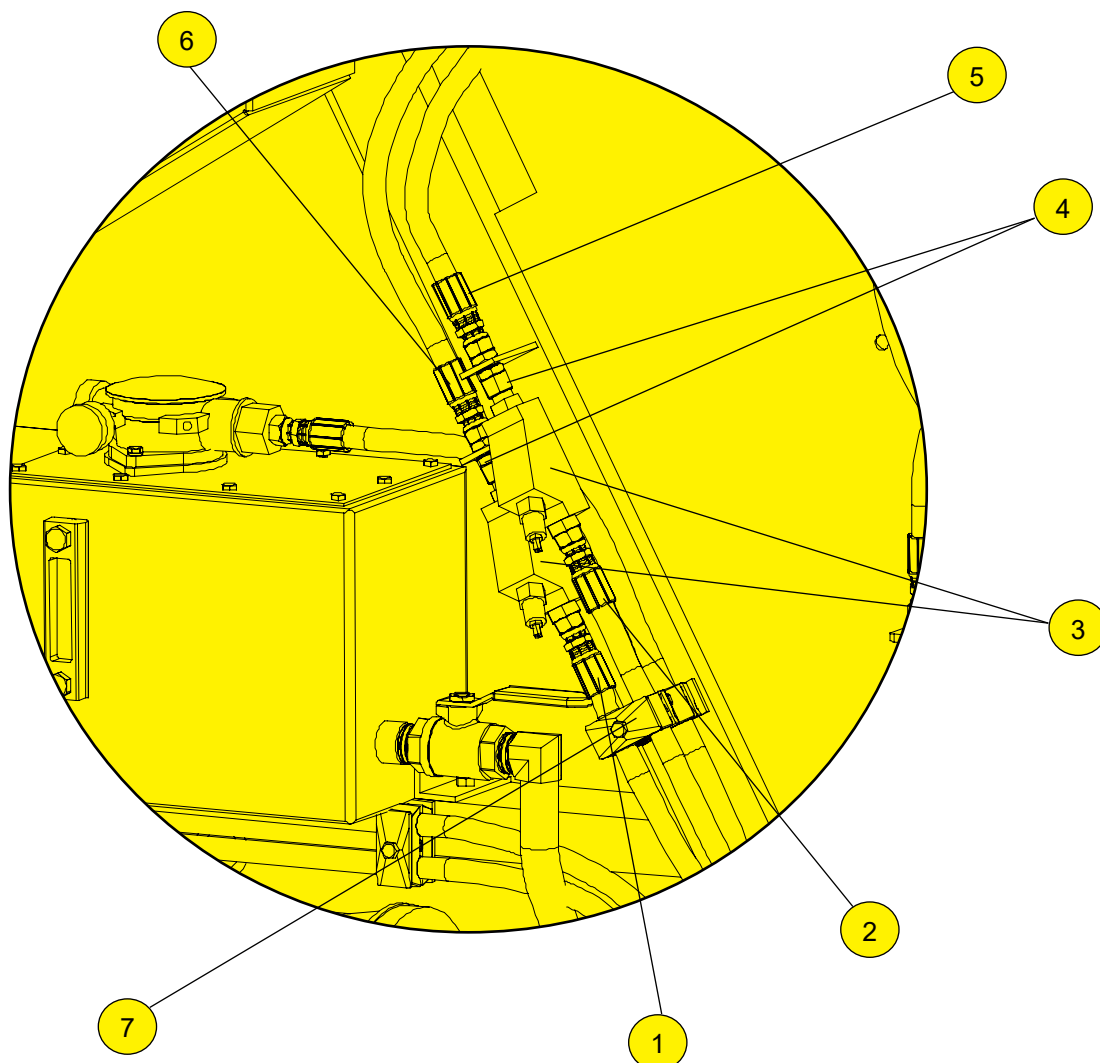




Please provide lengths when requesting replacement hoses.

## Hose and Flow Control Assembly

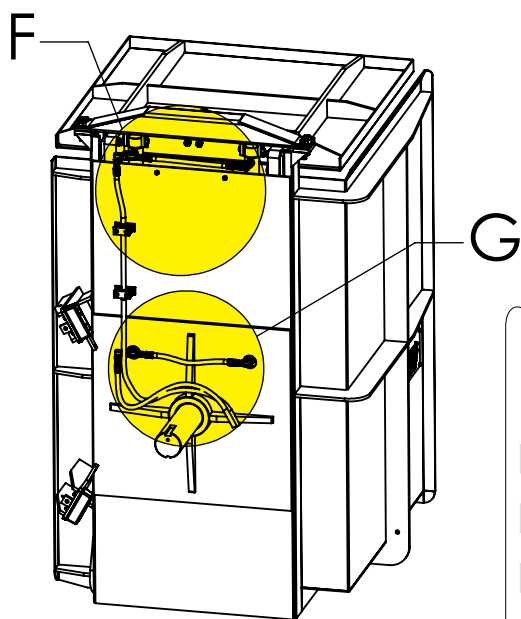
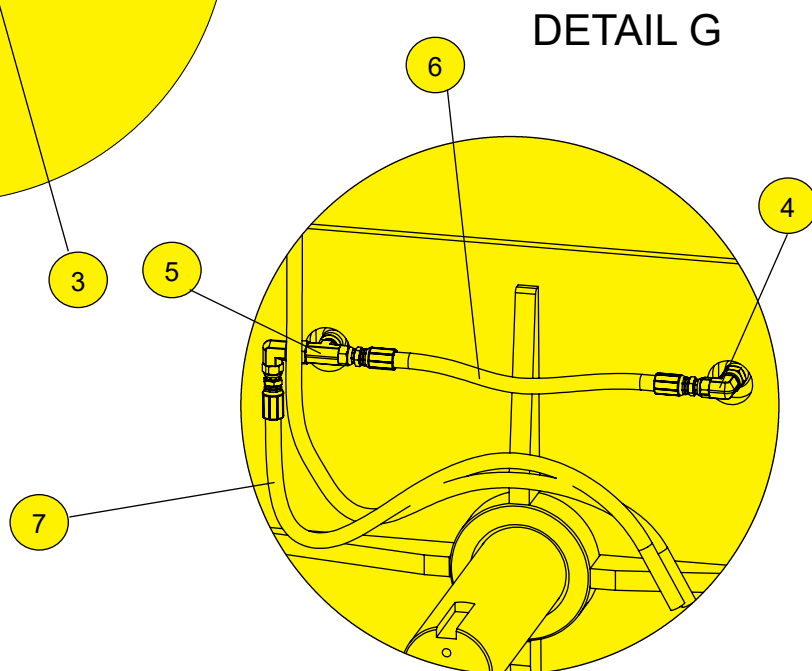
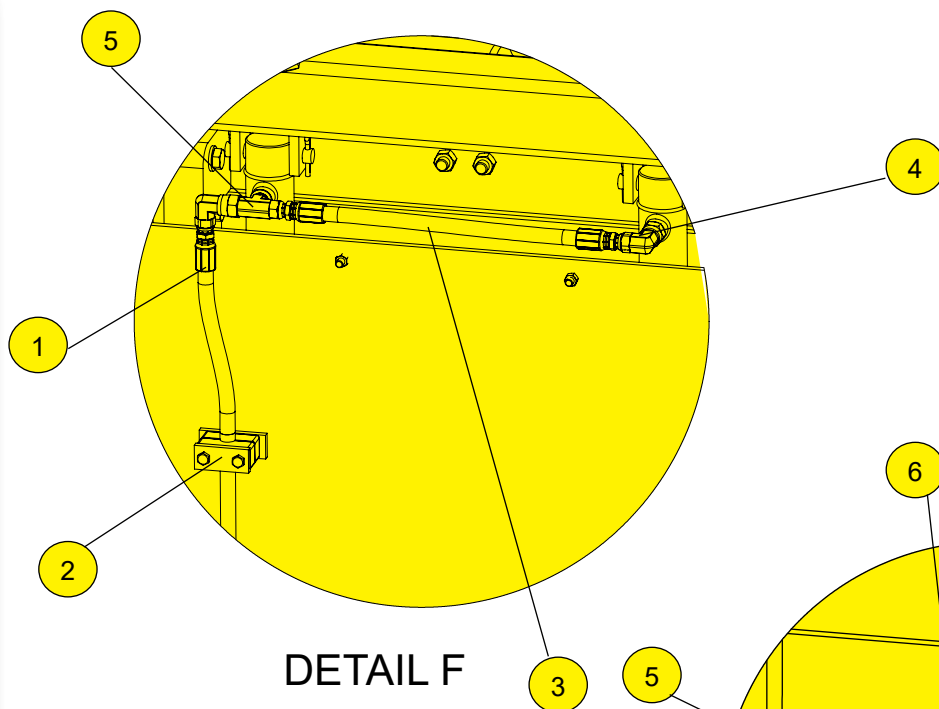
Item #	Part #	QTY	Description
1	2503-8-8	3	90° M-F adapter
2	F1-387-XX-S-S	1	Pump hose (Flow control - bulkhead)
3	E1-387-XX-S-S	1	Tank hose (Connector - bulkhead)
4	T-2006HC	3	Double Hose Cushion
5	SA80280	2	Flow Control



Please provide lengths when requesting replacement hoses.

