Returnable Plastic Container Erector

IPAK MACHINERY

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Operation and Service Manual

RP-100

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PREFACE

IPak Model RP-100 Tray Former are versatile and industry-proven machines with unique mechanical tray-forming technology. They are designed and built to withstand the rigors of continuous, heavy-duty, industrial applications.

The RP-100 Tray Former Operation and Service Manual was written to assist you in installing, operating, troubleshooting, maintaining, and repairing the machine properly. This manual describes the standard features that are present in the RP-100 machine. Please read the manual carefully, as it contains the necessary information required to extend the service life of this machine to its fullest.

We recommend that this manual be kept with the tray former for future reference. If any problems are encountered with the procedures contained in this manual, please contact our Service Center before proceeding.

While every effort has been made to ensure the completeness and accuracy of this manual, IPak assumes no responsibility or liability for any losses or damages resulting from the use of the information contained in this document.

Due to technical advances and improvements, some of the information contained in this manual may be changed or modified without prior notice. Also, note that some of the components illustrated in this manual may differ slightly from your machine.

How to use this manual

Please study carefully the following information about the manual's format.

This symbol alerts you to a risk of personal injury due to mechanical or pneumatic operation.

This symbol indicates that an electrical hazard may be present. It may be used in lieu of the wording 'caution, risk of electric shock' for any cautionary marking.

This symbol alerts you to general risks not associated with electrical, pneumatic or mechanical operations, or indicates that an action could cause equipment damage or affect the quality of the product.

To indicate that you must stop and read the instructions carefully, the following symbol is used:

This symbol is used to alert you of an important step in operational sequence, to note exceptions to normal machine operation, or when special circumstances must be taken into consideration by the machine operator.

Throughout this manual, you will find the following four special text formats:

- The names of all **buttons, keys, sensors, switches, displays,** and **status indicators** are capitalized, boldfaced, and placed in single quotes.

  For example, "Press the **'START'** button."
  "The value in the **'SPEED'** display is not touch sensitive."

- All **machine component status terms, operations, functions, display values,** and **features** are capitalized and boldfaced.

  For example, "The case separator returns to the **UP** position."

- When referring to **HMI (Human Machine Interface) display screens** and **windows,** we use initial capitals, boldface, and single quotes.

  For example, "…return to the **'Main Menu'** screen."
  "Touching the **'LOGIN'** button will bring up the **'Login'** window."

- When referring to **Sections** in this manual, we italicize the link and use single quotes.

  For example, "See *Section 6: 'Operating Procedures'*."

- If you are using a PDF version of this manual, you may jump directly to the referred section by clicking on the italicized text.

1 SAFETY

MUST BE READ PRIOR TO OPERATING

WARNING

The instructions in this manual are not intended to cover all of the details or variations in equipment, or to provide for every possible contingency to be met in connection with installation, operation, or maintenance. Should further information be desired, or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred directly to IPak.

The RP-100 has safety features to protect you from injury while the machine is operating. Guard doors equipped with interlock switches prevent you from entering the work cell while the case formation is in progress; the machine will not run if one of these doors is open. The control panel access door must also be closed in order for the machine to operate.

The perimeter guarding system surrounds the area known as the restrictive envelope and covers the entire range of possible machine motion. For your safety, you should never try to bypass the perimeter guarding system or enter the restrictive envelope while the machine is in operation.

Pressing an **'EMERGENCY STOP'** button immediately halts all machine operations by cutting off air supply and electrical power. This button should be pushed **IN** to **STOP** the machine in case of an emergency.

WARNING

Any electrical or mechanical modifications to this equipment made without the prior written consent of IPak will void all warranties. Unauthorized modifications can also result in personal injury, death, or destruction of the equipment.

1.1 Safety Considerations

IPak is proud to employ every conceivable precaution in the research and development of our tray formers. We have become a world-class leader in the packaging industry because of our adoption of the following best practices:

- Fully automatic functionality requiring minimal operator interaction
- Advanced safety guarding with keyed electronic interlock switches
- Lock-out provision on electrical and pneumatic main shut-offs
- Integrated 24-volt DC power supply for safe, low voltage operating controls
- Intuitive cautionary labeling demonstrating electrical and mechanical risks

- **'EMERGENCY STOP'** button shutdown with optional extra **'EMERGENCY STOP'** buttons
- PLC-operated sequence and timer control

1.2 Safety Standards

IPak observes the following safety standards:

- ANSI B151.1-2000 Safety Standards for Mechanical Power Transmission Apparatus
- CSA C22.2.1-02; 0-M91 Canadian Electrical Code Part I and Part II
- NFPA 79 Electrical Standards for Industrial Machines
- CSA C22.2 No. 14-95 Industrial Control Equipment
- ANSI Z535.4-2002 Product Safety Signs & Labels
- ANSI B155.1-2000 for Packaging Machinery
- CSA Z432-04 (2004) Safeguarding of Machinery
- NEMA 12 UL listed standard electrical control

1.3 General Precautions

Your IPak machine is a rugged piece of industrial machinery. It is equipped with various guards and other safety features, but it must be treated with respect at all times to avoid the possibility of personal injury. The following points are particularly important:

- Do not operate the machine until it is completely set up and installed properly and you are familiar with its operation.
- Do not operate the machine without guards and safety mechanisms in place and functioning.
- Do not attempt to enter the machine for any reason while the air pressure is still **ON**.
- Do not wear neckties, jewelry, loose clothing, or other items that can get caught in moving parts or mechanisms near the machine.
- Do not operate, troubleshoot, or maintain the machine while under the influence of any type of drug or alcohol.
- Always observe all safety warnings and notices on the machine and in this manual.
- Do not use solvents when cleaning or maintaining the machine.
- All installation wiring must comply with applicable local codes.

1.4 Lock-out Compliance

The RP-100 is lock-out / tag-out-compliant on both the electrical and pneumatic main shut-offs. Both the **'MAIN DISCONNECT'** and the air-regulator assembly can be locked out on our IPak tray formers. Ensure that you lock out the machine prior to performing any repairs or maintenance.

Figure 1-1: Locked Out 'MAIN DISCONNECT' Switch and Air-regulator Assembly

1.5 Compressed Air

Compressed air is used to power the movement of many machine components. You must ensure that the machine's main air solenoid valve is shut **OFF** before attempting to clear jams or make minor adjustments which require you to get close to the moving parts of the machine. This air valve shuts **OFF** when the guard doors are opened or when the main power is switched **OFF**.

To safely carry out service or repair work on the machine, a lockable main air shutoff valve is located on all IPak machines upstream of the regulator unit. Padlock this valve in the **OFF** position for absolute safety during service work. Always follow local lock-out/tag-out regulations.

Always exercise caution when switching the compressed air back **ON**. Stay well clear of all moving parts, as they may move quickly when the pressure is reapplied. Ensure that no person is in dangerous location when switching the compressed air **ON**.

1.6 Electrical Power

All IPak machines use electrical power. Switch **OFF** the **'MAIN DISCONNECT'** switch on the control panel, and lock it out before attempting service work outside of the control panel on the machine. Before performing service work inside the control panel, disconnect all electrical power to the machine (customer supplied disconnect).

1.7 Hot Melt Glue System

CAUTION!

Read and understand the safety instructions in the separate Nordson Manual supplied with your new machine.

The Hot Melt glue system operates at temperatures in the range of 350°F (175°C), and contact with the hot glue will cause serious burns. Always wear safety glasses and gloves when refilling the glue tank, and be careful to avoid splashing. Keep the tank lid closed at all times except when refilling the tank.

Remember that the glue applicator is very hot and that the glue is projected with considerable speed when the glue applicator is switched **ON**. Be extremely careful when near Hot Melt material. Even solidified material may still be very hot. Always wear protective clothing which safely covers all exposed parts of the body.

1.8 Outfeed Conveyor

Where used, the outfeed conveyor systems on IPak packaging machines operate at moderate speeds. Be sure to keep fingers well clear of all moving parts, as the gearmotors develop substantial torque and do not stop easily. Do not wear loose clothing or accessories (e.g., neckties) when operating IPak packaging machines.

1.9 Guard Doors

IPak takes your safety seriously, offering the added benefit of safety guarding with interlock guard doors on all of our machines. This guarding prevents operators from reaching into the machine during routine operation and maintenance.

1.10 Safety Interlocks

IPak is an industry leader in the incorporation of advanced integrated safety guarding with key-activated interlock switches on our IPak tray formers. Opening any of the guard doors on the machine instantly disables all machine functions.

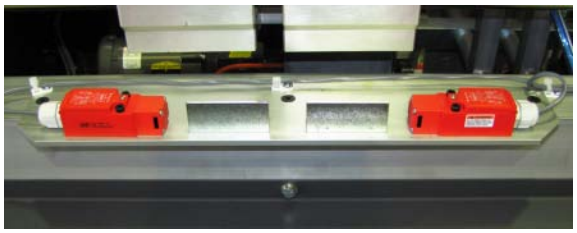


Figure 1-2: Safety Interlock

1.11 Cautionary Labels

IPak provides cautionary labels for workplace hazards. Please pay particular attention to the cautionary labels found on the machine.

Figure 1-3: Warning Labels

2 INSTALLATION

The installation of the RP-100 RPC involves moving the compnents of the machine to an appropriate location, reattaching all of the machine components, connecting electrical power, and supplying air to the machine. The following section shows how to fully install the machine.

2.1 Positioning the Machine

2.1.1 Selecting a Location for the Machine

Select an appropriate location for the machine. Ensure that enough room is provided next to the machine to load tray blanks, access the guard doors and **'EMERGENCY STOP'** buttons, remove formed trays, and make machine adjustments. Also, ensure that there is enough room for the conveyor and that there is enough room to remove trays.

2.1.2 Moving the Machine

The safest way to move the assembled machine is by pushing it with a forklift. When pushing the machine, place a wooden or steel block on the ground across the rear legs. Push against the block with the forklift.

Once the machine components are in the appropriate location, remove the transport skis. To do this, lift the machine, remove the bolts that are connecting the skis to the machine feet, and lower the machine.

Figure 2-1: Pushing a Machine with a Forklift

0.1 Connecting the Electrical Supply

Main power needs to be connected to the control panel when the machine is installed. This machine requires 240V, 3-Phase power, at 60Hz. Power must be wired to the machine before an IPak technician can begin setting up the machine.

Caution

A certified electrician must perform the main power wiring of the machine. DO NOT attempt the following procedure unless you are fully qualified.

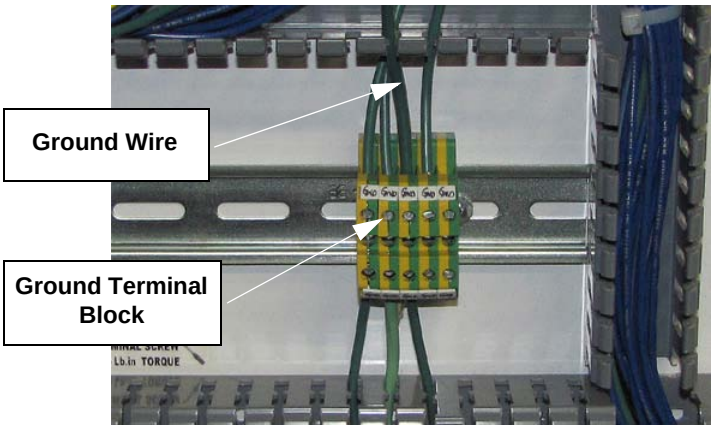


Figure 2-1: Ground Connection

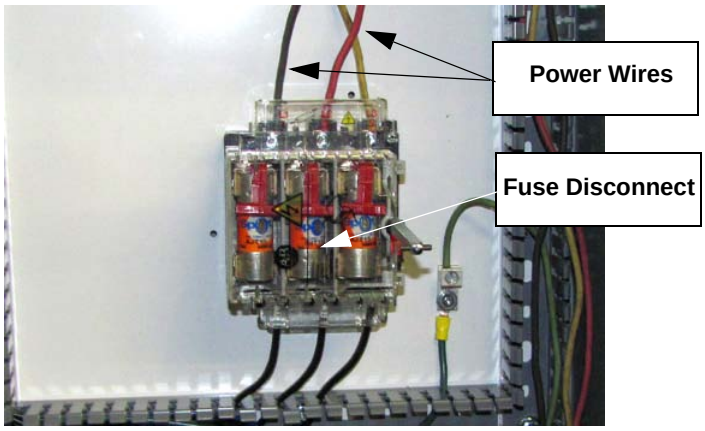


Figure 2-2: 3-Phase Power Connection

To connect power to the machine:

1. Drill a hole in the side, top or bottom of the control panel, to send the main power wires through. Install a strain relief or any other appropriate fitting, and then send the main power wire into the control panel.

2. Connect the ground wire to the grounding terminal block (Figure 2-1).

3. Connect the other three wires to the top of the fuse disconnect (see Figure 2-2). If the motor does not turn in the correct direction when the machine is running, the wiring must be changed. To do this, simply reverse any two wires that are connected to the fuse disconnect.

Refer to the electrical schematic provided in the control panel and users manual, for more detail on the electrical wiring.

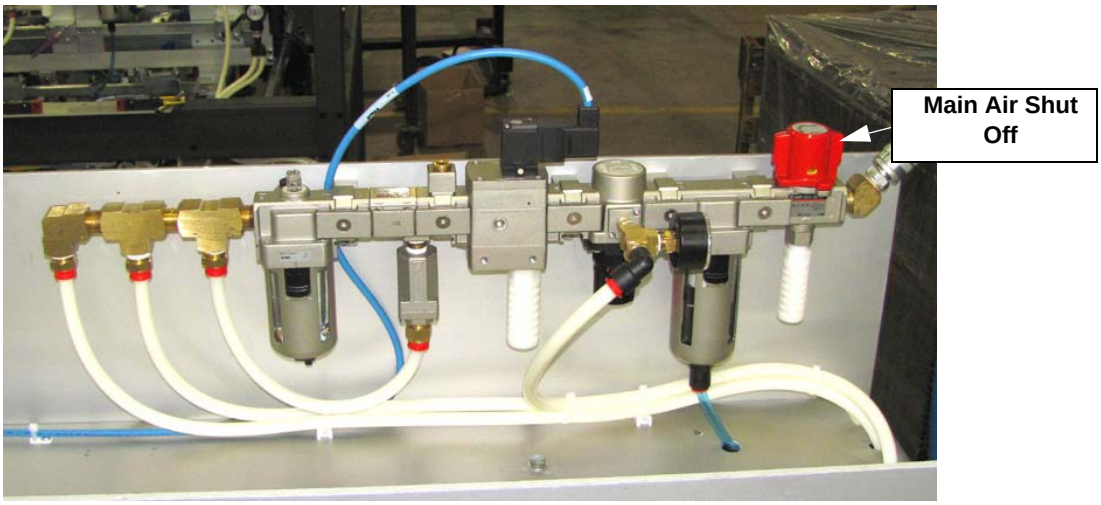


Figure 2-3: Fittings for FRL Unit & Lubricator

0.2 Connecting The Air Supply

Main air must be supplied to the machine. This can be done either by the client before the service technician arrives to set the machine up, or by the service technician when he or she arrives to set up the machine. The main air supply hose must be ¾" ID or larger. *See Section 9: 'Engineering Specifications'* for other air requirements.