## Hose and Flow Control Assembly

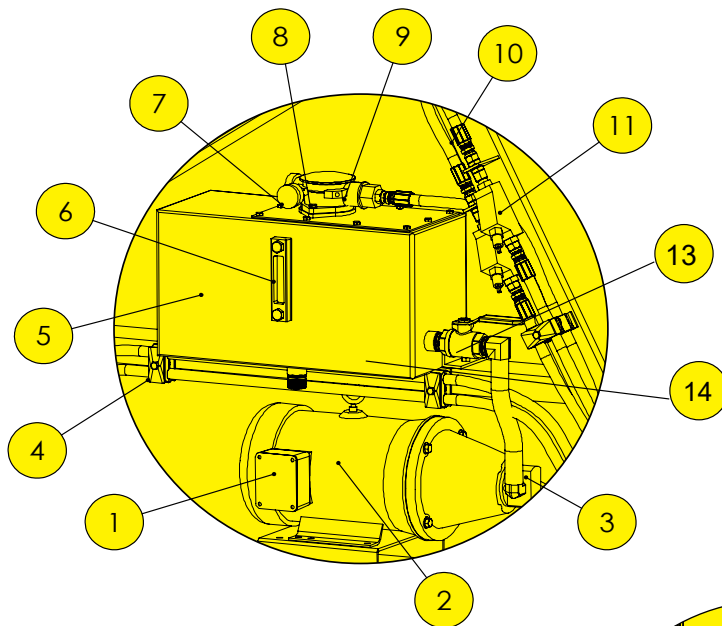
Item #	Part #	QTY	Description
1	A3-387-XX-S-S	1	Clamp hose (flow control - bulk head)
2	B3-387-XX-S-S	1	Unclamp hose (flow control - bulk head)
3	SA80280	2	Flow Control
4	0353-8-8-P	2	Bulk Head (Bulk Head adapter)
5	B2-387-XX-S-S90	1	Unclamp hose (Connector - flow control)
6	A2-387-XX-S-S90	1	Clamp hose (Connector - flow control)
7	T-2006HC	1	Double Hose Cushion



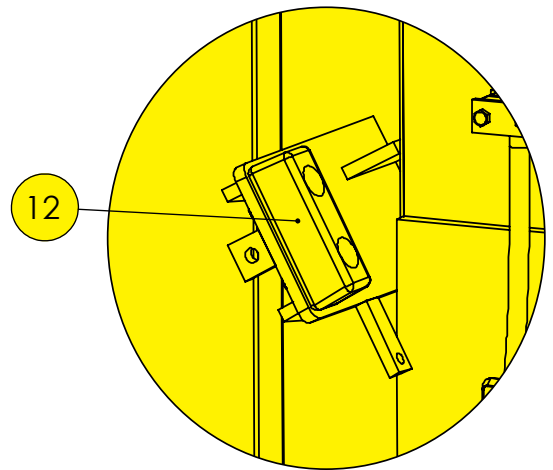
**!** Please provide lengths when requesting replacement hoses.

## Hose and Flow Control Assembly Cont'd

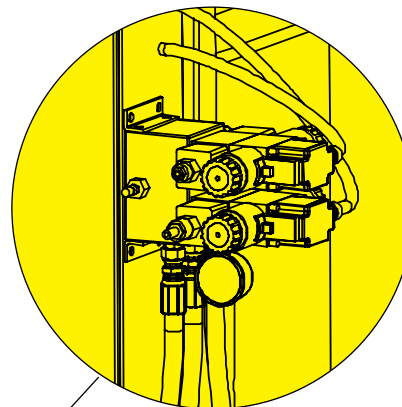
Item #	Part #	QTY	Description
1	A2-387-XX-S-S90	1	Clamp hose (Connector - flow control)
2	S-2006HC	1	Single Hose Cushion
3	A1-387-XX-S-S90	1	Clamp hose (Connector - flow control)
4	0503-8-8	2	M-M adapter
5	39T-8-8P	2	F-M-M "Tee" Adapter
6	B1-387-XX-S-S90	1	Unclamp hose (Cylinder-Connector)
7	B2-387-XX-S-S90	1	Unclamp hose (Connecor - flow control)



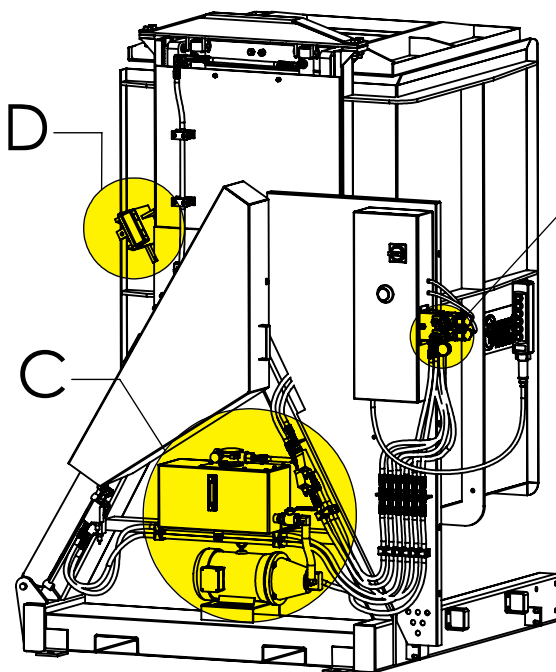
DETAIL C



DETAIL D



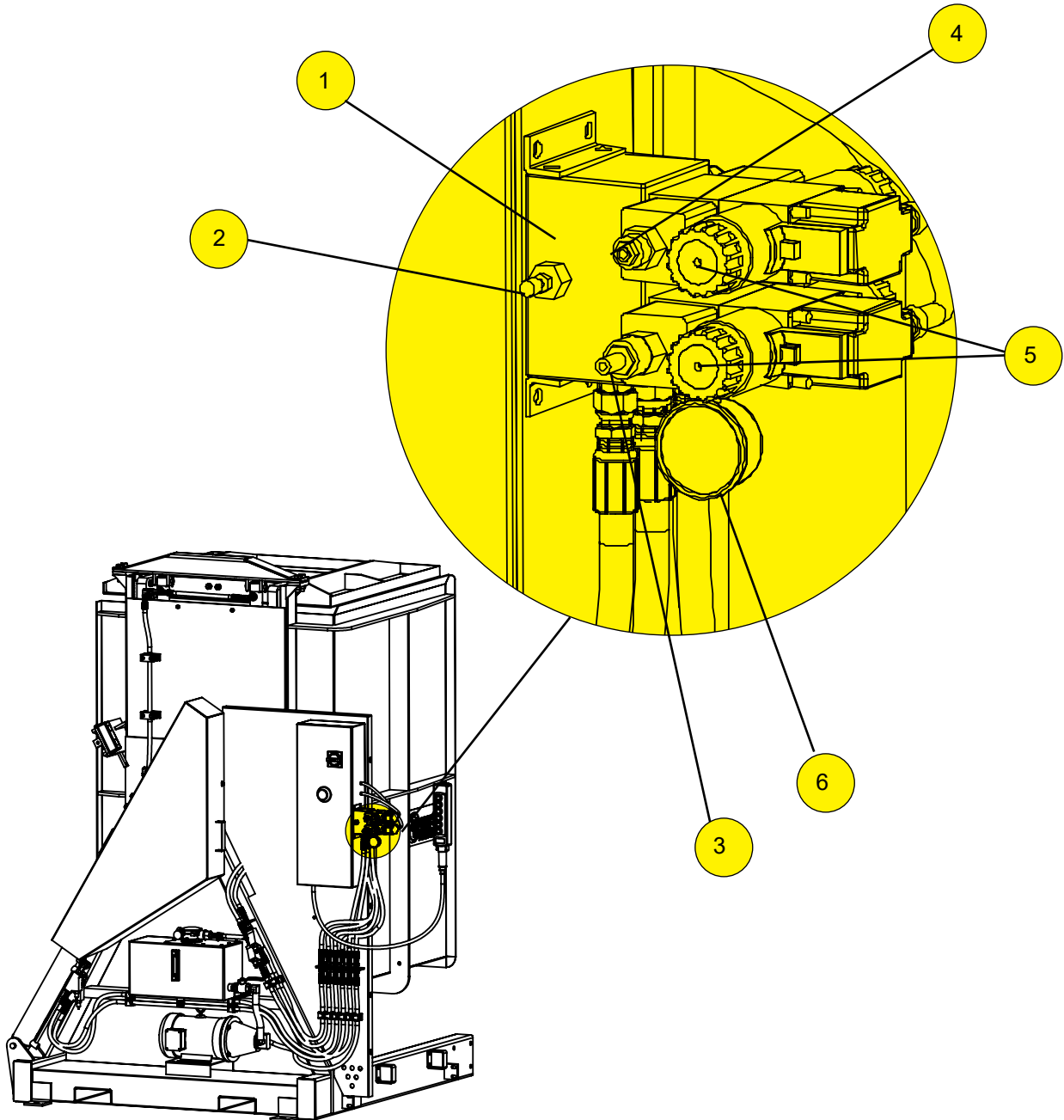
DETAIL B



## Tank - Motor - Pump Assembly

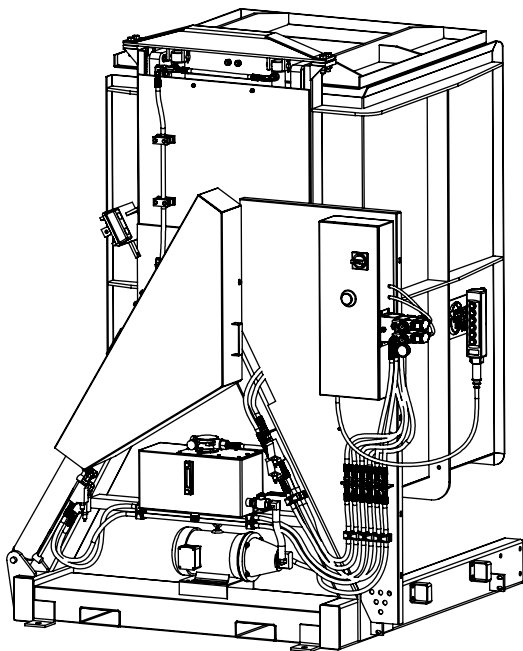
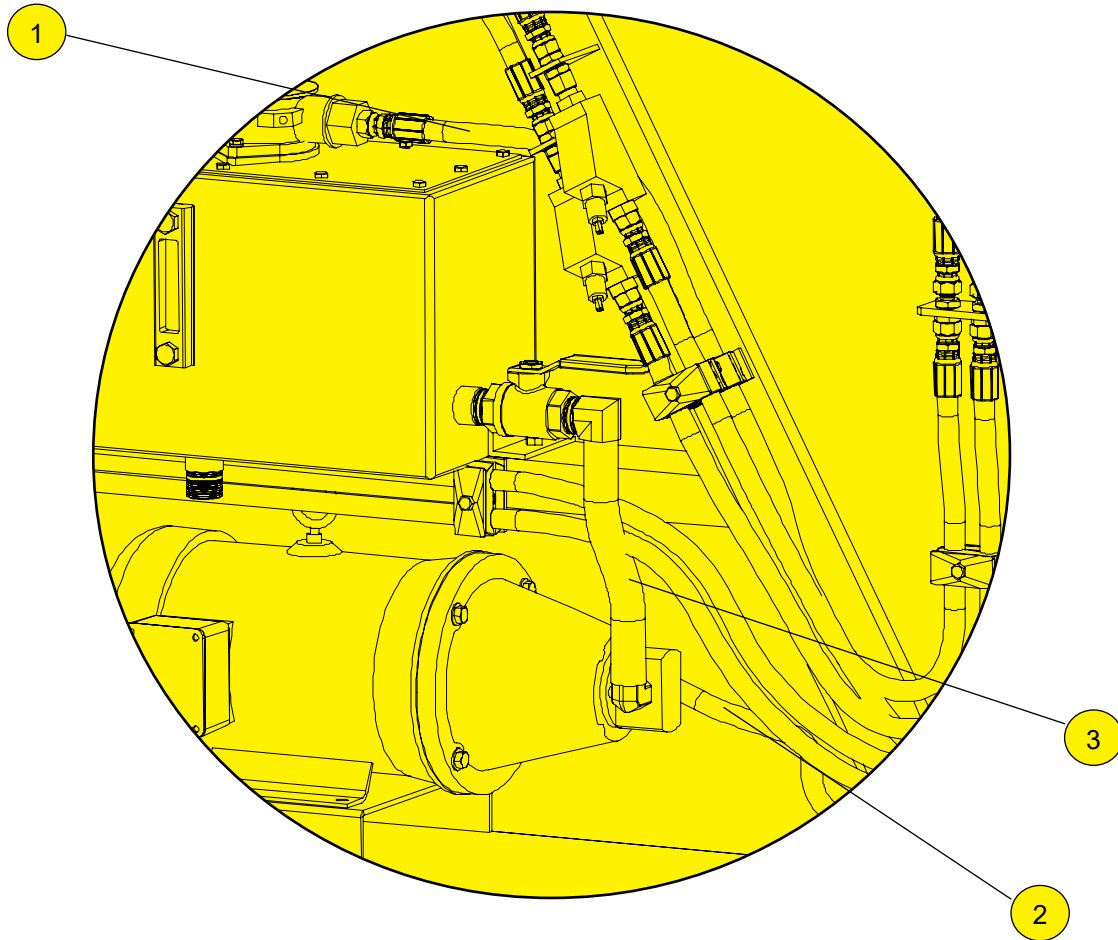
Item #	Part #	QTY	Description
1	J11022	1	Pump/Motor Assembly
2	00518ET3E184TC-W22	1	5HP Electric Motor
3	AZPF-12-008RQR12MB	1	3.7 GPM hydraulic pump
4	T-2006HC	4	Double Hose Cushion
5	J1571	1	Oil Tank and Filter
6	11360	1	Sight Glass
7	GAGE-DRY1.5-G/Y	1	Filter System Gauge
8	CHE0075H-D	1	Filter Housing with filter
9	CHE0075-D	1	Return filter
10	10643-8-6	5	Straight Crimp Connector
11	SA80280	2	Flow Control
12	10563	2	Rubber Buffer
13	A-116-12.75	1	Shut off valve
14	52015	1	Suction strainer Filter

## DETAIL B



### Manifold Assembly

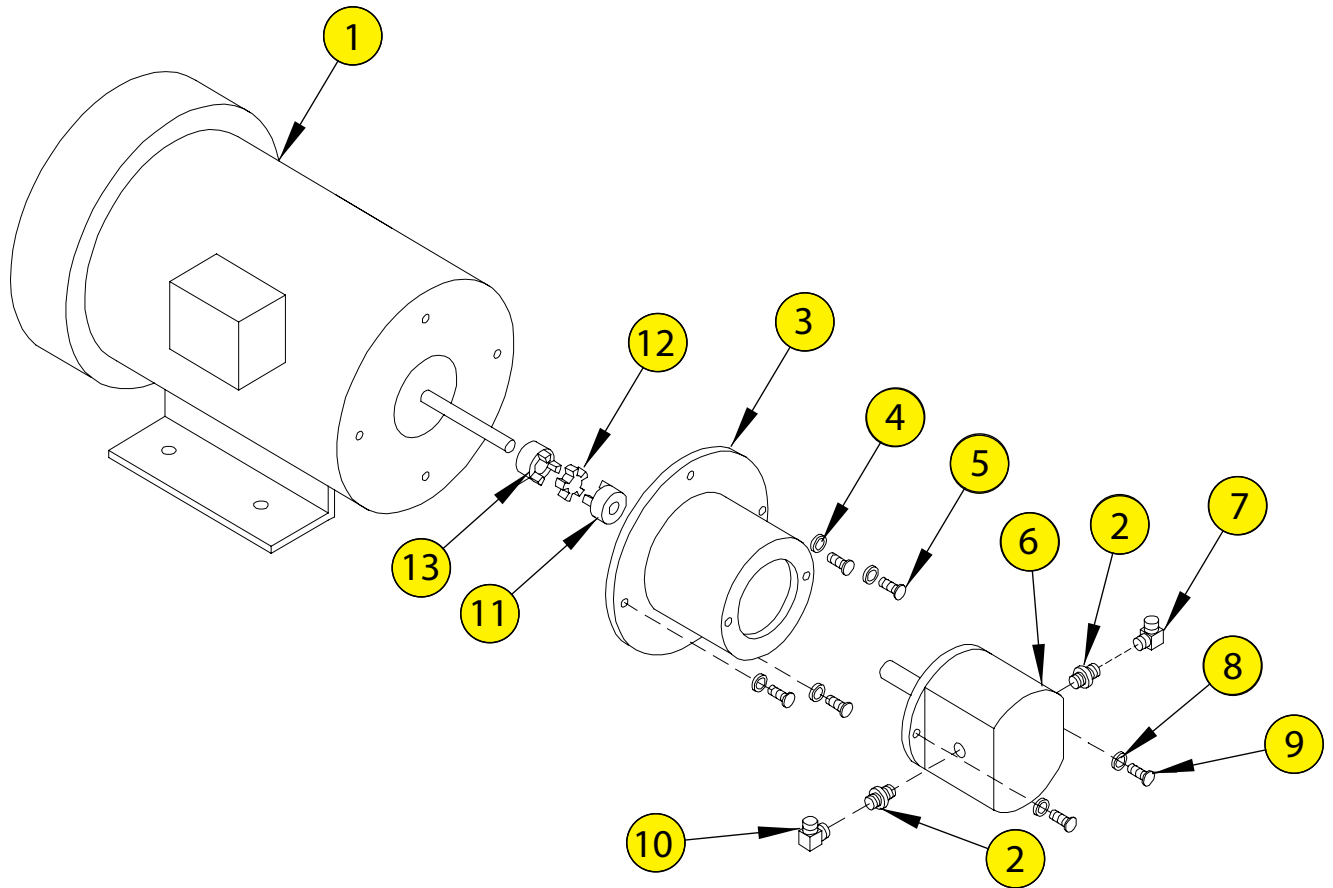
Item #	Part #	QTY	Description
1	A-D03-S02-2S/S	1	Two station manifold
2	RPEC-FAN	1	Relief valve
3	PBDB-LAN-EBA	1	Pressure reducing valve
4	CBCA-LAN-EBY	2	Counter balance valve
5	4WE6G6X/EG24N9DA/62	2	Directional valve
6	WX05065	1	Pressure gauge



Please provide lengths when requesting replacement hoses.

## Hose and Flow Control Assembly

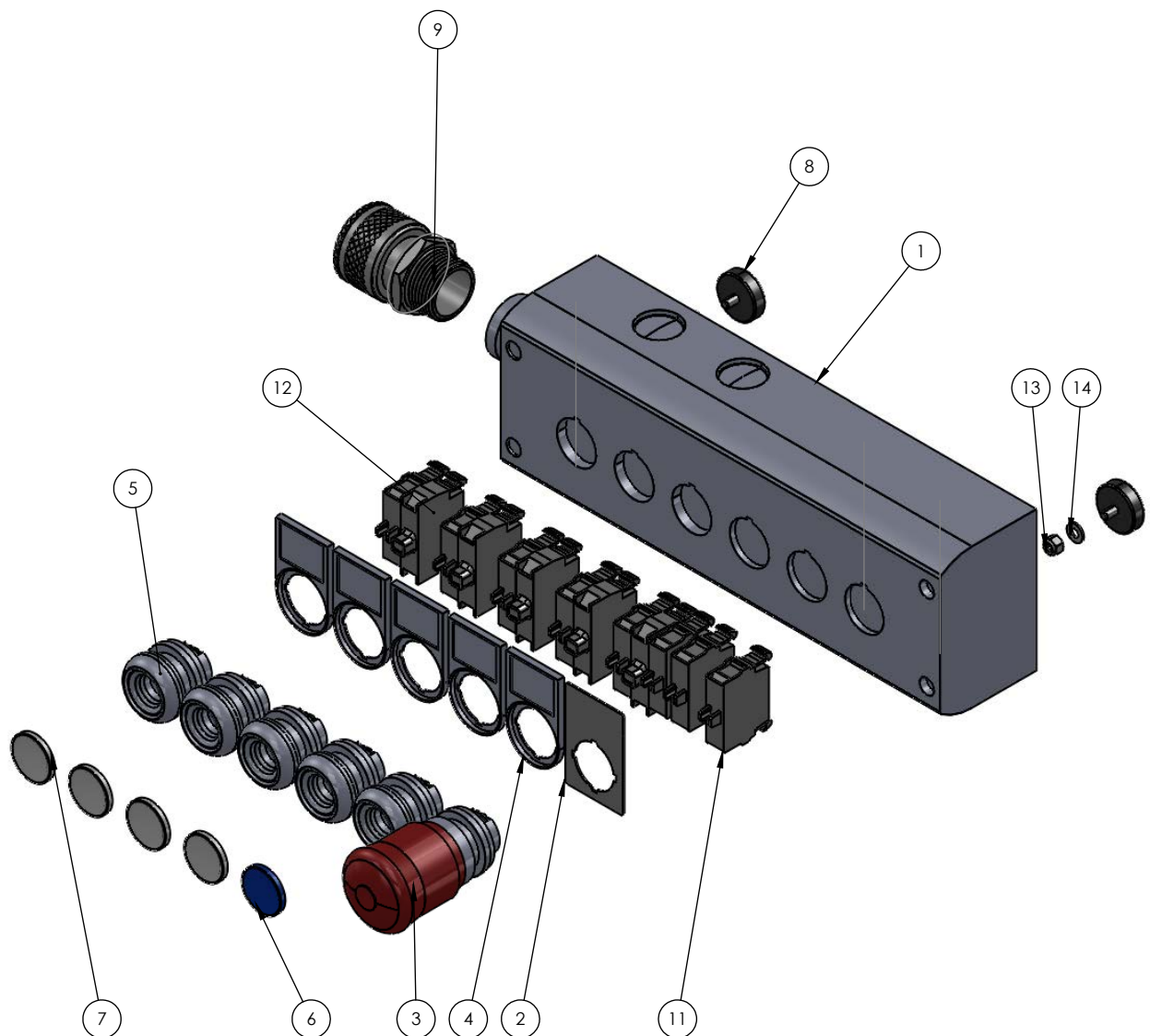
Item #	Part #	QTY	Description
1	C1-387-XX-S-S90	1	Tank hose (Connector - bulkhead)
2	D1-387-XX-S-S90	1	Pump hose (Connector - bulkhead)
3		1	Suction tube