To supply main air to the machine:

1. Connect the main air hose to the FRL unit (See Figure 2-3). A ¾" NPT fitting is required to connect the supply line to the FRL unit. Ensure that the supply line has an inside diameter of at least ¾".

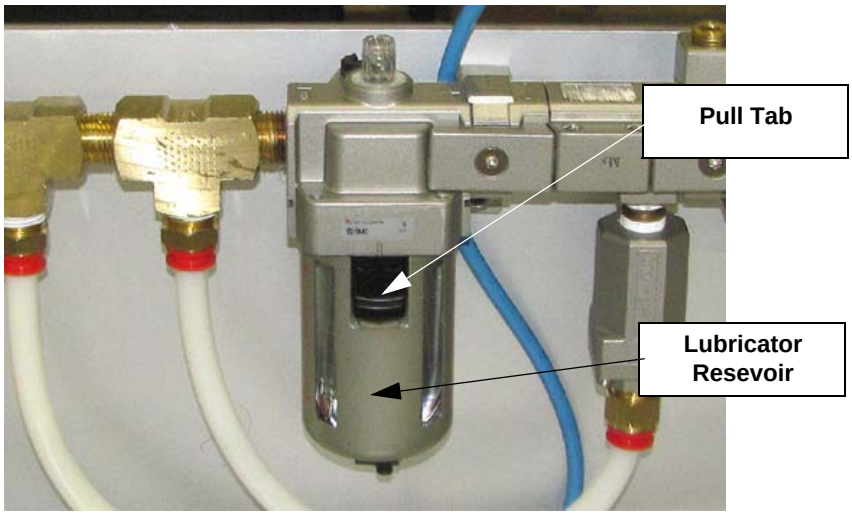


Figure 2-4: Air Lubricator

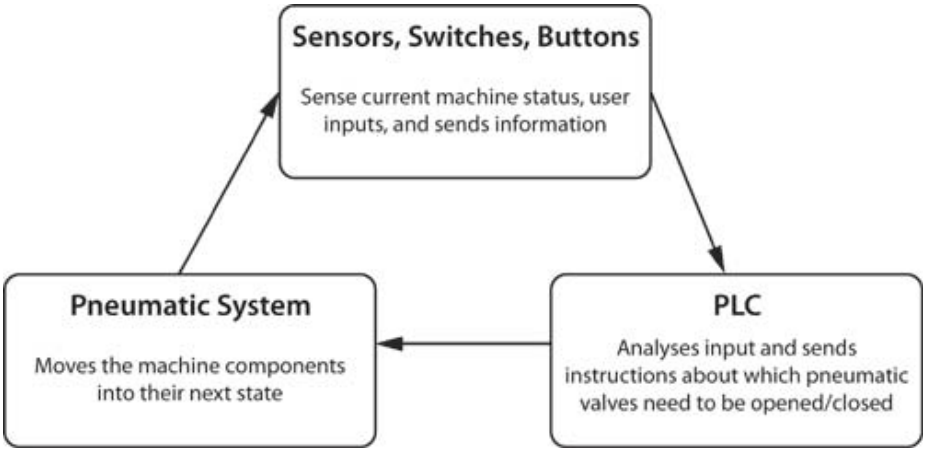
2. Ensure that the lubricator is full of oil. If the oil level is below the low level mark, it must be filled with oil. To add oil, pull the tab (Shown in Figure 2-4), twist the oil reservoir clockwise, and then pull it down and off.

3. Turn the main air shut off valve to the **SUPPLY** position.

3 THEORY OF OPERATION

The RP-100 Automatic Tray Former and Stacker are automatic machines designed to open and stack RPC trays. When functioning, the machines form and stack the trays at a constant speed, upon demand, without requiring further operator input.

All motions of the RP-100 Automatic Tray Former are controlled by a PLC (Programmable Logic Controller) which is located in the main control panel. Optical proximity sensors are used to detect the position of the machine's components and the trays being formed. Interlock switches are used to ensure that all guarding is secure while the machine is in operation. The buttons and touchscreen on the electrical control panels form the operator interface and provide the input signals to the PLC. The PLC then decides upon the next stage of the machine's operation, and sends electrical signals to the machine's electric motor and the pneumatic and solenoid valves that activate the machine's various components.



3.1 Sequence of Operation

3.1.1 Startup

Because the **'EMERGENCY STOP'** buttons and guard doors are wired together in series, all guard doors must be closed and **'EMERGENCY STOP'** buttons must be pulled out for the machine to energize when the **'START'** button is touched on the machine's HMI.

3.1.2 Hopper Tray Supply

The machine will begin to open trays if the following three conditions are met: 1) the **'OUTFEED JAM'** sensor ((Input I: 0.0/12) is clear, indicating that there is not a backup of opened trays on the outfeed converyor, 2) the **'LEFT LANE OF BACK'** (Input I: 0.0/3) or the **'RIGHT LANE OF BACK'** (Input I: 0.0/4) limit switches detect that the hopper cross pushers are back in position and ready to push a tray stack, and 3) the **'RIGHT LANE RPC DETECT'** (Input I: 0.0/7) or **'LEFT LANE RPC DETECT'** (Input I: 0.0/5) sensor detects that a conveyor has carried a stack of trays fully forward in one of the hopper lanes.

At this point, a side pusher pushes the stack of trays into the center of the hopper. If there are tray blanks ready to be fed from both of the conveyors, the side pusher of the Duty Lane will push the trays across.

When trays have been pushed into the center of hopper, the correct positioning of the tray stack is sensed by the **'CENTER RPC DETECT LH'** and **'CENTER RPC DETECT RH'** sensors (Input I: 0.0/0) and (Input I: 0.0/6). This triggers the Center Cross Pusher to push the stack of trays forward into the RPC Hopper. The motion of the Center Cross Pusher is detected by the **'CENTER OF FORWARD'** limit switch (Input I: 0.0/2) which signals when the Center Cross Pusher is at its fully-extended position and the **'CENTER OF BACK'** limit switch (Input I: 0.0/3) which signals that the Center Cross Pusher has returned to its home positon.

The sensors and limit switches described above trigger a series of timers in the PLC which then trigger the following outputs:

- Valve SV0 / Left RPG Lift (Output O:2.0/0)
- Valve SV1 / Right RPG Lift (Output O.2:0/1)
- Valve SV2 / Left Side Cross Pusher (Output O.2:0/2)
- Valve SV3 / Right Side Cross Pusher (Output O.2:0/3)
- Valve SV4 / Side Swing (Output O.2:0/4)
- Valve SV5 / Center Cross Pusher (Output O.2:0/5)

3.1.3 Tray Positioning for Opening

When the stack of trays is positioned in the RPC Hopper, it is supported by the Front and Rear Hopper Gates. The **'RPC Detect Sensor'** (Input I: 0.0/11) detects the bottom tray in the stack. When this tray is detected, two RPC Clamp Swings jam into holes in the sides of the second tray up in the stack. Two Pick Lifts then grab the bottom tray. The Hopper Gates then open to allow the bottom tray to be lowered and it is lowered down onto two guide rails. The Hopper Gates then close, the RPC Clamp Swings swing out of the holes in the second tray, and it is allowed to fall down onto the Hopper Gates. The two Pick Lifts rise to grab the next tray. Their raised position is signalled by the **'PICK DOWN'** limit switch (Input I: 0.0/8). A **'HOPPER LOW'** sensor (Input I: 0.0/13) is positioned on the side of the RPC Hopper a few inches above the 'RPC Detect Sensor. When this sensor is cleared, another stack of unopened trays is moved by a crosspusher into positon ready to be advanced into the RPC Hopper.

The sensors and limit switches described above trigger a series of timers in the PLC which then trigger the following outputs:

- Valve SV6 / RPC Pick (Output O:2.0/6)
- Valve SV7 / Grip Swing (Output O.2:0/7)

3.1.4 Tray Advance and Opening

As the tray is placed on the guide rails, its presence is detected by the **'OUTFEED JAM'** sensor (Input I: 0.0/12). The RPC Pusher then pushes the tray forward and into position for opening. Two pairs RPC Openers then descend to the bottom of the tray. After reaching the tray bottom, the pairs separate - one pair moving towards the leading end of the tray and the other to the trailing end. The claw-shaped tray openers slide under the folded end panels of the tray, lifting their edges up off of the tray floor. The lifting of the tray ends forces the tray sides to rotate upward into a vertical position. Finally, four RPC Lock Hammers, located near the the tray corners swing outwards to impact the tray's end panels near the tray corners. The tray-opening sequence with the tray openers and hammers is initiated by the **'RPC PUSHER FWD'** limit switch (Input I: 0.0/10). The impact of these hammers forces the four corners of the tray into their locked positions. The tray remains on the guide rails at this location until pushed forward and out of the machine by the advance of the next unopened tray.

The sensors and limit switches described above trigger a series of timers in the PLC which then trigger the following outputs:

- Valve SV11 / RPC Position Lock (Output O:2.0/11)
- Valve SV12 / Opener Lift (Output O.2:0/12)
- Valve SV13 / Opener Slide (Output O.2:0/13)
- Valve SV14 / RPC Lock Hammer (Output O.2:0/14)

3.1.5 Tray Stacking

As the tray arrives at the the infeed end of the stacker, it is detected by the **'TRAY DETECT'** sensor. If the **'CROSS PUSHER BACK'** limit switch has has signalled that the cross pusher is in its **HOME** position, the lift cylinder activates and the tray is lifted up between two spring-loaded side plates to make way for the arrival of the next tray underneath. It is held at this level while the lift descends to receive the next tray. When the tray stack has reached the number which has been preset in the tray opener's HMI, the cross pusher activates and pushes the stack out of the outfeed end of the stacker.

The sensors and limit switches described above trigger a series of timers in the PLC which then trigger the following outputs:

- Valve SV1 / Cross Pusher Valve (Output O:1.0/1)
- Valve SV2 / Lift Cylinder Valve (Output O.1:0/2)
- Valve SV3 / Trapped Guides Valve (Output O.1:0/3)

4 CONTROLS

The control station is located on the front of the main control panel. The station consists of the **'HMI'** screen, the **'MAIN DISCONNECT'** switch, the **'RESET'** button, and an **'EMERGENCY STOP'** button.

4.1 'MAIN DISCONNECT' Switch

The **'MAIN DISCONNECT'** switch turns the main electrical power to the machine **ON** or **OFF**. However, no power is applied to any of the machine's electrically or pneumatically powered components. The **'MAIN DISCONNECT'** switch can be locked in the **OFF** position for safety during maintenance operations.

Figure 4-1:'MAIN DISCONNECT' Switch

4.2 'RESET' Button

Touch the **'RESET'** button to turn on the control power and provide power to the machine's electrically or pneumatically powered components.

Figure 4-2: 'RESET' Button

4.3 'EMERGENCY STOP' Button(s)

The **'EMERGENCY STOP'** button immediately cuts off electrical and air supply to the machine, and halts all operations regardless of whether a tray is positioned in the tray-erecting process when the button is pushed **IN**.

Power is removed from the main air mechanisms. Restarting the machine after an emergency stop is more complex than with a regular **START**. Most likely, the tray that was being formed will be wasted.

After clearing any tray jams or damaged trays, the **'EMERGENCY STOP'** button should be released (twisted and pulled out) and the **'RESET'** button should be pushed for the machine to operate again.

Figure 4-3: 'EMERGENCY STOP' Button(s)

4.4 HMI and Chapter Organization

The HMI (Human Machine Interface) touch screen uses a **'Main Control'** screen and the **'Jog Control screen'** for primary control. The **'Setup Menu'** screen has eight subsections for adjusting and monitoring settings. The reference numbers at the top right of the screens indicate chapter section numbers.

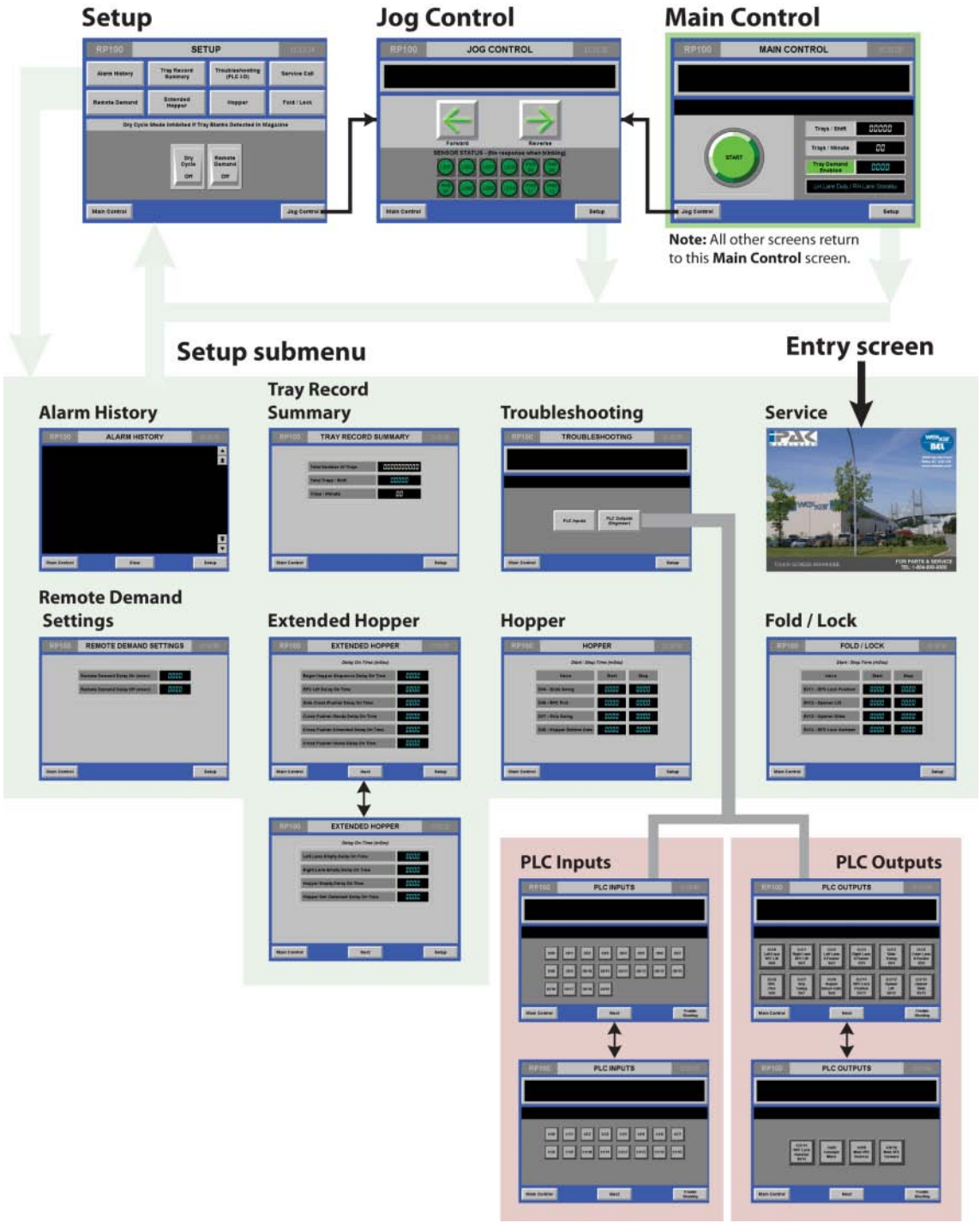


Figure 4-4: HMI and Chapter Organization

4.5 'SERVICE CALL' Screen

When the machine is turned on, the opening screen displays a photo of the Wexxar factory and contact information. Touch this screen anywhere to bring up the HMI's **'Main Control'** screen.

You can bring up this screen when the machine is not operating by pressing the '**SETUP'** button located at the lower right corner of any screen. When the **'Setup Menu'** screen appears, press the **'SERVICE CALL'** button to display the screen as shown in *Figure 4-5*.

Figure 4-5: 'SERVICE CALL' Screen

The RP-100 features an Allen Bradley HMI (human-machine interface) touchscreen display instead of mechanical controls. Many of these surfaces, such as the **'START'** button operate as though they were mechanical buttons. They will be referred to as buttons in this manual section.

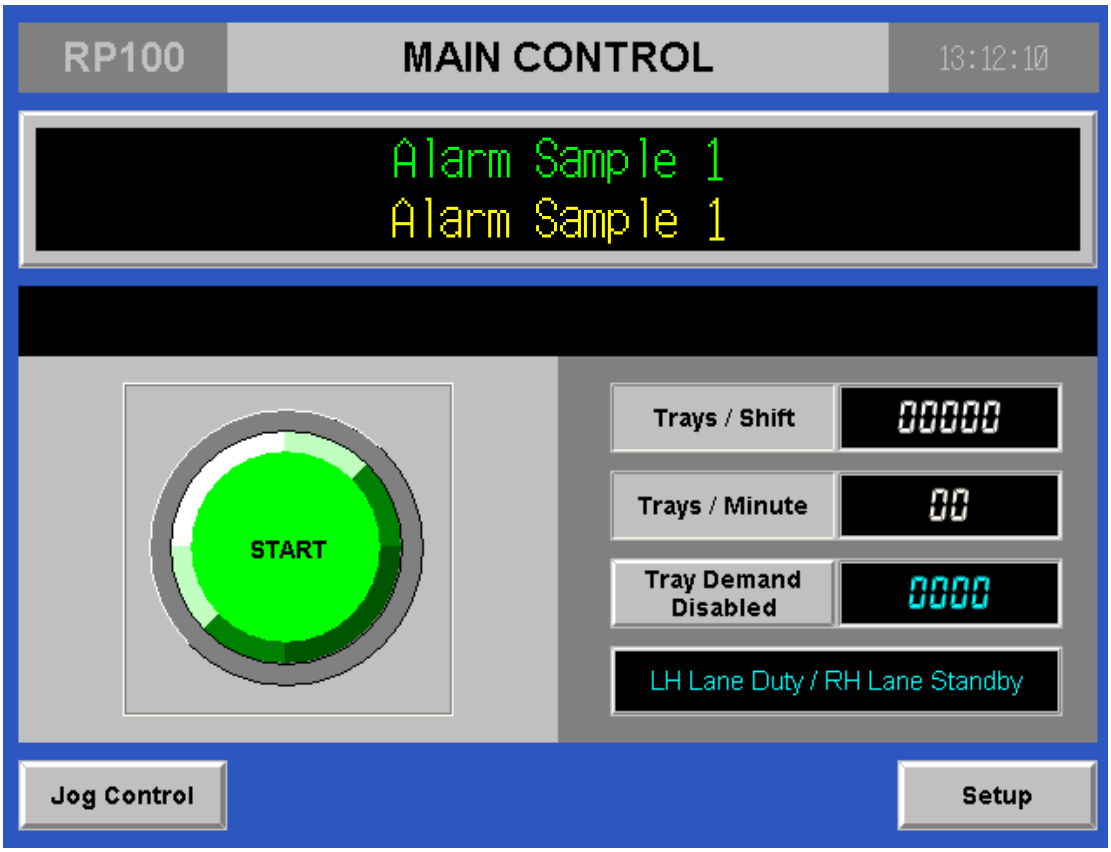


Figure 4-6: 'Main Control' Screen

4.6 'Main Control' Screen

On the **'Main Control'** screen are buttons, toggle switches, and status indicators required for the basic operation of the machine. The interactive controls on this screen include the '**START/STOP'** button, the **'TRAY DEMAND DISABLED'** button and display and the **'DUTY LANE'** toggle switch. This screen also includes buttons which give the operator access to the '**Jog Control'** and **Setup'** screens.

Figure 4-7: 'MACHINE ALARM' Status Indicator

4.6.1 'MACHINE ALARM' Status Indicator

At the top of many of the HMI screens is the green-text machine **'MACHINE ALARM'** status indicator. This status indicator changes to red during an alarm state. A message in the status indicator indicates which of the machine's fault conditions has triggered the alarm. When the fault condition has been remedied, the alarm message will disappear and the green **NO CURRENT ALARMS** status message will appear.

Figure 4-8: 'MACHINE ALARM' Status Indicator

4.6.2 'MACHINE WARNING' Status Indicator

Below the **'MACHINE ALARM'** status indicator on many of the HMI screens is a green **'MACHINE WARNING'** status indicator. The screen changes to yellow during a warning state. A message in the window indicates which of the machine's fault conditions has triggered the warning. When the fault condition has been remedied, the warning message will disappear, and the green **NO CURRENT WARNINGS** status message will reappear.

4.6.3 'START/STOP' Button

On the left-hand side of the **'Main Control'** screen is the **'START'** button. Touching this button starts the **CYCLE** of the machine to erect trays continually. If the **'REMOTE DEMAND'** sensor is **ON**, automatic tray erecting will stop when erected trays block the sensor on the outfeed conveyor and will resume when they move downstream away from the sensor. Once touched, the **'START'** button will be replaced with a **'STOP'** button. Touching the **'STOP'** button stops the automatic machine cycle. If the **'STOP'** button is touched while the machine is in the middle of a tray forming cycle, the machine finishes forming the tray, and then halts all further operation, returning the mechanisms to their **HOME** positions.

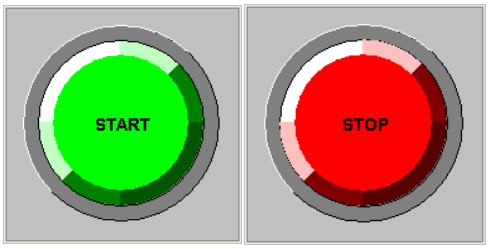


Figure 4-9: 'START/STOP' Button

4.6.4 'VALUE' Buttons and Displays

Throughout the remainder of the Controls Section of the manual, the screen images includes **'VALUE'** symbols. Any of these symbols with blue values are touch-sensitive and function as buttons. Any with white numerals are displays and are not touch-senstive. The function of each will be made clear in the descriptions accompanying them.

Figure 4-10: 'VALUE' Button and Display

4.6.5 'TRAYS per SHIFT' Display

In the upper right area of the **'Main Control'** screen is the **'TRAY'S PER SHIFT'** button and display. Its value cannot be changed other than being reset to 0. Touch the value in this display to reduce the **'TRAYS PER SHIFT'** value to zero.

Figure 4-11: 'TRAYS PER SHIFT' Display

4.6.6 'TRAYS PER MINUTE' Display

On the right-hand side of the **'Main Control'** screen is the **'TRAYS PER MINUTE'** display. It is not touch-sensitive and cannot be changed by the operator.

Figure 4-12: 'TRAYS per MINUTE' Display

4.6.7 ‘’Numeric Keypad’ Window

The numeric keypad is used to change the values of many of the displays on the machine’s interactive screens. Touching the numerals of any touch-sensitive value brings up the **‘Numeric Keypad’** window. Touch the numerals to set the desired value in the field in the top of the keypad. Touch the **‘CLEAR’** button to delete any value entered. Store the new value and close the window by touching the **‘ENTER’** button. Touch the **‘CANCEL’** button to close the **‘Numeric Keypad’** window without making any changes.

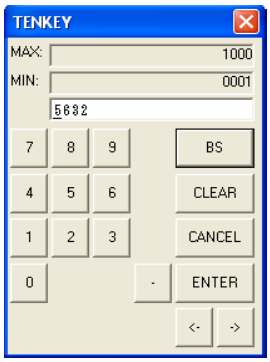


Figure 4-13: ‘Numeric Keypad’ Window

4.6.8 ‘TRAY DEMAND’ Toggle Switch and Display

On the right-hand side of the **‘Main Control’** screen is the **‘TRAY DEMAND’** toggle switch and display. Touch the gray **‘TRAY DEMAND DISABLED’** button to enable the tray demand feature which allows the machine to run a set number of trays. Touching the value in the display will bring up a **‘Tenkey Keypad’** window which will enable the operator to run a set number of trays. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **‘ENTER’** button.

Figure 4-14: ‘TRAY DEMAND’ Toggle Switch and Display

4.6.9 ‘DUTY LANE’ Toggle Switch

In the lower right of the **‘Main Control’** screen is the **‘DUTY LANE’** toggle switch. Touchng the **LH Lane Duty / RH Lane Standby** toggle switch will toggle the display from black to green and switch the duty lane from the left lane to the right lane. The display changes to read **Right Lane Duty / Left Lane Standby** and the machine draws the trays from the right hand lane when that lane is not empty. When the right lane becomes empty, trays from the right-hand lane are automatically loaded. Touch the green **‘RIGHT LANE DUTY / LEFT LAND STANDBY’** toggle switch to switch the duty lane back to the left lane.

Figure 4-15: ‘DUTY LANE’ Toggle Switch

4.6.10 ‘JOG CONTROL’ Button

The **‘JOG CONTROL’** button is located on the ‘**Main Control’** screen at the lower right when the machine is stopped. Touch this button to open the **‘Jog Control’** screen.

Figure 4-16: ‘JOG CONTROL’ Button

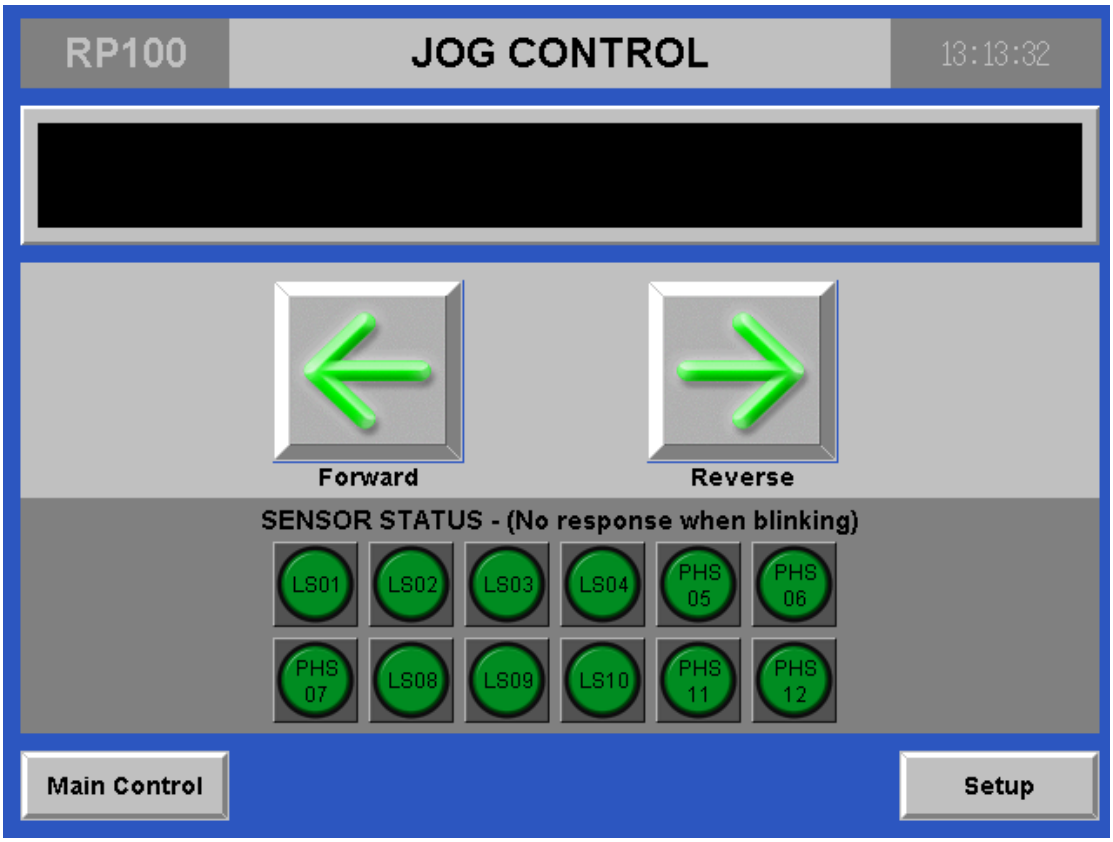


Figure 4-17: 'Jog Control' Screen

4.7 'Jog Control' Screen

The **'Jog Control'** screen contains the **'(JOG) REVERSE'** and **'(JOG) FORWARD'** buttons. In the lower area of the **'Jog Control'** screen, twelve sensor status indicators show which sensors are activated during each step in the **JOG CYCLE**.

4.7.1 '(JOG) REVERSE' and '(JOG) FORWARD' Buttons

In the upper right and left of the **'Jog Control'** screen are the **'(JOG) REVERSE'** and **'(JOG) FORWARD'** buttons. To jog the machne forward, touch the **'(JOG)' FORWARD'** button. To jog the machne in reverse, touch the **'(JOG)' REVERSE'** button.

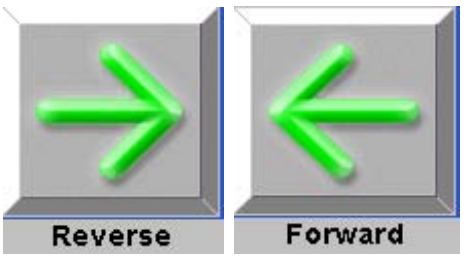


Figure 4-18: '(JOG) REVERSE' and '(JOG) FORWARD' Buttons

4.7.2 'SENSOR' Status indicator

The **'SENSOR'** status indicators show which sensors are activated at each step as the machine is jogged in forward or reverse. A blinking **'SENSOR'** status indicator means that there is no response from a particular sensor. Touching the **'SENSOR'** status indicator will bring up the 'Error Identification' screen with a photo of the sensor and its location on the machine. Touching the photo will return the touch screen to the **'Jog Control'** screen.

Figure 4-19: 'SENSOR' Status indicator

4.7.3 'MAIN CONTROL' Button

The **'MAIN CONTROL'** button is located on the bottom left-hand corner of many of the HMI's display screens. Touch the **'MAIN CONTROL'** button to return to the **'Main Control'** screen..