## Pump Motor Assembly

Item #	Part #	QTY	Description
1	00518ET3E184TC-W22	1	5HP Electric Motor
2	6400-8-10	2	Adapter
3	1960	1	Adapter
4	KDBW24	1	1/2" Lock Washer
5		1	1/2"-13 x 1" HHB Bolt
6	AZPF-12-008RQR12MB	1	3.7 GPM Hydraulic Pump
7	6500-8	1	Adapter
8		1	3/8" Lock Washer
9		1	3/8"-16 x 1" HHB Bolt
10	4601-12	1	Adapter
11	LO95 5/8 x 5/32	1	LO95 5/8" x 5/32" Coupling
12	11070	1	LO95 SOX Spider
13	LO95 1-1/8 x 1/4	1	LO95 1-1/8" x 1/4" Coupling





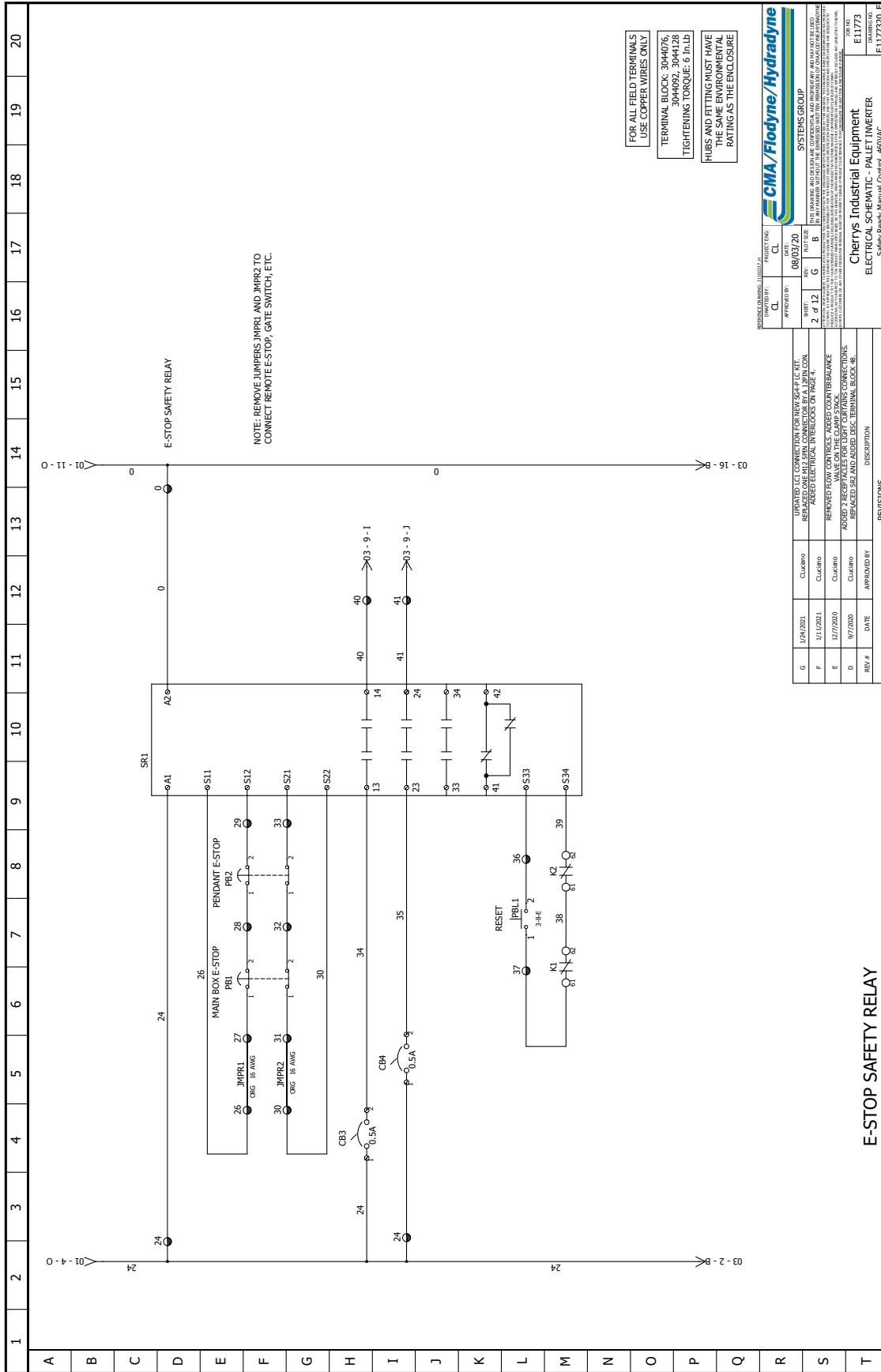
### Pendant Assembly

Item #	Part #	QTY	Description
1	M22-I6-PG	1	Enclosure, Surface Mount, Six Element 2.5mm Element, Gray Base, White Top
2	M22-XZK-GB99	1	Legend Plate, Square, Yellow Etched EMERGENCY-STOP
3	M22-PVT	1	Pushbutton Housing, E-Stop, Twist to Release, Non-Illuminated, Bottom-Red
4	M22S-ST-X	5	Legend Plate Holder without Legend Plate Insert, For Pushbutton
5	M22-DL-X	5	Pushbutton Housing, Flush, Mom, Silver Bezel, Illuminated
6	M22-XDL-B	1	Lense, Button, Blue
7	M22-XDL-W	4	Lense, Button, White
8	T9FB804052	2	Pendant Round Magnet
9	CG-7575	1	Cable Gland, 3/4"
11	M22-KC01 & M22-KC10	8	Contact Block, Pushbutton, Base Mount, Screw Terminal, 1NO or 1NC
12	M22-LEDC-W	5	Pushbutton, illum: Wht, LED Module only, 12-30 Vac/Vdc
13	90576A103	2	Locknut, Nylon, M4
14	90965A150	2	Washer, Flat, M4