Figure 4-20: 'MAIN CONTROL' Button

4.7.4 'SETUP' Button

The **'SETUP'** button appears on the bottom right-hand corner of many of the HMI's display screens. Touch this button to display the '**Setup'** screen. **NOTE:** While the machine is cycling, this button will not display.

Figure 4-21: 'SETUP' Button

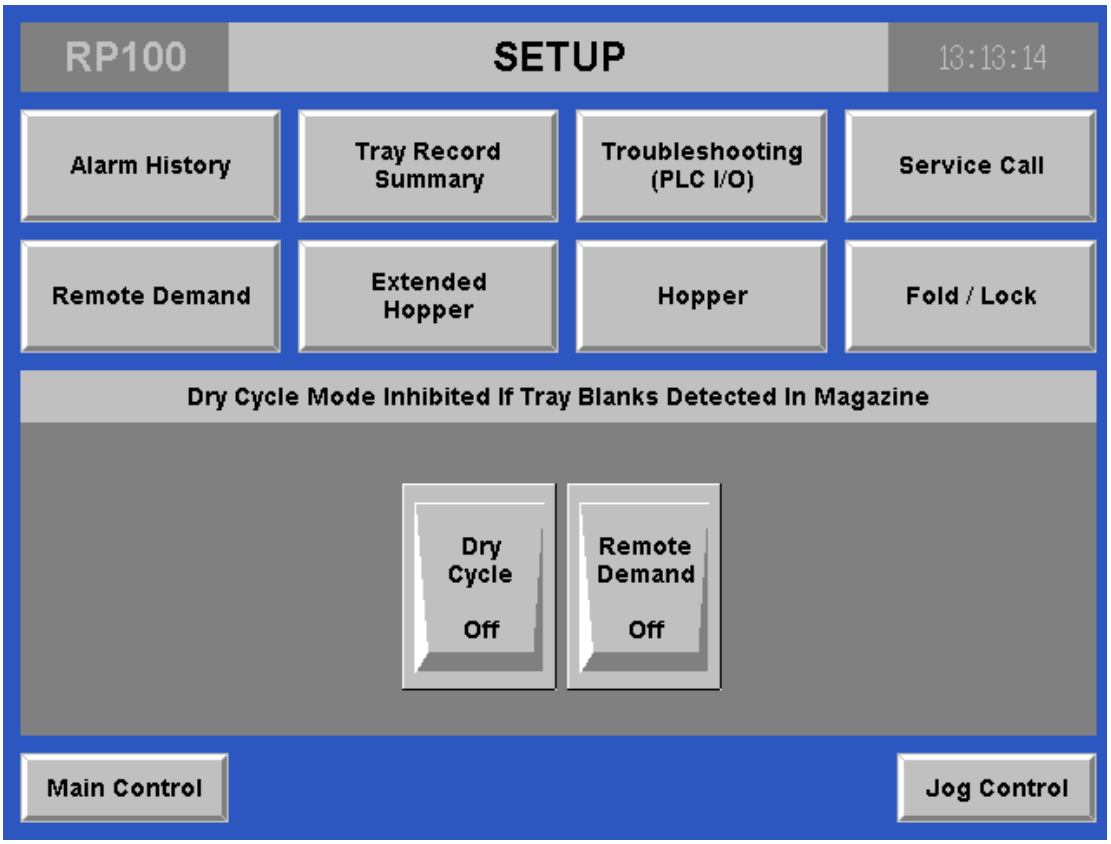


Figure 4-22: 'Setup' Screen

4.8 'Setup' Screen

The '**Setup**'screen provides access to many features related to machine diagnostics and tuning and setting adjustments. It also includes toggle switches for turning the dry cycle and remote demand features **ON** and **OFF**. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the **'JOG CONTROL'** button in the bottom right-hand corner to return to the **'JOG CONTROL'** screen.

4.8.1 'DRY CYCLE' Toggle Switch

For the purposes of troubleshooting, machine operators may choose to operate the machine without any try blanks loaded. This function is called the **DRY CYCLE**. To enable the Dry Cycle operation, touch the gray **'DRY CYCLE OFF'** toggle switch located in the lower center of the **'Setup'** screen. The toggle switch will then change to the green **'DRY CYCLE ON'** toggle switch, at which point the machine can operate without any tray blanks loaded.

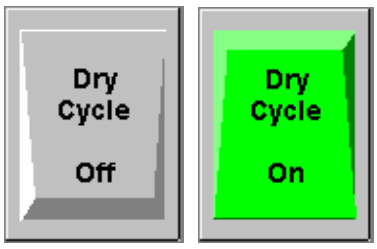


Figure 4-23: 'DRY CYCLE' Toggle Switch

4.8.2 'DRY CYCLE ACTIVE' Status Indicator

Figure 4-24: 'DRY CYCLE ACTIVE' Status Indicator

When the machine is in **'DRY CYCLE'** operation, a small **'DRY CYCLE ACTIVE'** status indicator appears below the **'DRY CYCLE'** toggle switch. It will display in the same location on the **'Main Control'** screen.

4.8.3 'REMOTE DEMAND' Toggle Switch

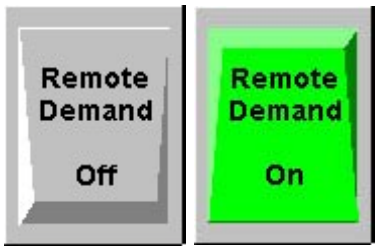


Figure 4-25: 'REMOTE DEMAND' Toggle Switch

Located in the lower right area of the **'Setup'** screen, this toggle switch turns the **'REMOTE DEMAND'** sensor **ON** or **OFF**. The **'REMOTE DEMAND'** sensor is used to halt machine operation if trays are not moving away from the machine on the downstream conveyor, thus avoiding tray jams. It also matches tray forming output to the rate of consumption by downstream processes. To enable the **'REMOTE DEMAND'** sensor, touch the gray **'REMOTE DEMAND OFF'** toggle switch which will then turn green and display the text **'REMOTE DEMAND ON'**.

4.8.4 'REMOTE DEMAND ON' Status Indicator

Figure 4-26: 'REMOTE DEMAND ON' Status Indicator

When the **'REMOTE DEMAND'** sensor has been turned **ON**, a small **'REMOTE DEMAND ON'** status indicator appears below the **'REMOTE DEMAND'** toggle switch. It will display in the same location on the **'Main Control'** screen.

4.8.5 'ALARM HISTORY' Button

Figure 4-27: 'ALARM HISTORY' Button

Located in the upper left-hand corner of the **'Setup'** screen is the **'ALARM HISTORY'** button. Touch this button to bring up the **'Alarm History'** screen.

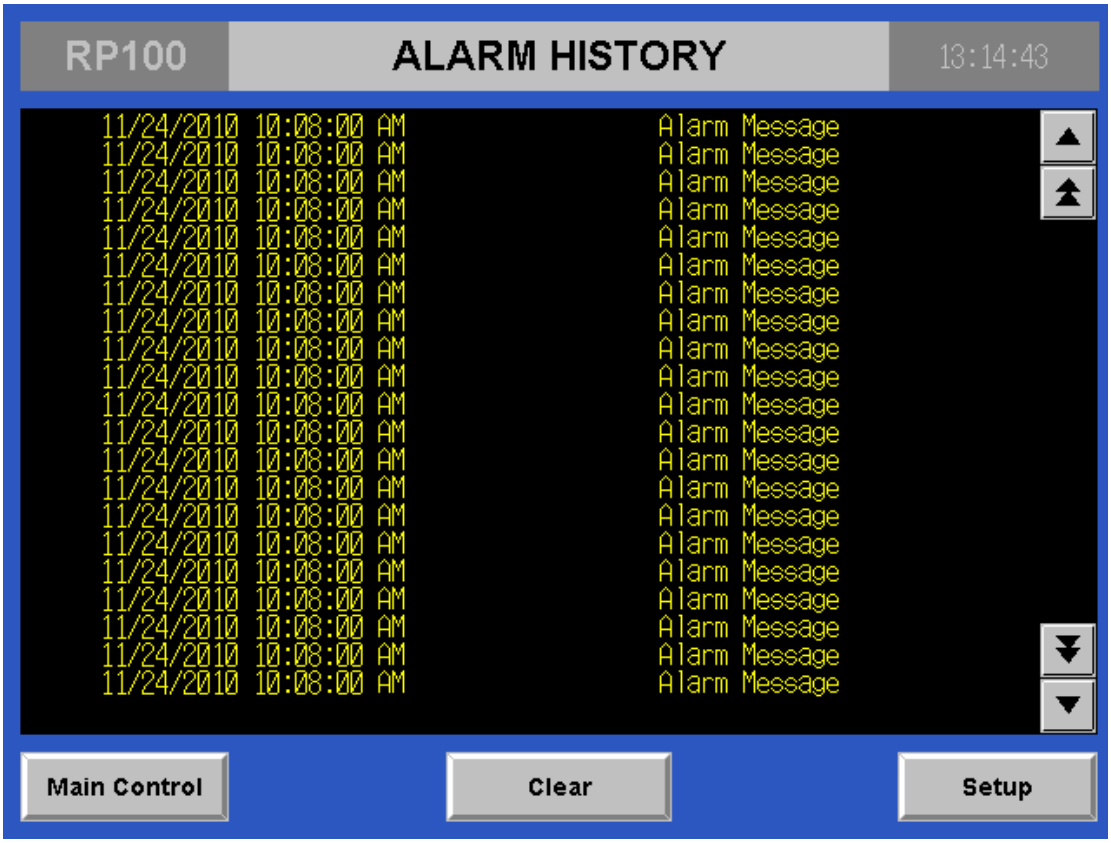


Figure 4-28: 'Alarm History' Screen

4.9 'Alarm History' Screen

The **'Alarm History'** screen displays the time, date, and identity of each alarm condition that the machine has experienced. This screen is useful in determining common problems and can assist the operator in troubleshooting or making machine adjustments. Touch the **'SETUP'** button in the bottom right-hand corner of the **'Alarm History'** screen to bring up the **'Setup'** screen, or touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen.

4.9.1 'SCROLL' Buttons

The **scroll** buttons, located at the right top and bottom of the screen, are used to move up or down through a alarm history messages. The single arrow scrolls one line at a time while the double arrow scrolls one screen at a time.

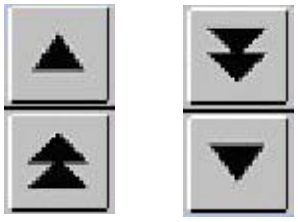


Figure 4-29: 'SCROLL' Buttons

4.9.2 'CLEAR' Button

Figure 4-30: 'CLEAR' Button

Touch the **'CLEAR'** button, located at the bottom center center of the **'Alarm History'** screen to erase accumulated alarm messages. Authorized users may clear this data upon entering the password on the **Keyboard** that appears. Note that touching this button will bring up a **'Password'** window.

4.9.3 'Password' Window

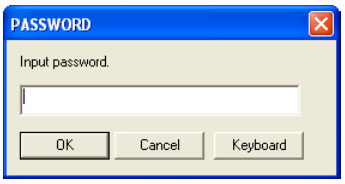


Figure 4-31: 'Password' Window

Touch the blank field in the **'Password'** window to bring up an **'Alphanumeric keypad'** window. Type the required password: 9300. To enter the password into the **'Password'** window, touch the **'ENTER'** key Then touch the **'OK'** button. If you enter an invalid password, an error message will display. Touch '**OK'** to remove the error message and input a valid password. **NOTE:** As soon as the password is entered and the **'OK'** button is touched, the **'Alarm History'** screen will cleared.

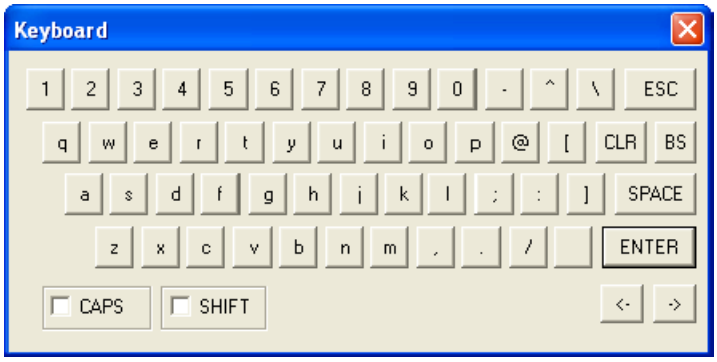


Figure 4-32: 'Alphanumeric Keypad' Window

4.9.4 'Alphanumeric Keypad' Window

Touch the buttons in the **'Alphanumeric Keypad'** window to set the username and the password into the field at the top of the window. Store the username and password and close the window by touching the **'ENTER'** button.

4.9.5 'TRAY RECORD SUMMARY' Button

Figure 4-33: 'TRAY RECORD SUMMARY' Button

In the upper left area of the **'Setup'** screen is the **'TRAY RECORD SUMMARY'** button. Touch this button to bring up the **'Tray Record Summary'** screen.

Figure 4-34: 'Tray Record Summary' Screen

4.10 'Tray Record Summary' Screen

The **'Tray Record Summary'** screen is used to check the total number of trays formed by the machine or or the machine's speed in trays per minute or to reset the machine's Total Trays/Shift value. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the **'SETUP'** button in the bottom right-hand corner return to the **'Setup'** screen.

Figure 4-35: 'TOTAL NUMBER OF TRAYS' Display

4.10.1 'TOTAL NUMBER OF TRAYS' Display

In the top of the **'Tray Record Summary'** screen is the **'TOTAL NUMBER OF TRAYS'** display. This value indicates the total number of trays which the machine has formed. The value changes automatically as each tray is made. The value is not touch-sensitive and cannot be altered or reset.

Figure 4-36: 'TOTAL TRAYS PER SHIFT' Button and Display

4.10.2 'TOTAL TRAYS PER SHIFT' Button and Display

In the upper center of the **'Tray Record Summary'** screen is the **'TOTAL TRAYS PER SHIFT'** button and display. This value is used to count the number of trays made since the display's value was last reset. Touch the value in the display to reset the value to zero.

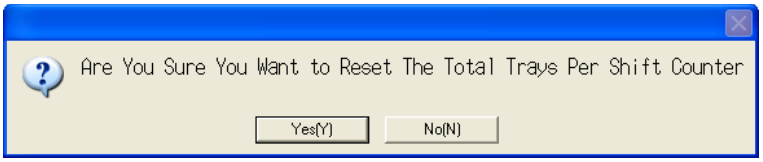


Figure 4-37: 'Total Trays Per Shift' Confirmation Window

4.10.3 'Total Trays Per Shift' Confirmation Window

When the value in the **'Total Trays Per Shift'** button and display is touched, a confirmation window will appear. Touch the **'YES'** button in the confirmation window to reset the Total Trays per Shift value to zero

4.10.4 'TRAYS per MINUTE' Display

Figure 4-38: 'TRAYS per MINUTE' Display

In the center of the **'Tray Record Summary'** screen is the **'TOTAL TRAYS/MINUTE'** display. This value indicates the machine's production speed in trays per minute. This value is not touch-sensitive and cannot be reduced or reset.