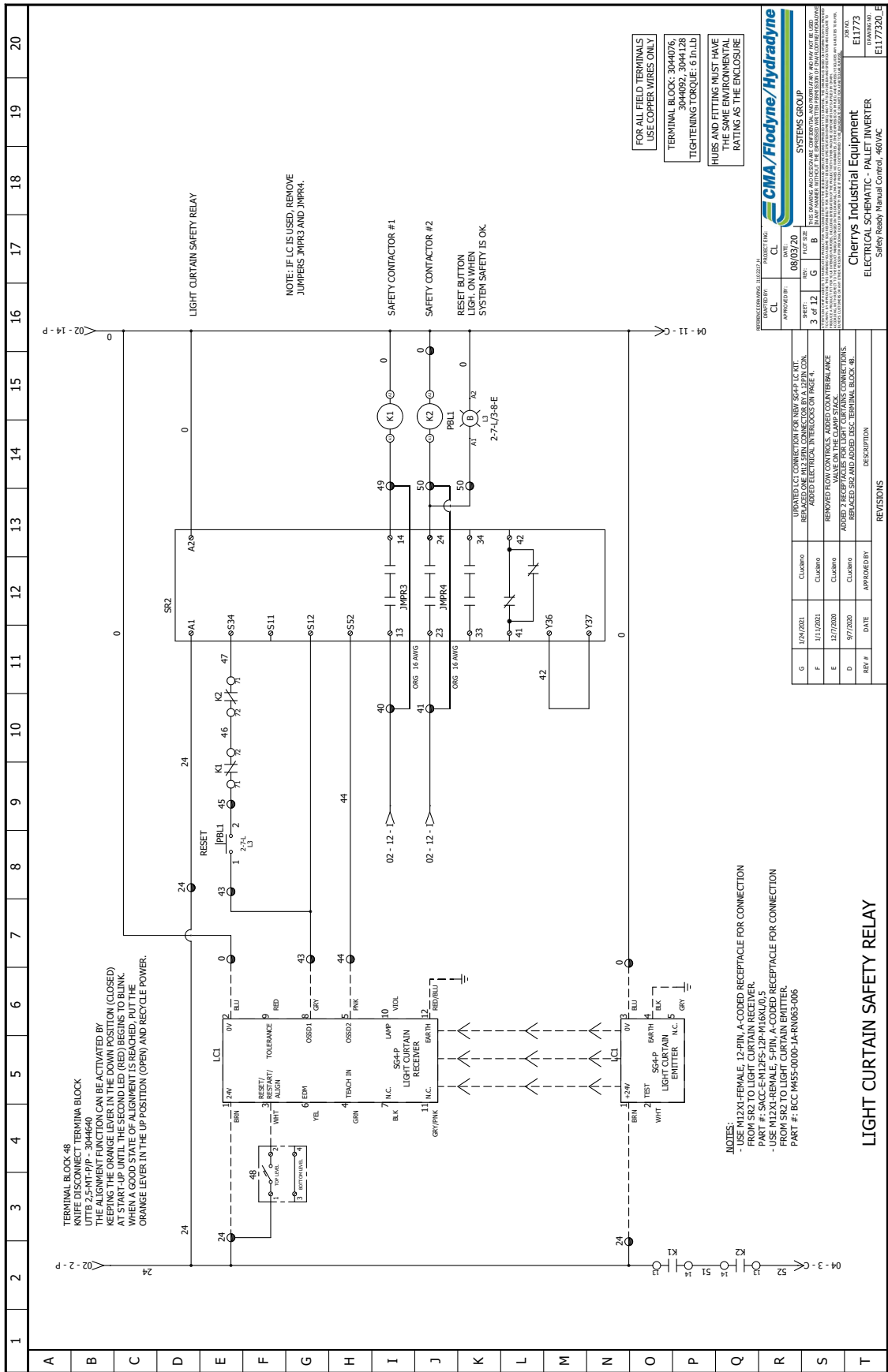
# ELECTRICIAL & HYDRAULIC DRAWINGS



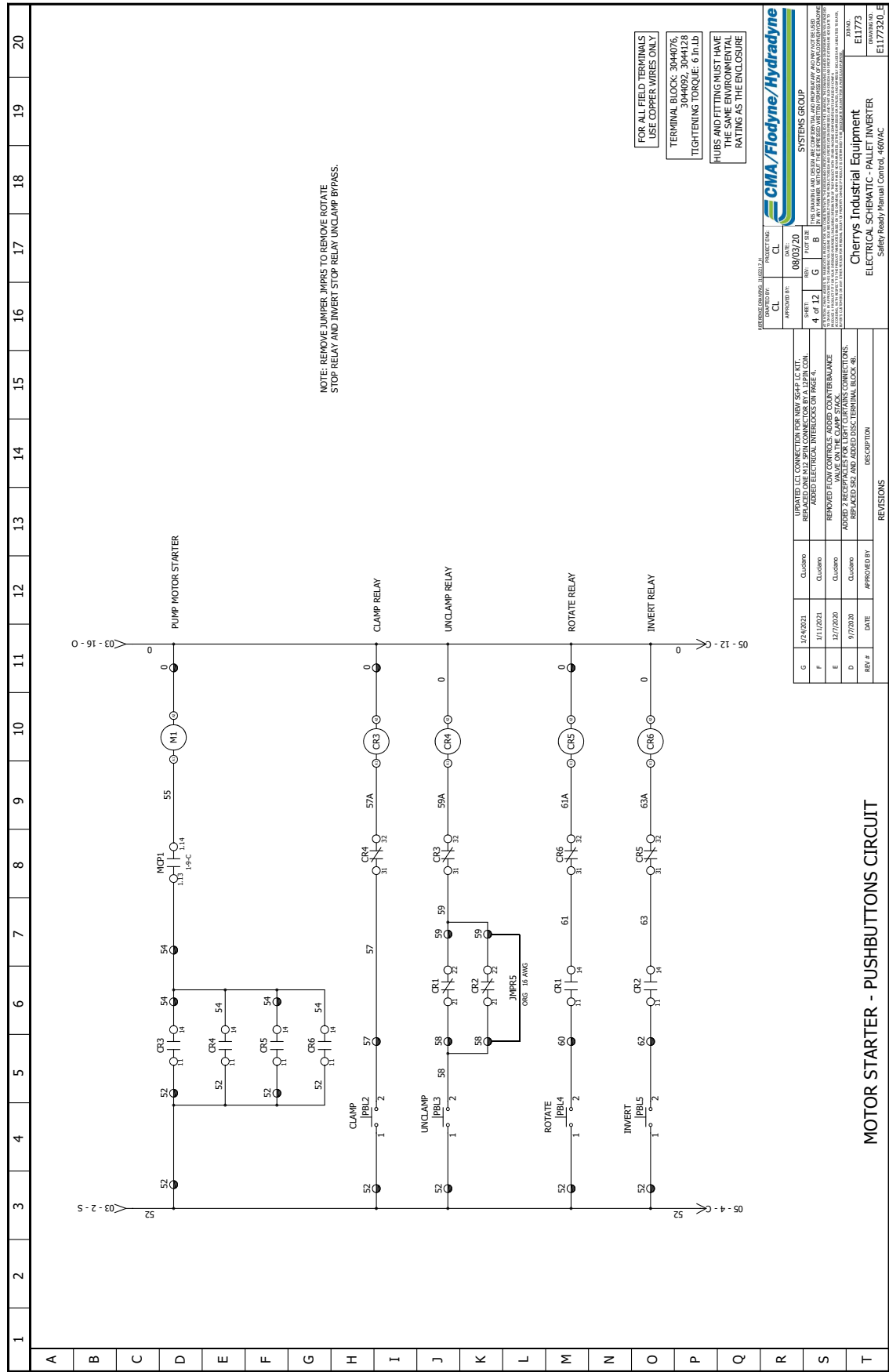
# 180 ° PALLET INVERTER



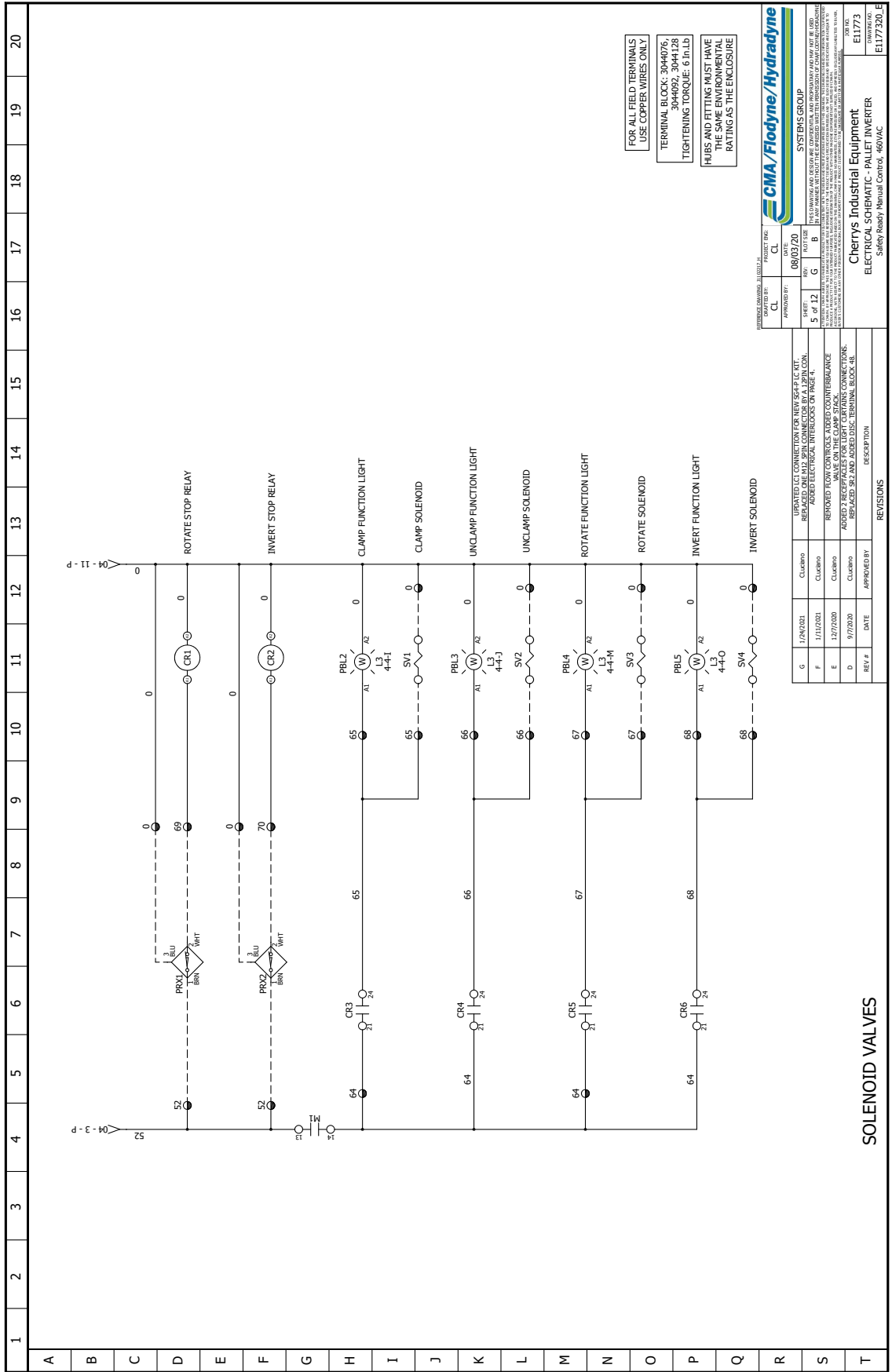
# 180 ° PALLET INVERTER



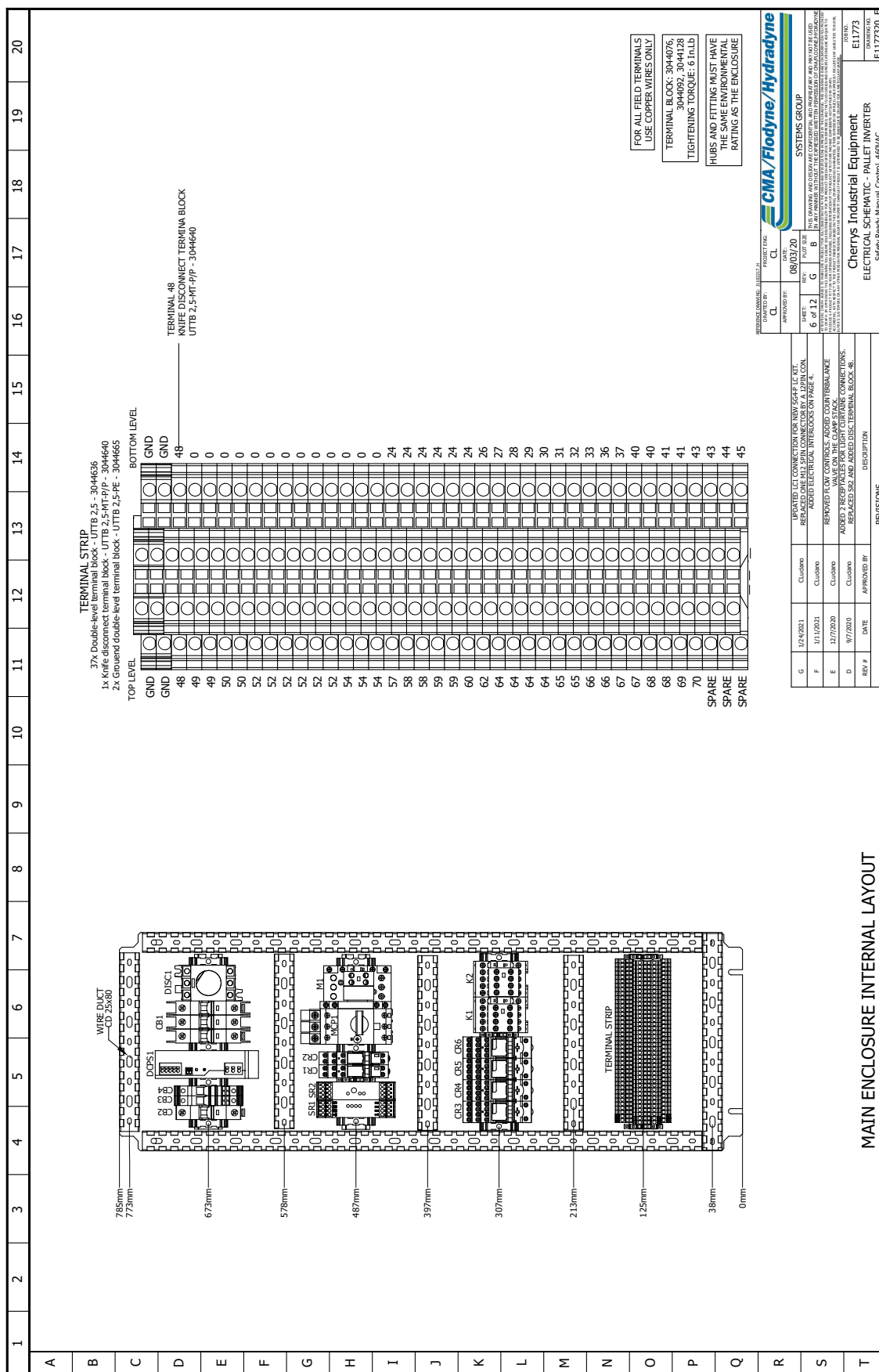
# 180 ° PALLET INVERTER



# 180 ° PALLET INVERTER



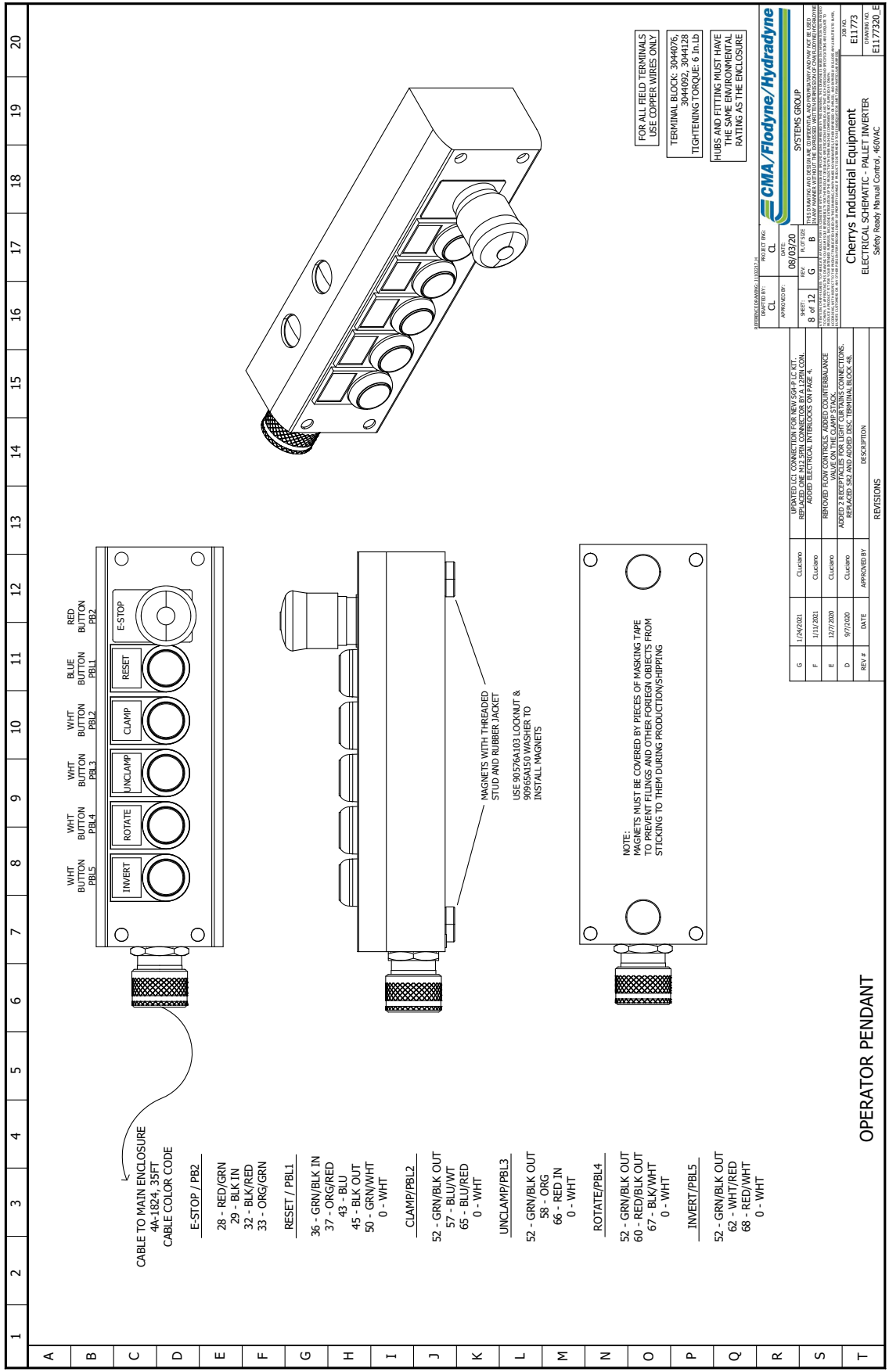




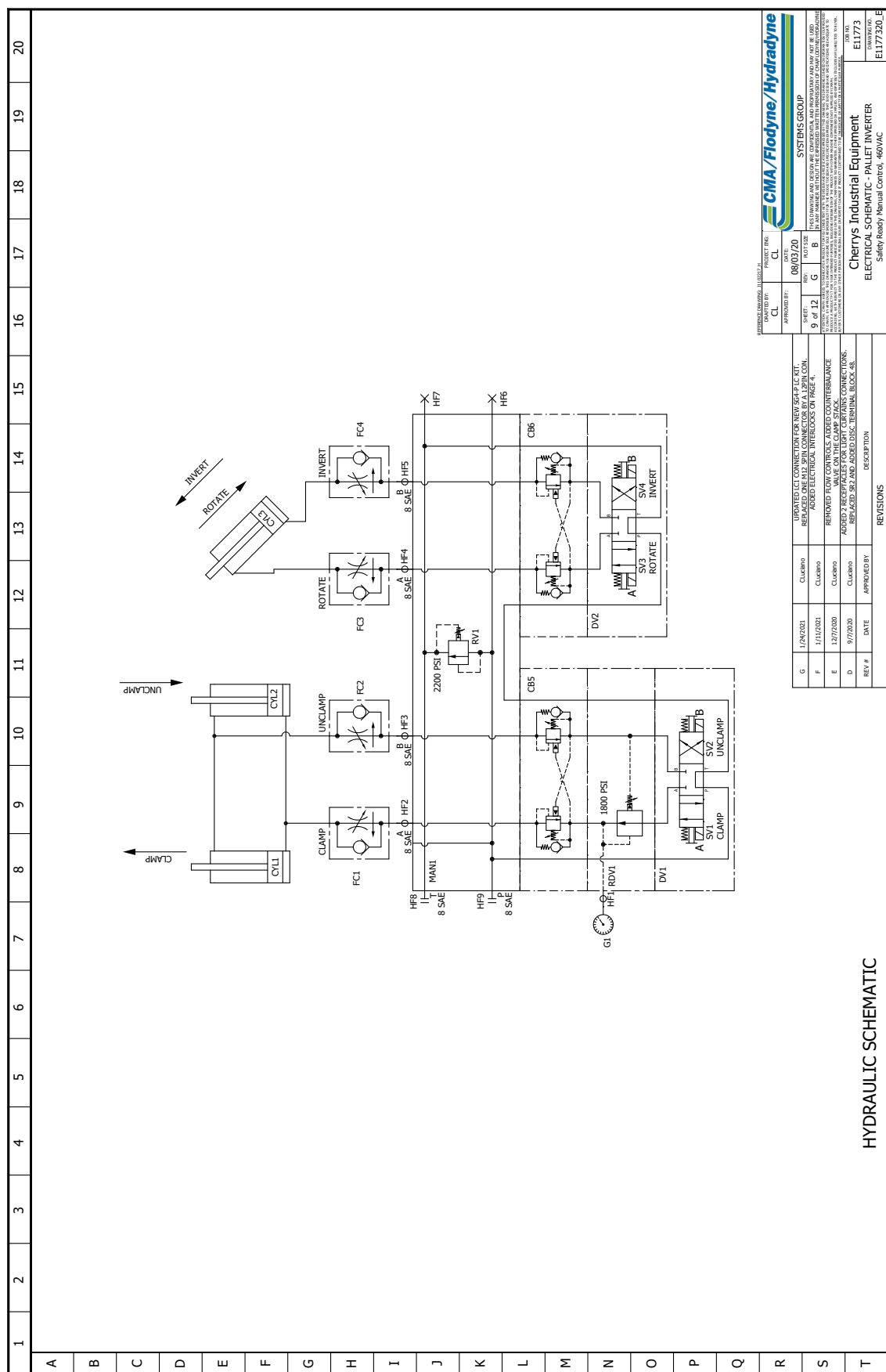
**CHERRY'S** Industrial  
Equipment®



# 180 ° PALLET INVERTER



**CHERRY'S** Industrial  
Equipment®



**CHERRY'S** Industrial Equipment®


# OWNER'S MANUAL SC-75 MODEL GEN5 VERSION 1.0

-> L1-Main electrical closet

Component mark	Quantity	Description	Reference	Manufacturer
MP1	1	PROTECTOR,MOTOR,MANUAL,XTRP ROTARY	XTRP10BCL	EATON