4.10.5 'TROUBLESHOOTING (PLC I/O)' Button

The **'TROUBLESHOOTING (PLC I/O)'** button is found on the upper right area of the **'Setup'** screen, to the right of the **'TRAY RECORD SUMMARY'** button. Touch the **'TROUBLESHOOTING'** button to be taken to the **'Troubleshooting'** screen.

Figure 4-39: 'TROUBLESHOOTING (PLC I/O)' Button

‘

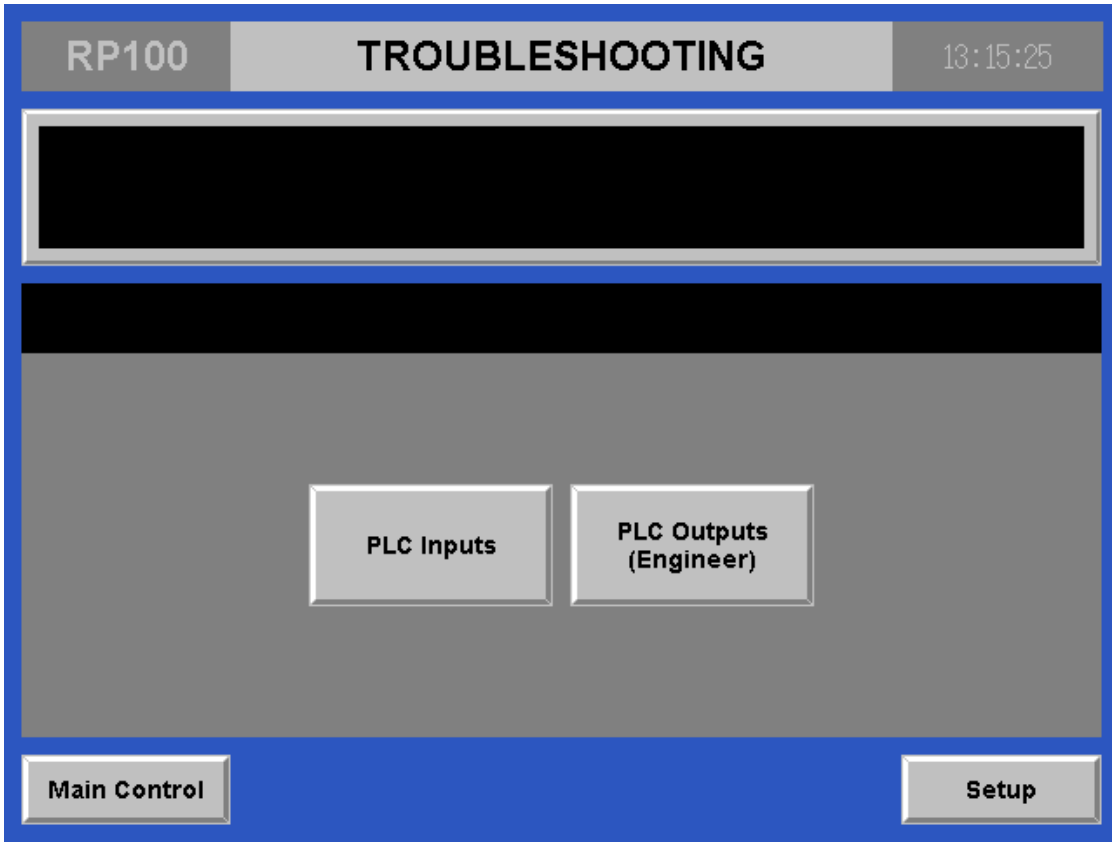


Figure 4-40: ‘Troubleshooting’ Screen

4.11 ‘Troubleshooting’ Screen

On the center of the **‘Troubleshooting’** screen are the **‘PLC INPUTS’** and the **‘PLC OUTPUTS (ENGINEER)’** buttons. Touch the **‘MAIN CONTROL’** button in the bottom left-hand corner of the screen to return to the **‘Main Control’** screen or the **‘SETUP’** button in the bottom right-hand corner to bring up the **‘Setup’** screen.

4.11.1 ‘PLC INPUTS’ Button

In the left center area of the **‘Troubleshooting’** screen is the **‘PLC INPUTS’** button. Touch this button to access the first **‘PLC Inputs’** screen.

Figure 4-41: ‘PLC INPUTS’ Button

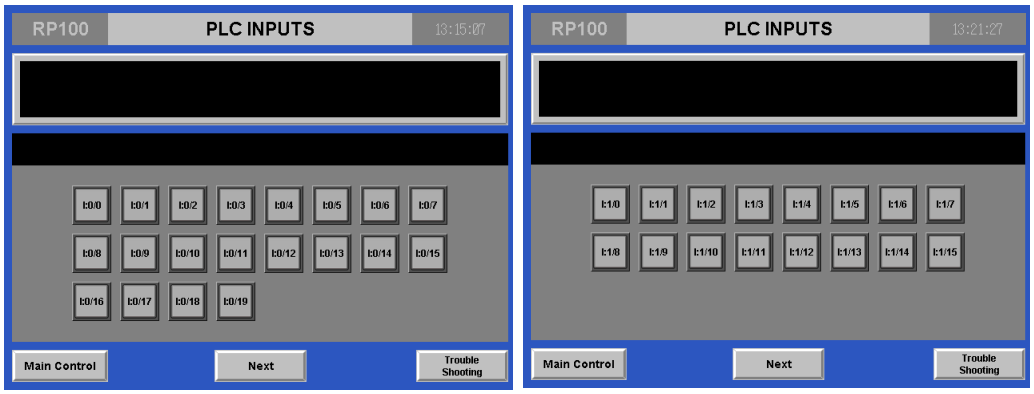


Figure 4-42: 'PLC Inputs' Screens

4.12 'PLC Inputs' Screens

The **'PLC Inputs'** screens display thirty-six machine PLC Inputs status indicators. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the **'TROUBLESHOOTING'** button in the bottom right-hand corner to return to the **'Troubleshooting'** screen.

4.12.1 'PLC INPUT' Status Indicators

Figure 4-43: 'PLC INPUT' Status Indicators

When the machine is jogged through its cycle, as each machine input is triggered, the corresponding **'PLC INPUT'** status indicator will be momentarily change from gray to yellow.

4.12.2 'NEXT' Button

Figure 4-44: 'NEXT' Button

Touch the **'NEXT'** button in the bottom center of the screen to access the next **'PLC Inputs'** screen.

4.12.3 PLC OUTPUTS (ENGINEER)' Button

Figure 4-45: PLC OUTPUTS (ENGINEER)' Button

In the right center area of the **'Troubleshooting'** screen is the **'PLC OUTPUTS (ENGINEER)'** button. Touch this button to access the first **'PLC Outputs'** screen. The password is required to access this screen.

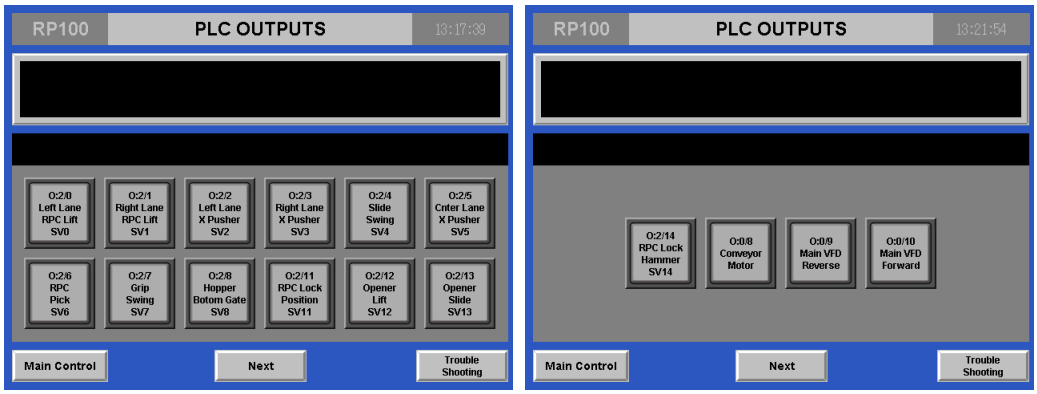


Figure 4-46: 'PLC Outputs' Screens

4.13 'PLC Outputs' Screens

The **'PLC Outputs'** screens display sixteen buttons. Each of these buttons controls a PLC output directly. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the **'TROUBLESHOOTING'** button in the bottom right-hand corner to return to the **'Troubleshooting'** screen.

4.13.1 PLC OUTPUT' Buttons and Status Indicators

Figure 4-47: PLC OUTPUT' Buttons and Status Indicators

To test any of the PLC outputs, **STOP** the machine, and remove any unformed trays from the hopper. Then touch the button for that output. When a button is touched, it will illuminate, and that machine component will function through its cycle. If it does not function, inspect and repair the component.

4.13.2 'SERVICE CALL' Button

Figure 4-48: 'SERVICE CALL' Button

In the upper right-hand corner of the **'Troubleshooting'** screen is the **'SERVICE CALL'** button. Touch this button to bring up the **'Service'** screen which contains contact information for the IPak Service Department.

4.13.3 'REMOTE DEMAND' Button

Figure 4-49: 'REMOTE DEMAND' Button

In the upper left area of the **'Setup'** screen is the **'REMOTE DEMAND'** button. Touch this button to bring up the **'Remote Demand Settings'** screen.

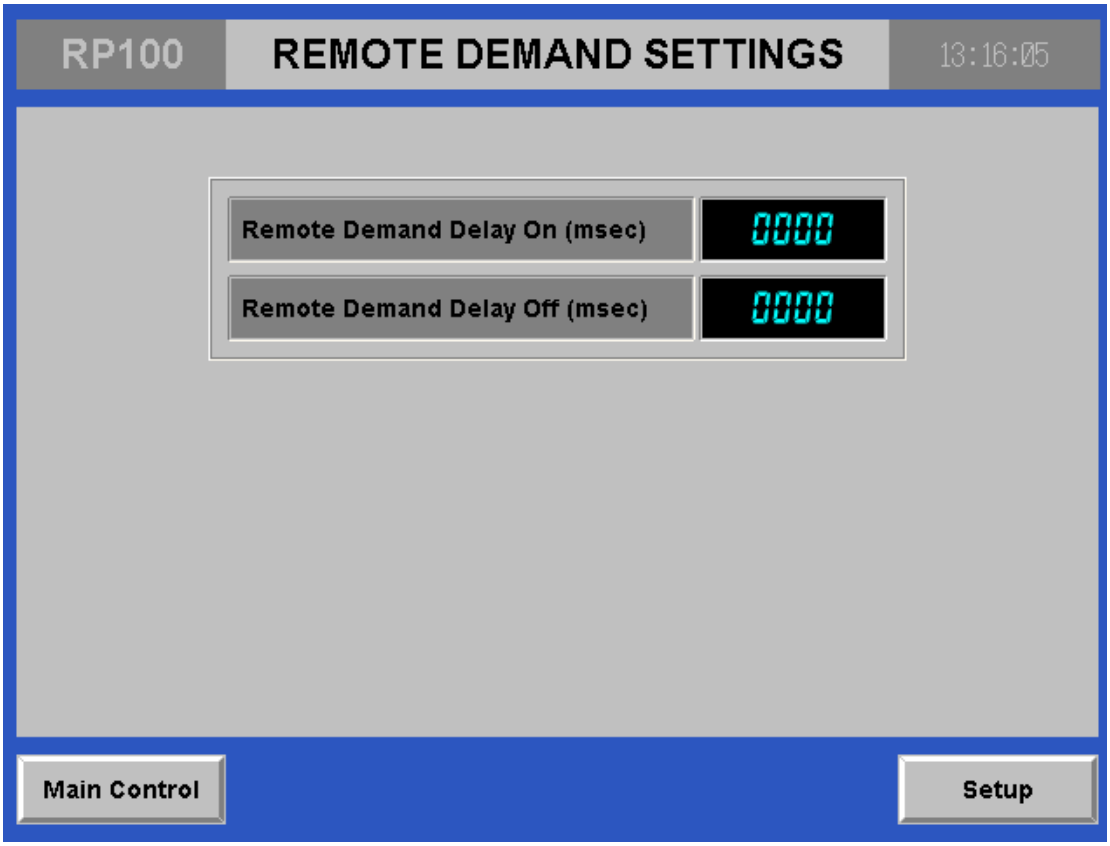


Figure 4-50: 'Remote Demand Settings' Screen

4.14 'Remote Demand Settings' Screen

The **'Remote Demand Settings'** screen is used to set the Remote Demand Delay **ON** and Remote Demand Delay **OFF** values. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the **'SETUP'** button in the bottom right-hand corner to return to the **'Setup'** screen.

Figure 4-51: 'REMOTE DEMAND DELAY' Buttons and Displays

4.14.1 'REMOTE DEMAND DELAY' Buttons and Displays

In the top center of the **'Remote Demand Settings'** screen is the **'REMOTE DEMAND DELAY ON'** buttons and displays. This button and display indicates the amount of time, in milliseconds, that the machine will wait after the **'REMOTE DEMAND'** sensor has been blocked before the machine stops. Under the **'REMOTE DEMAND DELAY ON'** button and display is the **'REMOTE DEMAND DELAY OFF'** button and display. This button and display indicates the amount of time, in milliseconds, after the **'REMOTE DEMAND'** sensor has been cleared before the the machine will resume cycling. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

4.14.2 'EXTENDED HOPPER' Button

In the upper left area of the **'Setup'** screen is the **'EXTENDED HOPPER'** button. Touch this button to bring up the first **'Extended Hopper'** screen.