PB1	2	CONTACT BLOCK,PUSHBUTTON,1NC,FRONT MOUNT,SCREW TERMINAL WITH SCREW TERMINALS	M22-A01	EATON
PB1	1	LEGEND PLATE,ROUND,YELLOW,60MM ETCHED EMERGENCY STOP, 4 LANGUAGES - D,GB, F, I	M22-XBK1	EATON
PB1	1	PUSHBUTTON HOUSING,E-STOP,TWIST TO RELEASE,NON-ILLUMINATED,BOTTOM-LED	M22-MT	EATON
PRX1	1	CABLE, PROXIMITY SWITCH, 5M	BCC M25-0000-1A-003-VX4H72-050 (CUSTOMER SUPPLIED)	BALLUFF
PRX1	1	INDUCTIVE PROXIMITY SENSOR, M18X1 HOUSING SIZE	BES M18MH-POC80B-50MK (CUSTOMER SUPPLIED)	BALLUFF
PRX2	1	CABLE, PROXIMITY SWITCH, 5M	BCC M25-0000-1A-003-VX4H72-050 (CUSTOMER SUPPLIED)	BALLUFF
PRX2	1	INDUCTIVE PROXIMITY SENSOR, M18X1 HOUSING SIZE	BES M18MH-POC80B-50MK (CUSTOMER SUPPLIED)	BALLUFF
SR1	1	RELAY/SAFETY,I/L FILE E29184.SPD7	ERS-NO-31-24VAC/DC	EATON
SR2	1	SAFETY RELAY	SE-5R2	DATALOGIC