Figure 4-52: 'EXTENDED HOPPER' Button

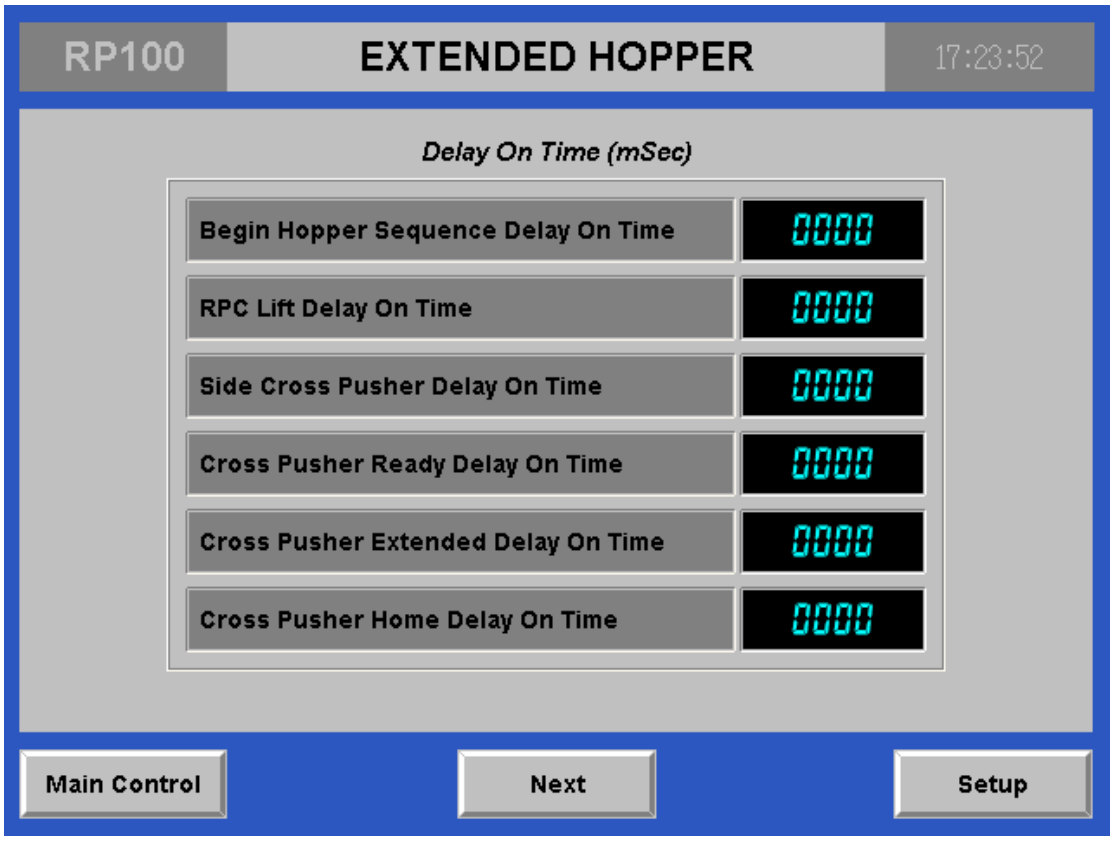


Figure 4-53: 'Extended Hopper 1' Screen

4.15 'Extended Hopper 1' Screen

The **'Extended Hopper 1'** screen includes the first six of the timings for the machine's extended hopper. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the **'SETUP'** button in the bottom right-hand corner to bring up the **'Setup'** screen. Touch the **'NEXT'** button to bring up the **'Extended Hopper 2'** screen.

Figure 4-54: 'BEGIN HOPPER SEQUENCE DELAY ON TIME' Button and Display

4.15.1 'BEGIN HOPPER SEQUENCE DELAY ON TIME' Button and Display

The first of the Extended Hopper buttons and displays is the **'BEGIN HOPPER SEQUENCE DELAY ON TIME'** button and display. It indicates, in milliseconds, the delay time after which either of the hopper lanes recognizes that a tray stack is ready for lateral side pushing into the hopper's center lane. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)' button.

Figure 4-55: 'RPC LIFT DELAY ON TIME' Button and Display

4.15.2 'RPC LIFT DELAY ON TIME' Button and Display

The second of the Extended Hopper buttons and displays is the **'RPC LIFT DELAY ON TIME'** button and display. It indicates, in milliseconds, the delay time after the tray stack is ready for lateral side pushing before the stack is lifted in the hopper. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-56: 'SIDE CROSS PUSHER DELAY ON TIME' Button and Display

4.15.3 'SIDE CROSS PUSHER DELAY ON TIME' Button and Display

The third of the Extended Hopper buttons and displays is the **'SIDE CROSS PUSHER DELAY ON TIME'** button and display. It indicates, in milliseconds, the delay time after the tray stack is lifted in the hopper before the stack is cross-pushed laterally into the center of the hopper. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-57: 'CROSS PUSHER READY DELAY ON TIME' Button and Display

4.15.4 'CROSS PUSHER READY DELAY ON TIME' Button and Display

The fourth of the Extended Hopper buttons and displays is the **'CROSS PUSHER READY DELAY ON TIME'** button and display. It indicates, in milliseconds, the delay after the tray stack is moved to the center lane before it is cross-pushed longitudinally towards the tray erecting area. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-58: 'CROSS PUSHER EXTENDED DELAY ON TIME' Button and Display

4.15.5 'CROSS PUSHER EXTENDED DELAY ON TIME' Button and Display

The fifth of the Extended Hopper buttons and displays is the **'CROSS PUSHER EXTENDED DELAY ON TIME'** button and display. It indicates, in milliseconds, the delay after the tray stack is cross-pushed longitudinally before the cross-pusher retracts to its home position. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-59: 'CROSS PUSHER HOME DELAY ON TIME' Button and Display

4.15.6 'CROSS PUSHER HOME DELAY ON TIME' Button and Display

The sixth of the Extended Hopper buttons and displays is the **'CROSS PUSHER HOME DELAY ON TIME'** button and display. It indicates, in milliseconds, the delay after the longitudinal cross-pusher returns to its home position before it is ready to receive the next stack of closed trays. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

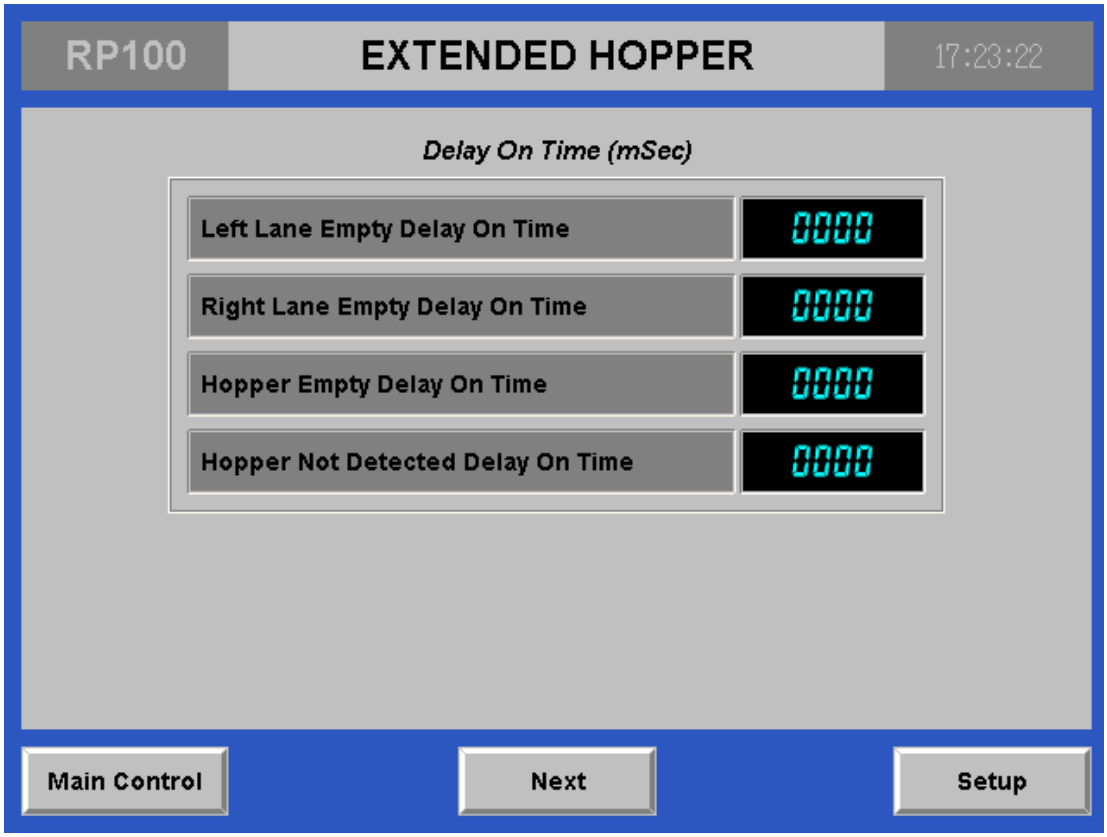


Figure 4-60: 'Extended Hopper 2' Screen

4.16 'Extended Hopper 2' Screen

The **'EXTENDED HOPPER 2'** screen includes the remaining four timings for the machine's extended hopper. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the **'SETUP'** button in the bottom right-hand corner to bring up the **'Setup'** screen. Touch the **'NEXT'** button to bring up the next **'Extended Hopper 1'** screen.

Figure 4-61: 'LEFT LANE (and) RIGHT LANE EMPTY DELAY ON TIME' Buttons and Displays

4.16.1 'LEFT LANE (and) RIGHT LANE EMPTY DELAY ON TIME' Buttons and Displays

The seventh and eighth of the Extended Hopper buttons and displays are the **'LEFT LANE EMPTY DELAY ON TIME'** and the **'RIGHT LANE EMPTY DELAY ON TIME'** buttons and displays. They indicate, in milliseconds, the delay time after the **'LEFT LANE RPC DETECT' or 'RIGHT LANE RPC DETECT'** sensor is cleared before the that lane is recognized as having no trays and trays are taken from the opposite lane. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-62: 'HOPPER EMPTY DELAY ON TIME' Button and Display

4.16.2 'HOPPER EMPTY DELAY ON TIME' Button and Display

The ninth of the Extended Hopper buttons and displays is the **'HOPPER EMPTY DELAY ON TIME'** button and display. It indicates, in milliseconds, the delay time after the **'HOPPER EMPTY'** sensor is cleared before the hopper is recognized as having no trays. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-63: 'HOPPER NOT DETECTED DELAY ON TIME' Button and Display

4.16.3 'HOPPER NOT DETECTED DELAY ON TIME' Button and Display

The tenth of the Extended Hopper buttons and displays is the **'HOPPER NOT DETECTED DELAY ON TIME'** button and display. It indicates, in milliseconds, the delay time after which the hopper has been empty for a period of time set in the HMI. Touching the numerals of this touch-sensitive value will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

4.16.4 'HOPPER' Button

In the upper right area of the **'Setup'** screen is the **'HOPPER'** button. Touch this button to bring up the **'Hopper'** screen.

Figure 4-64: 'HOPPER' Button

Figure 4-65: 'Hopper' Screen

4.17 'Hopper' Screen

The **'Hopper'** screen includes four timings for the machine's hopper. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the **'SETUP'** button in the bottom right-hand corner to bring up the **'Setup'** screen.

Figure 4-66: 'SLIDE SWING' Buttons and Displays

4.17.1 'SLIDE SWING' Buttons and Displays

The first pair of the Hopper buttons and displays are those of the **'SLIDE SWING'**. They indicate, in milliseconds, the start and stop times for the hopper's Slide Swing. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-67: 'RPC PICK' Buttons and Displays

4.17.2 'RPC PICK' Buttons and Displays

The second pair of the Hopper buttons and are those of the **'RPC PICK'**. They indicate, in milliseconds, the start and stop times for the hopper's RPC Pick. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-68: 'GRIP SWING' Buttons and Displays

4.17.3 'GRIP SWING' Buttons and Displays

The third pair of the Hopper buttons and are those of the **'GRIP SWING'**. They indicate, in milliseconds, the start and stop times for the hopper's Grip Swing. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-69: 'HOPPER BOTTOM GATE' Buttons and Displays

4.17.4 'HOPPER BOTTOM GATE' Buttons and Displays

The fourth pair of the Hopper buttons and are those of the **'HOPPER BOTTOM GATE'**. They indicate, in milliseconds, the start and stop times for the Hopper's Bottom Gate. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

4.17.5 'FOLD /LOCK' Button

In the upper right side of the **'Setup'** screen is the **'FOLD / LOCK'** button. Touch this button to bring up the first **'Fold / Lock'** screen.

Figure 4-70: 'HOPPER' Button

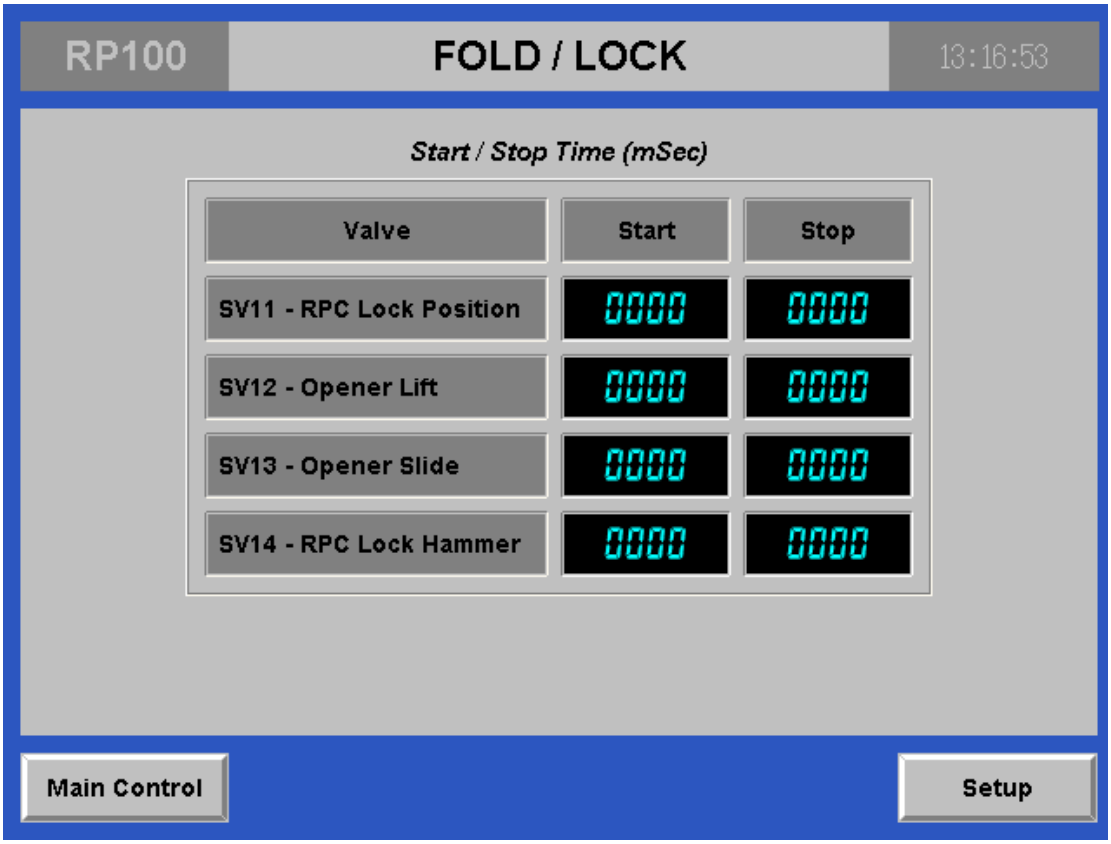


Figure 4-71: 'Fold / Lock' Screen

4.18 'Fold / Lock' Screen

The **'Fold / Lock'** screen includes four timings for the machine's tray-folding and tray-locking mechanisms. Touch the **'MAIN CONTROL'** button in the bottom left-hand corner of the screen to return to the **'Main Control'** screen or the**'SETUP'** button in the bottom right-hand corner to bring up the **'Setup'** screen.

'

Figure 4-72: 'RPC LOCK POSITION' Buttons and Displays

4.18.1 'RPC LOCK POSITION' Buttons and Displays

The first pair of Fold / Lock buttons are those of the **'RPC LOCK POSITION'**. They indicate, in milliseconds, the start and stop times for the RPC Lock. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER (↵)'** button.