## 2.2-HYDRAULIC MANIFOLD

Component mark	Quantity	Description	Reference	Manufacturer
CB5	1	BODY	EBY	SUN
CB5	2	COUNTERBALANCE VALVE	CBCA-LHN	SUN
CB6	1	BODY	EBY	SUN
CB6	2	COUNTERBALANCE VALVE	CBCA-LHN	SUN
DV1, DV2	2	DIRECTIONAL CONTROL	4WE6GG/EG-24N9DA/62	BOSCH REXROTH
L2	4		5/16-18 A06-S5	APM
L2	1	ADAPTER, 90°, STREET ELBOW, MNPT X FNPT	5502-04-04	TOMPKINS
L2	1	HEX PLUG, HOLLOW, MSAE	6408-HHR-08	TOMPKINS
L2	2	HEX PLUG, HOLLOW, MSAE	6408-HHP-10	TOMPKINS
L2	4	HYD FITTING, STRAIGHT, NJC X MSAE	6400-08-08	TOMPKINS
L2	2	HYD FITTING, STRAIGHT, NJC X MSAE	6400-08-10	TOMPKINS
L2	1	MANIFOLD, D03, 2-STA., PARALLEL, SAE	AD030225/5	DAMAN
L2	1	PRESSURE GAUGE 0-3000 PSI	25-901-3000-PSI/BAR-#P3	NOSHOK
L2	8	SCREW, CAP, SOCKET HEAD, 10-24X5-1/2	SHCS 10-24X3.3/4	SWIFT SAW
RDV1	1	BODY	EBA	SUN
RDV1	1	PRESSURE REDUCING VALVE	PBB-LAN	SUN
RV1	1	RELIEF VALVE	RPEC-FAN	SUN

REVISION DRAWING: J120212 M PROJECT NAME: CL PROJECT DATE: 08/03/20 		SYSTEMS GROUP THIS DRAWING AND ITS CONTENTS ARE THE PROPERTY OF CMA/FLODYNE/HYDRADYNE AND ARE NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.	
DATE 11/12/20	BY 11/12/20	CHECKED BY 11/12/20	APPROVED BY 11/12/20
REVISIONS		Cherys Industrial Equipment ELECTRICAL SCHEMATIC - PALLET INVERTER Safety Ready Manual Control - 460V/3P/50	
G	1/26/2021	Cusumano	UPDATED LCI CONNECTION FOR NEW 504 P.L.C. UNIT. ADDED ELECTRICAL INSTRUCTIONS ON PAGE 4.
F	1/17/2021	Cusumano	BROWSE DOWN CONNECTIONS, ADDED SCOUTER (REBUSANCE) VALVE ON THE CLAMP STACK
C	9/17/2020	Cusumano	ADDED 2 500 GPM FLOW RATE CONNECTIONS, CONNECTIONS, RESEARCH 502 AND ADDED 502 - TERMINAL BLOCK 4B
D	9/17/2020	Cusumano	ADDED 2 500 GPM FLOW RATE CONNECTIONS, CONNECTIONS, RESEARCH 502 AND ADDED 502 - TERMINAL BLOCK 4B
E	9/17/2020	Cusumano	ADDED 2 500 GPM FLOW RATE CONNECTIONS, CONNECTIONS, RESEARCH 502 AND ADDED 502 - TERMINAL BLOCK 4B
REV #	DATE	APPROVED BY	REVISIONS
E117320	11/12/2020	Cusumano	ADDED 2 500 GPM FLOW RATE CONNECTIONS, CONNECTIONS, RESEARCH 502 AND ADDED 502 - TERMINAL BLOCK 4B





## MAINTENANCE

### EVERY WEEK

SWEEP AND CLEAN IN AND AROUND MACHINE. ENSURE INTERNAL LOAD AREA AND APPROACH TO MACHINE ARE CLEAR OF DEBRIS. CONFIRM THAT EMERGENCY STOP BUTTON AND ALL LIMIT OR PROXIMITY SWITCHES ARE FUNCTIONING CORRECTLY. CHECK ALL ELECTRICAL CABLES AND CONDUITS FOR SIGNS OF WEAR AND ABRASIONS. CHECK THAT ALL GAUGES ARE WORKING PROPERLY & GREASE GREASE POINTS (PAY PARTICULAR ATTENTION TO CENTRAL SHAFT).

### EVERY 6 WEEKS

CHECK AND TIGHTEN BOLTS, LUBRICATE AND GREASE ALL FITTINGS (PAY PARTICULAR ATTENTION TO THE CLAMP SLIDES ASSEMBLY AND RACK & PINION). CHECK ALL HYDRAULIC HOSES AND FITTINGS FOR SIGNS OF WEAR AND ABRASIONS. CHECK ALL FLUID LEVELS AND CHECK FILTER GAUGE (WHEN NEEDLE IS IN RED, REPLACE FILTER), & CONFIRM THAT ALL INTERNAL MECHANICAL SLIDES AND COMPONENTS ARE SECURE.

### EVERY 6 MONTHS

CHANGE HYDRAULIC OIL AND OIL FILTERS (WE RECOMMEND 68 HYDRAULIC OIL 32 OR AN EQUIVALENT MEDIUM GRADE, MINERAL-BASED HYDRAULIC OIL). CHECK ALL BOLTS & ENSURE THAT ALL COUNTER BUSH SCREWS AND HYDRAULIC CONNECTIONS ARE TIGHT (ESPECIALLY 4 BOLTS SECURING CROSSHEAD ON REAR MAST).

IN THE EVENT OF ANY MALFUNCTION, VISIBLE OR AUDIBLE DEFECT, OR OTHER SERIOUS PROBLEM, IMMEDIATELY CONSULT THE MANUFACTURER OR A REPRESENTATIVE OF THE MANUFACTURER.

## NOTICE

CHERRY'S INDUSTRIAL EQUIPMENT CORP. PROVIDES PARTIAL GUARDING AND/OR BARRIERS FOR SOME OF ITS EQUIPMENT. HOWEVER, CHERRY'S INDUSTRIAL EQUIPMENT CORP. DOES NOT REPRESENT OR WARRANT THAT SUCH GUARDING AND/OR BARRIERS CONSTITUTE ALL OF THE SAFETY OR OTHER PROTECTIONS THAT MAY BE NEEDED OR REQUIRED BY LAW.

THE RESPONSIBILITY TO PROVIDE ADEQUATE SAFETY AND OTHER PROTECTIONS FOR SUCH INSTALLATIONS DOES NOT REST WITH CHERRY'S INDUSTRIAL EQUIPMENT CORP., BUT WITH ITS CUSTOMERS.

## WARNING

STAND CLEAR OF MACHINE WHILE IN OPERATION

WWW.PALLETINVERTER.COM

SALES DEPARTMENT 800.350.0011  
SALES@CHERRYIND.COM  
SERVICE DEPARTMENT 877.350.2748  
SERVICE@CHERRYIND.COM  
WWW.CHERRYIND.COM

ROTATE  
FLOW CONTROL

INV RFC 1014

INVERT  
FLOW CONTROL

INV IFC 1014

480 VOLTS

# REPLACEMENT LABELS



18.

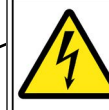
480 VOLTS

7.

### WARNING!

If the fault causes the breaker to trip, the handle must be turned counter-clockwise to RESET before turning clockwise to the ON position. Failure to do this will cause the handle to break.

22.



**DANGER**  
HAZARDOUS VOLTAGE  
Contact will cause electric shock or burn.  
Turn off and lock out power before servicing.

11.

SALES: 800-350-0011 SERVICE: 877-350-2748

**CHERRY'S** Industrial Equipment

MODEL: XXXXXX Inverter

SERIAL #: PH-XXXXXX

ELECTRIC #: E-XXXX

HYDRAULIC #: J-XXXX

CLAMP CYLINDER: XXXXXX / X

SEAL KIT: XXXXXXXX

TURNOVER CYLINDER: XXXXXX / X

SEAL KIT: XXXXXXXX

VOLTAGE: 300 V

GUARDING: XXXXXX Rolling

MAX LOAD CAPACITY: XXXX LBS

DATE OF PRODUCTION: XX / XXXX

10.

CLAMP  
FLOW CONTROL

INV CFC 1014

UNCLAMP  
FLOW CONTROL

INV UFC 1014

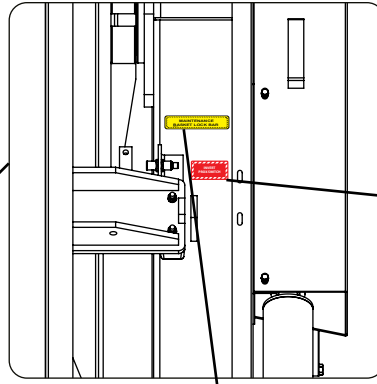
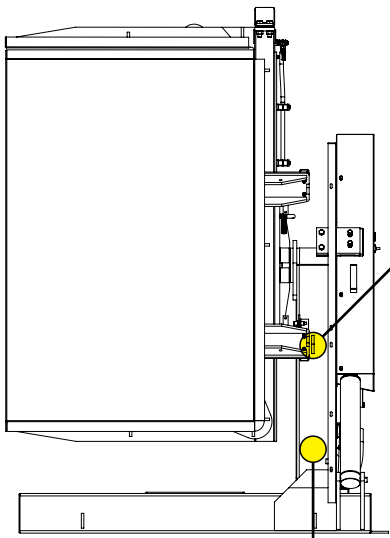
**CAUTION!**  
CHECK THAT THE PUMP IS RUNNING IN THE DIRECTION OF THE ARROW. IF THE MOTOR IS RUNNING IN THE WRONG DIRECTION, STOP IMMEDIATELY. OPERATING THE MOTOR BACKWARDS WILL CAUSE SEVERE DAMAGE TO THE HYDRAULIC PUMP. REFER TO THE OWNER'S MANUAL FOR START UP INFORMATION.

9.

8.

Item #	Part #	Item#	Part#	Item#	Part#	Item#	Part#
1	INV_MAINT	7	GEN_480V14	13	INV_MRL	19	GEN_MCPLB
2	GEN_NOTE	8	INV_UFC	14	INV_IPS	20	GEN_SERVICE
3	GEN_WSC	9	INV_CFC	15	INV_MIL	21	GEN_PICOM
4	INV_RFC	10	INV ID Plate	16	INV_MBLB	22	TRIP_KNOB
5	INV_IFC	11	C82002-11DHYD	17	INV_CTRL	23	GEN_MOTOR_ROTATION
6	93242	12	INV_RPS	18	USA504		

# 180 ° PALLET INVERTER



12.

**ROTATE  
PROX SWITCH**

INV\_RPS\_1014



13.

INV\_MRL\_1014



20.



3.