Figure 4-73: 'OPENER LIFT' Buttons and Displays

4.18.2 'OPENER LIFT' Buttons and Displays

The second pair of Fold / Lock buttons and are those of the **'OPENER LIFT'**. They indicate, in milliseconds, the start and stop times for the Opener Lift. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-74: 'OPENER SLIDE' Buttons and Displays

4.18.3 'OPENER SLIDE' Buttons and Displays

The third pair of Fold / Lock buttons and are those of the **'OPENER SLIDE'**. They indicate, in milliseconds, the start and stop times for the Opener Slide. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

Figure 4-75: 'RPC LOCK HAMMER' Buttons and Displays

4.18.4 'RPC LOCK HAMMER' Buttons and Displays

The fourth pair of Fold / Lock buttons and are those of the **'RPC LOCK HAMMER'** buttons and displays. They indicate, in milliseconds, the start and stop times for the RPC Lock Hammer. Touching the numerals of either of these touch-sensitive values will bring up a ten-key keypad. Touch the numerals of the keypad to set the desired value in the field at the top of the keypad. Store the new value and close the keypad by touching the **'ENTER** (↵)**'** button.

5 OPERATING PROCEDURES

5.1 General Outline

During normal operation, the operator should maintain an adequate flattened trays. In addition to the above responsibilities, the operator must also be alert to the possible development of malfunctions. An important factor in achieving optimum performance of the RP-100 system is the quality control of the trays The operator should be particularly alert to the condition of these trays.

5.2 Machine Start-Up

Before the machine can start forming trays, it must be powered up. To do this:

1. Turn **ON** the **'MAIN DISCONNECT'** switch and turn **ON** the air to the machine
2. Close all guard doors, and ensure that all the **'EMERGENCY STOP'** buttons are not pressed
3. Press the **'RESET'** button on the control panel.

In this mode, the machine will be powered up but will not be able to erect trays.

Before beginning production operation, it is recommended that the operator slowly jog the machine until it has made a few cycles to ensure everything is operating smoothly. To do this, on the HMI:

1. Touch the **'JOG'** button on the HMI screen.
2. Touch the **'START'** button on the HMI screen.

The machine will move through the **JOG** cycle only while the **'START'** button is touched. Ensure that all of the shafts and chains are rotating freely. This mode can also be used when troubleshooting problems in the erecting section.

5.3 Loading Totes

Place the totes horizontally onto the extended hopper conveyor. Ensure the stack is even all around and square. The machine is equipped with a **'HOPPER FULL'** sensor, and when it becomes clear, the machine will stop.

5.4 Production Operation

5.4.1 Starting the Machine

With the power turned **ON** and a blank hopper full of trays:

1. Turn the **'JOG ON/OFF'** button on the HMI screen to the **OFF** position
2. Touch the green **'START'** button on the HMI screen.

The machine will now run automatically, continually erecting trays.

If the machine is required to stop and start from a remote area or on demand by a conveyor system, a remote switching device (limit switch, sensor, foot pedal, etc.) is required. This switching device must be wired in the normally **OPEN** position. Refer to the remote demand hookup on the electrical schematic diagram (X100-E0044)

The machine operation does not change when the remote switching device is connected.

5.4.2 Stopping the Machine

The machine will continually run until the machine is manually turned **OFF** by the operator or until the hopper runs out of folded trays. To stop the machine manually, touch the red **'STOP'** button on the HMI or stop the signal from the remote switching device. The machine will run several cycles without picking any more blanks to ensure that all previous trays are cleared from the machine.

5.5 Safety Systems and Features

If a tote is blocking the **'PH-13'** sensor or if any of the check-timer setting conditions are not met, a safety timer will time out and stop the machine. To restart the machine:

1. Depress the **'EMERGENCY STOP'** button.
2. Remove the tote and any obstructions.
3. Disengage the **'EMERGENCY STOP'** button.
4. Press the **'RESET'** button on the control panel
5. Touch the green **'START'** button on the HMI screen.

There are five guard doors on the machine and two **'EMERGENCY STOP'** buttons. If any door is opened or an **'EMERGENCY STOP'** button is pressed, the machine will immediately stop. Power will be removed from the PLC and the main air will shut off. To restart the machine:

1. Close the guard door and/or turn and pull out the **'EMERGENCY STOP'** button.
2. Press the **'RESET'** button on the control panel.
3. Touch the green **'START'** button on the HMI.

5.6 Features and Instructions

The machine is equipped at the factory with guards to protect the operator from drive units, pinch points and electrical circuitry. It is important to turn the **'MAIN POWER DISCONNECT'** switch on the machine to the **OFF** position before removing any guarding. It is important for all guarding and safety devices, as manufactured and installed at the factory, to be re-installed after maintenance and prior to start-up of the machine. All guarding must always be in place while the machine is operating.

Extreme caution should be taken while making adjustments with the guards off.

5.7 Shutdown Procedure

At the end of each production day, the following shutdown procedures are necessary:

1. Clean up the machine and operating area.
2. It is suggested that all daily maintenance procedures outlined in *Section 7: 'Maintenance'* be performed at this time.

6 MACHINE SETUP

The machine comes set up at the factory and should open trays without any problems. However, if the machine fails to open trays properly, the machine setup may need to be adjusted. The areas of the machine that may need adjusting are the guide rails, the lock hammers, and the flap openers. The following procedures outline how to inspect and set up these areas of the machine.

6.1 Guide Rail Adjustment

If blanks are failing to be placed level on the guide rails or are not entering the tray-opening section straight and square, the guide rails may be incorrectly positioned. To correct the positioning of the guide rails, use the following procedure:

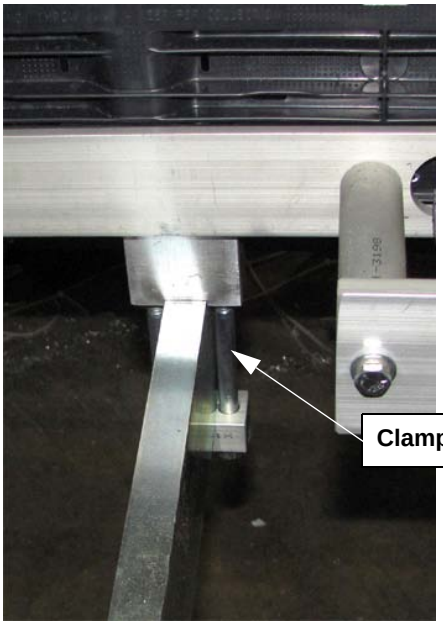


Figure 6-1: Infeed-end Side Guide

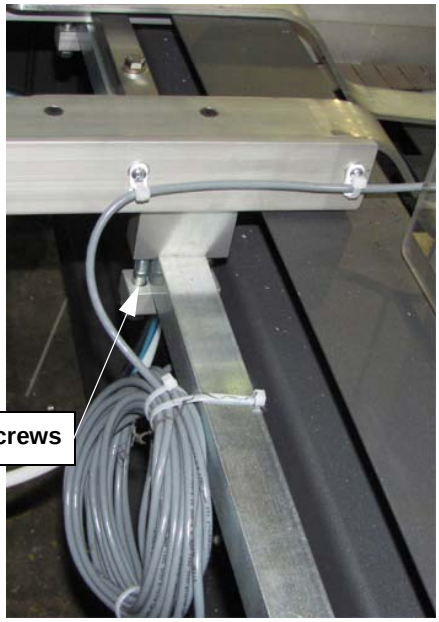


Figure 6-2: Outfeed-end Side Guide

1. Place an open tray on the guide rails and inside the lock hammers (See Figures 6-1 and 6-2).

2. Using a 9/16” wrench, loosen the four caphead clamp screws which secure each of the four side guide clamp blocks.

3. Adjust the side guides so that there is a 1/16” gap between the inner edges of the two guide rails and the outer edges of the tray. In doing so, take care to ensure that the two guide rails are equidistant from the machine’s longitudinal centerline.

4. Tighten the sixteen caphead clamp screws.

6.2 Lock Hammer Lateral Adjustment

1. Place a formed tray in the tray-forming section with the RPC lock hammers lowered into the tray.
2. Locate the clamp blocks at each end of the RPC lock hammer assembly (See Figure 6-3).
3. Using a 9/16” wrench, loosen the four caphead screws which secure the lateral adjustment of the clamp blocks.
4. Slide the lock hammer assemblies inward or outward to such a position as that the lock hammers, when fully lowered, straddle the seam lines between the inner edges of the erected tray minor and major flaps.
5. Retighten the clamp blocks.

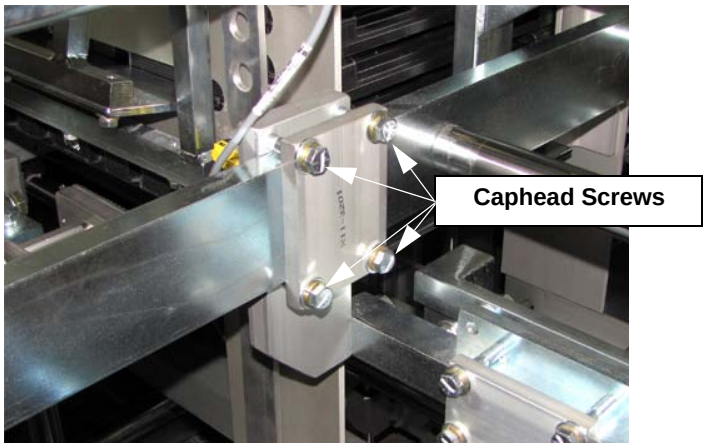


Figure 6-3: RPC Lock Hammer Clamp Blocks

6.3 Flap Opener Vertical Adjustment

1. Place a formed tray in the tray forming section.
2. Locate and loosen the two caphead screws which secure the each of the flap opener assemblies in their vertical position (See Figure 6-4) (**NOTE:** Only one caphead screw is shown in the photo.)
3. Lower the flap opener assemblies so that the openers, at their lowest point, distort the floor of the RPC tray downward approximately 1/16” from its level position.
4. Retighten the four caphead screws.

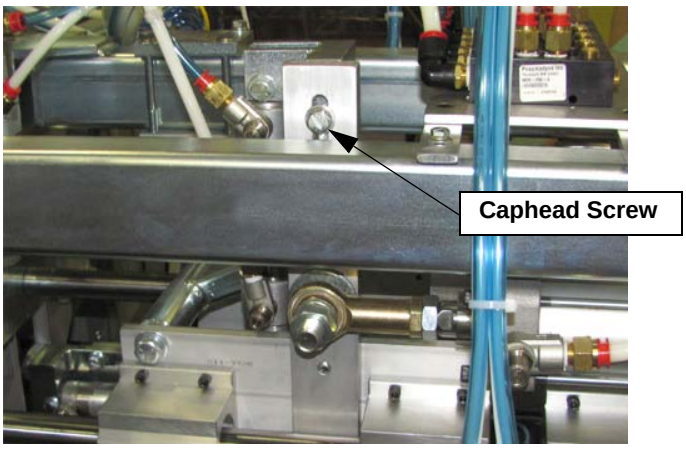


Figure 6-4: Flap Opener Vertical Adjustment

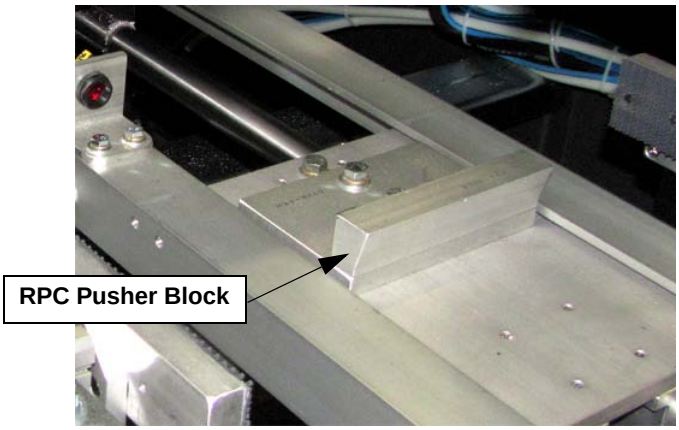


Figure 6-5: RPC Pusher

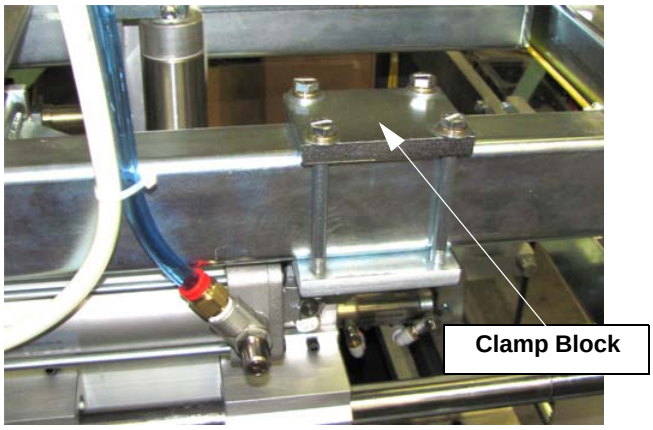


Figure 6-6: Horizontal Adjustment Clamp Block

6.4 Flap Opener Horizontal Adjustment

5. Pull the RPC pusher out as far as possible towards the outfeed end of the machine.

6. Place an opened tray on the guide rails with its trailing end touching the RPC pusher block (See Figure 6-5).

7. Locate the flap opener assembly holding the flap openers which are turned towards the infeed end of the machine. Loosen the four caphead screws which secure it.

8. Slide the assembly towards the infeed end of the machine until the flap openers are touching the inner side of the trailing minor flap.

9. Tighten the four caphead screws which secure the flap opener clamp block.

10. Loosen the caphead screws which secure the second flap opener assembly.

11. Slide it away from the first flap opener assembly until it touches the inner side of the leading minor tray flap.

12. Secure the caphead screws which secure the second flap opener assembly.

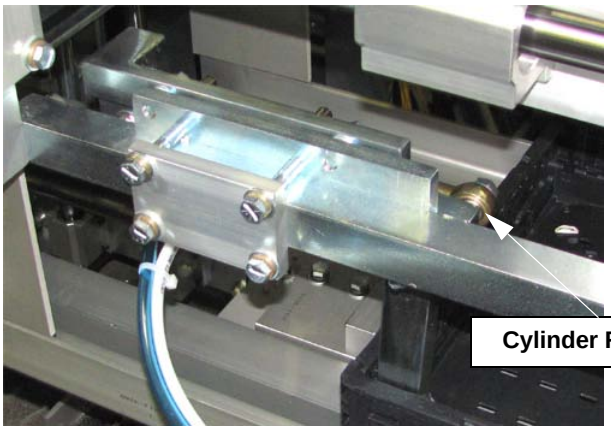


Figure 6-7: Lock Hammer Assembly

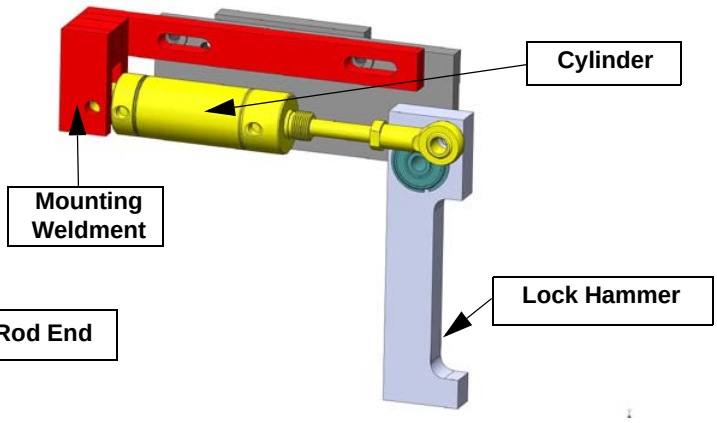


Figure 6-8: Lock Hammer Cylinder and Mount

6.5 Lock Hammer Swing Adjustment

1. Locate the four lock hammer cylinders secured to their mounting weldments (See Figure 6-8.)
2. Using a 1/2" wrench, loosen the two capscrews which secure each of the four lock hammer cylinders on the mounting weldments.
3. Extend each of the four cylinders out to their maximum extension point.
4. Slide the each of the cylinders horizontally along the mounting weldments until their positions cause the lock hammers to be swing to exactly 1/2 degree past a vertical angle.
5. Tighten the two capscrews on each of the lock hammers. mounting weldments.