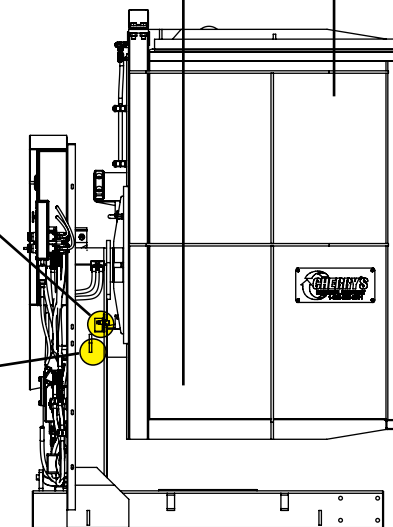
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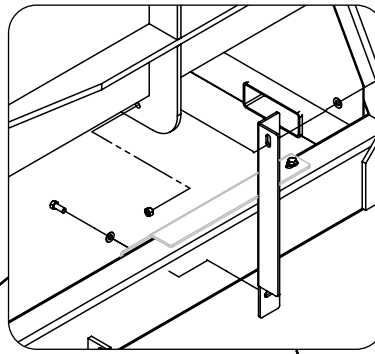
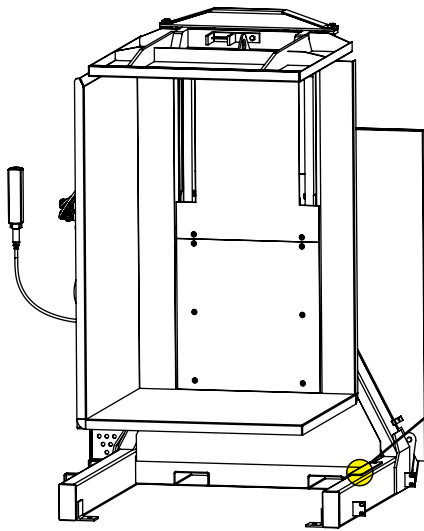
INV\_IPS\_1014



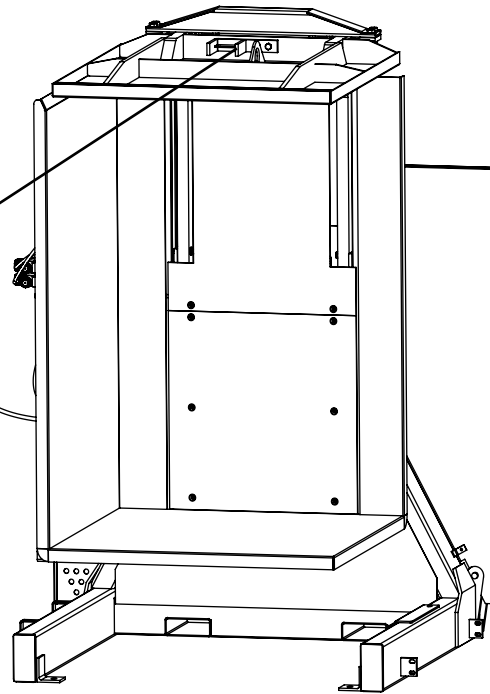
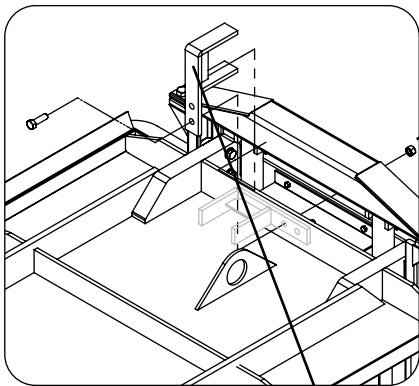
15.

INV\_MIL\_1014





16.



19.



Product safety signs or labels should be periodically inspected and cleaned by the product users as necessary to maintain good legibility from a safe viewing distance.  
ANSI 535.4 (10.21)  
Contact Cherry's Industrial for replacement labels

# SPARE PARTS LIST

## RECOMMENDED SPARE PARTS

Item #	Part #	QTY	Description
1.	10314/G	1	3 1/2" Bore x 18" stroke turnover cylinder
3.	10224/G	1	2" Bore x 33" stroke Clamp cylinder
5.	10325/2	1	ACM Side Wear Pad
6.	10563	1	Rubber Buffer
7.	AZPF-12-008RQR12MB	1	3.7 GPM hydraulic pump
8.	CHE0075-D	1	Return Filter Element
9.	52015	1	Suction Strainer filter
10.	00518ET3E184TC-W22	1	5HP Electric Motor
11.	GAGE-DRY1.5-G/Y	1	Filter System Gauge
12.	104610	4	70 mm Faro Bearing w/Mounting Plate
13.	LO95 5/8 x 5/32	1	LO95 5/8" x 5/32" Coupling
14.	11070	1	LO95 SOX Spider
15.	LO95 1-1/8 x 1/4	1	LO95 1-1/8" x 1/4" Coupling
16.	RIF-1-RSC-LDP-24DC/2X21	1	Relay Module, 2 Pdt. Input Voltage: 24vdc
17.	RIF-2-RSC-LDP-24DC/4X21	1	Relay Module, 4 Pdt. Input Voltage: 24vdc
18.	SHR00N4X	1	Handle,Selector,Red Size 00, Nema4/4x, (A,B&C Frame)
19.	SF320SH5X5	1	Shaft 320mm (12.6") Use W/ Selector Handles For R5/R9, 5x5 Switch Only,3 Pole Rotary,Non-Fusible,Disconnect UI508, A-Frame,30amp
20.	R5A3030U	1	
21.	XTCEXFAC11	1	Contact, Auxiliary Contacts For Xtre Control Relay, Front Mount
22.	XTCE018C10TD	1	Contact, Fvnr Iec, 3p, Screw Terminals
23.	XTPAXSA11	1	Contact, Auxillary, Side
24.	M22-K01	1	Contact Block, Pushbutton, 1nc, Front Mount, Screw Terminal With Screw Terminals
25.	4WE6G6X/EG24N9DA/62	1	Directional Control
26.	BES M18MI-POC80B-S04K	1	Inductive Proximity Sensor, M18x1 Housing Size
27.	ESR5-NO-31-24VAC-DC	1	Relay, Safety, UI File E29184, Spdt
28.	SE-SR2	1	Safety Relay
29.	CBCA-LHN	2	Counterbalance Valve
30.	M22-PVT	1	Pushbutton Housing, E-Stop, Twist To Release, Non-Illuminated, Bottom-Red
31.	PBDB-LAN	1	Pressure Reducing Valve
32.	RPEC-FAN	1	Relief Valve
33.	M22-KC01	1	Contact Block, Pushbutton, 1nc, Base Mount, Screw Terminal With Screw Terminals
34.	M22-KC10	1	Contact Block, Pushbutton, 1no, Base Mount, Screw Terminal With Screw Terminals
35.	M22-XDL-B	1	Lense, Button, Blue
36.	M22-LEDC-W	1	Pushbutton, Illum: Wht, Led Module Only, 12-30 Vac/Vdc

**CHERRY'S INDUSTRIAL EQUIPMENT**  
**68 CONGRESS CIRCLE WEST.**  
**ROSELLE, IL 60172**

**CHERRY'S** Industrial  
 Equipment®

**SERVICE, PARTS, & SUPPORT:** 877.350.2748  
 service@cherrysind.com

CHERRY'S INDUSTRIAL EQUIPMENT  
68 CONGRESS CIRCLE WEST.  
ROSELLE, IL 60172

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**CHERRY'S** Industrial  
Equipment®

Thank you for your recent purchase. As you know Cherry's Industrial Equipment has a reputation for building Pallet Inverting and Pallet Handling Equipment that is rugged, dependable and built to last. The key to maximizing machine uptime is following the recommended preventative maintenance program and using OEM parts. We offer filters, seal kits and other consumables needed for scheduled maintenance and over time other replacement parts needed for repair. Cherry's Industrial maintains a large inventory of parts, available for immediate shipment and offers ongoing technical support to keep the machine in operation. The spare parts list above itemizes the most common replacement parts requested over the life of a machine. Please contact Cherry's Industrial Equipment parts department at **877-350-2748** to provide a quote specific for your needs.

**CHERRY'S** Industrial Equipment®



## WARRANTY

Cherry's Industrial Equipment Corp. warrants this product to be free from defects in material or workmanship for a period of (3) years of single shift usage from date of shipment, providing claim is made in writing within that time period. This warranty shall not cover modified designs for special applications, failure or defective operation caused by misuse, misapplication, negligence or accident, exceeding recommended capacities, failure to perform required maintenance or altering or repairing, unless alteration is authorized by Cherry's Industrial Equipment Corp. Except as set forth herein, there are no other warranties, express or implied, including the warranties of merchantability and fitness for a particular purpose, all of which are hereby excluded.

Cherry's Industrial Equipment Corp makes no warranty or representation with respect to the compliance of any product with state or local safety or product standard codes, and any failure to comply with such codes shall not be considered a defect of material or workmanship under this warranty. Cherry's Industrial Equipment Corp shall not be liable for any direct or consequential damages arising out of such noncompliance.

Cherry's Industrial Equipment Corp's obligation under this warranty is limited to one (1) year labor and three (3) years parts of the replacement or repair of defective components at its factory or another location at Cherry's Industrial Equipment Corp's discretion. This is the buyer's sole remedy. Except as stated herein, Cherry's Industrial Equipment Corp will not be liable for any loss, injury or damage to persons or property, nor for direct, indirect, or consequential damage of any kind, resulting from failure or defective operation of said product.

The stated warranty does not cover standard components categorized as wear or maintenance parts. These parts include, but are not limited to, buttons, contacts, chains & drive pins, track rollers, filters and wear pads. For a full list of components considered wear or maintenance parts please contact your Cherry's Industrial Equipment representative.

Feel free to contact us via our toll-free number or email:

**SERVICE, PARTS, & SUPPORT:** 877.350.2748 or [service@cherrysind.com](mailto:service@cherrysind.com)

**SALES:** 800.350.0011 or [sales@cherrysind.com](mailto:sales@cherrysind.com)

Thank you for your business.

IF YOUR MACHINE IS UNDER WARRANTY, WE WILL REPLACE THE DEFECTIVE COMPONENT  
AND YOUR COMPANY WILL BE INVOICED AT THAT TIME.

WE WILL ISSUE A WARRANTY CREDIT UPON THE RETURN OF THE DEFECTIVE ITEMS  
FOR THE FULL AMOUNT OF THE INVOICE.

**CHERRY'S** *Industrial  
Equipment®*

**CHERRY'S INDUSTRIAL EQUIPMENT**

68 Congress Circle West.  
Roselle, IL 60172  
800.350.0011



**Cherry's Industrial Equipment Corp.**  
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or  
**[service@cherrysind.com](mailto:service@cherrysind.com)**