6.6 Lock Hammer Longitudinal Adjustment

6. Place an opened tray on the side guides with the flap openers fully extended against the inner sides of the tray ends.
7. Using a 9/16" wrench, loosen the four caphead screws which secure each of the lock hammer assemblies (See Figure 6-9).
8. Slide each of the lock hammer assemblies to positions such that, with the lock hammers swung to their maximum rotation (1/2 degree past the vertical), the edges of the lock hammers are pressed againt the inner edges of the tray's end flaps. **NOTE:** The position of the lock hammer one one side of the machine must be exactly parallel with its match on the other side.
9. Tighten the four caphead screws on each of the lock hammer assemblies.

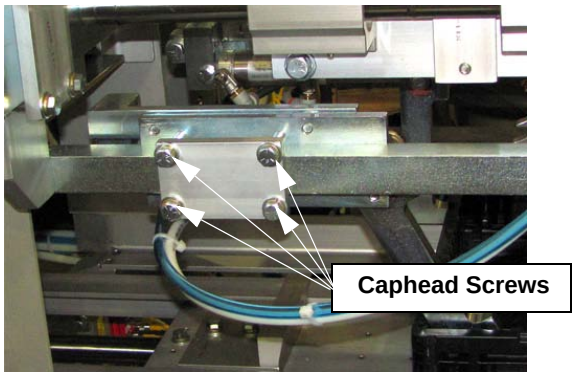


Figure 6-9: Lock Hammer Longitudinal Adjustment

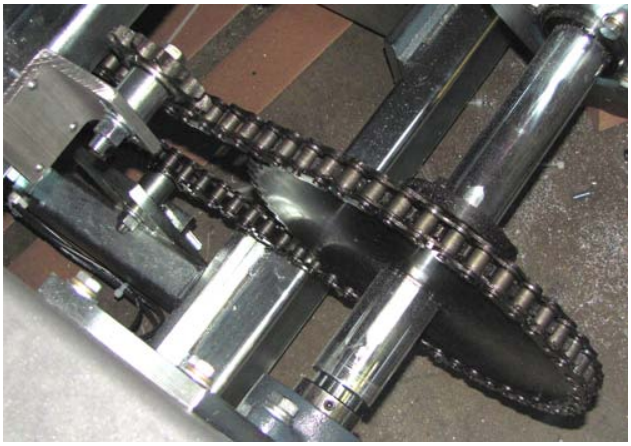
7 MAINTENANCE

Proper maintenance is critical in ensuring long lasting performance from the RP-100. Performing the following procedures will ensure that the machine will continue to run reliably for many years.

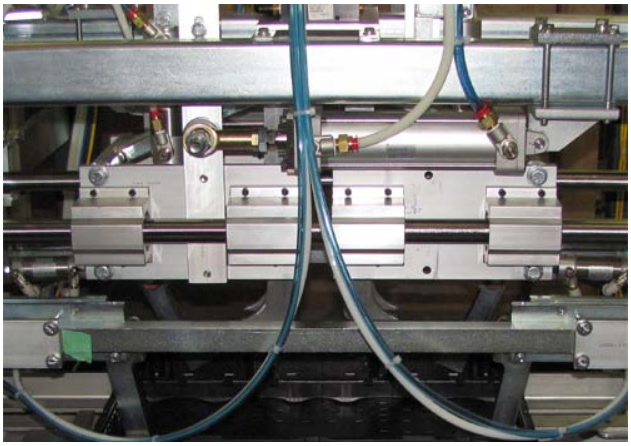
7.1 Daily Maintenance

1. Sweep under and around the machine.

2. Inspect the chain tension, ensuring that all chains are tight.



3. Inspect the linear shafting for any foreign material that might be attached. Carefully remove any particles, while taking care not to score the shafts.

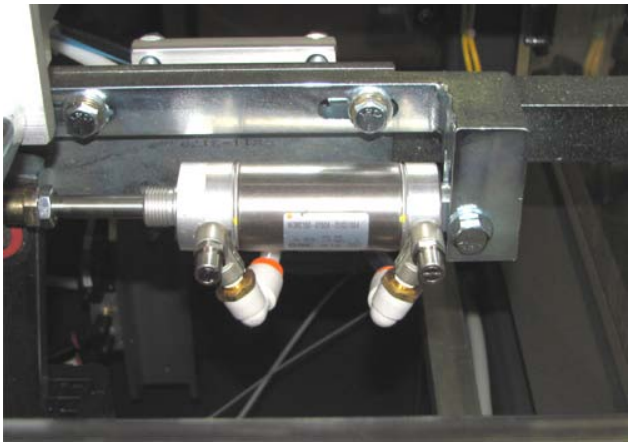


4. Check the sensors for correct operation. Clear any debris blockage and dust using only a soft cloth to prevent scratching

7.2 Weekly Maintenance

1. Check and refill the air lubricator.

2. Inspect all air cylinders on the machine. They should move freely without binding or restrictions.

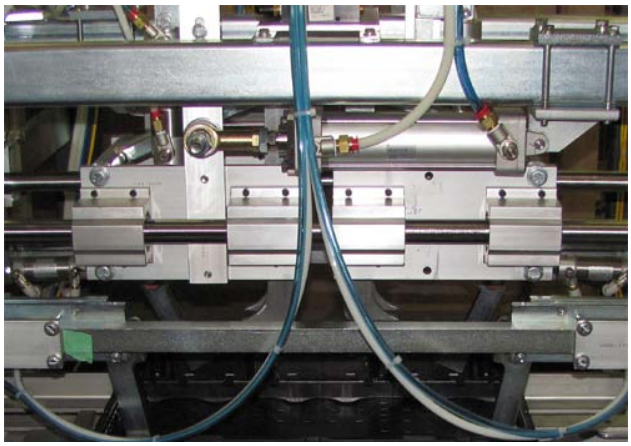


7.3 Monthly Maintenance

1. Lubricate all bushings, cylinder pivots and rod ends where applicable.

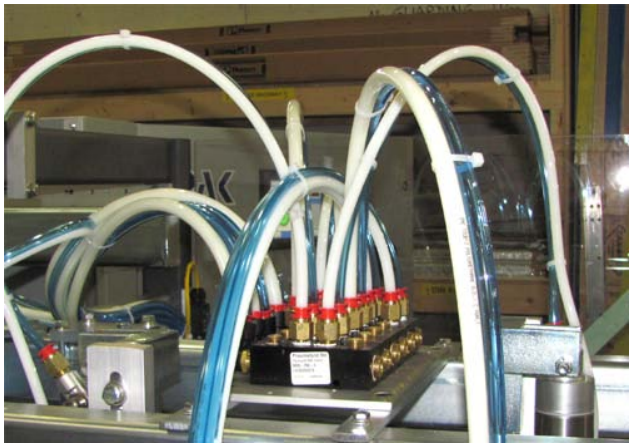
7.4 Every Three Months

1. Using food grade grease and the two pumps of the grease gun, grease the linear bearings in the vacuum section and the ram assembly. Wipe away the excess grease.

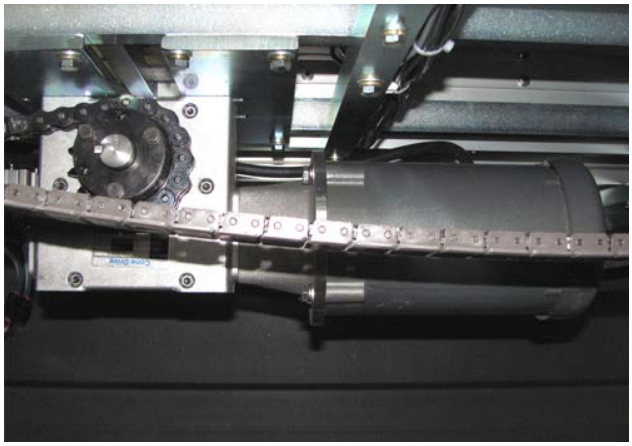


7.5 Annual Maintenance

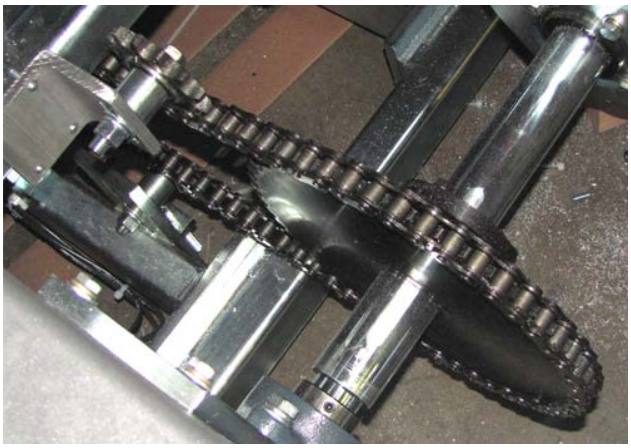
1. Inspect all air lines for cracks and wear. Replace them as necessary.



2. Change the gearbox oil.

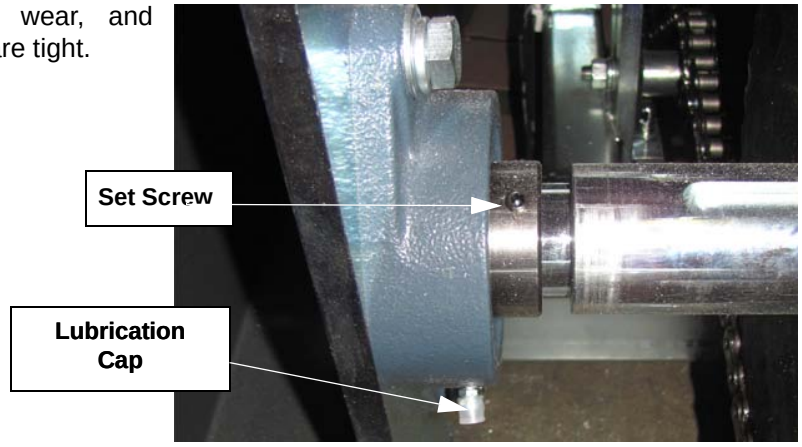


3. Inspect all chains for wear. Replace them if necessary.



4. Inspect the bearings for wear, and ensure that the set screws are tight.

5. Grease the bearings.



7.6 Guarding Removal

The machine is equipped at the factory with guards to protect the operator from drive units, pinch points and electrical circuitry.

An **'EMERGENCY STOP'** button must be pressed before removing any of the guarding. It is necessary for all guards and safety devices, as manufactured and installed at the factory, to be re-installed after maintenance and prior to **STARTUP** of the machine. All guarding must always be in place while the machine is operating.

WARNING

DO NOT operate the machine without the guards in place!!

WARNING

Extreme caution should be taken while making adjustments or size changes with the guards removed.

8 TROUBLESHOOTING

NOTE: Prior to referencing the troubleshooting guide, ensure that you have properly read and understand *Section 5: 'Operating Procedures'*

ALL TROUBLESHOOTING STEPS THAT REQUIRE WORKING INSIDE THE ELECTRICAL PANEL OR REMOVING GUARDING SHOULD ONLY BE PERFORMED BY CERTIFIED MAINTAINANCE PERSONNEL!

8.1 Vacuum System

The vacuum system may not operate properly for many reasons. If the vacuum system fails to pick a blank properly, the reasons can be mechanical, pneumatic, or electrical. The following section shows how to trouble shoot the vacuum system. Refer to the vacuum assembly (X21-1348, X21-1377), the electrical diagram (X100-E0034), and the pneumatics diagram.

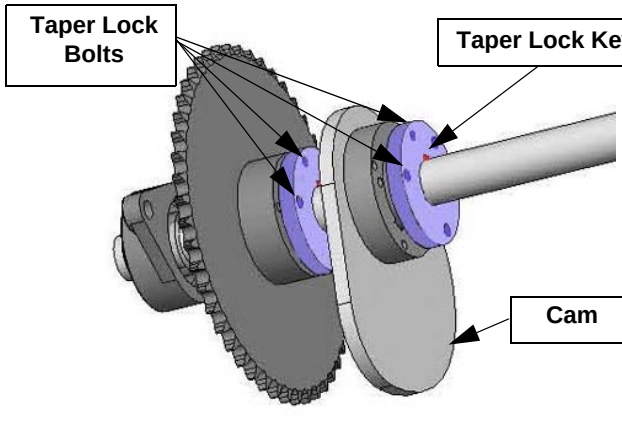


Figure 8-1: Vacuum Drive Cam Assembly

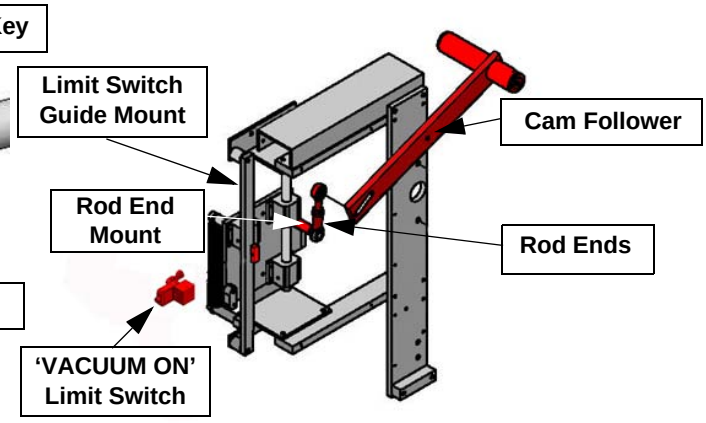


Figure 8-2: Cam Follower Linkage

8.1.1 Vacuum Cups Do Not Move

If the vacuum cups do not move when the **'START'** button is pressed:

1. Ensure that the vacuum shaft is rotating by slowly jogging the machine.

2. If the cam does not rotate, ensure that the chain and taper lock bushings are in place and that the keys and bolts are in the bushings are secured tightly (See Figure 8-1). Tighten any loose fittings.

3. If the cam is rotating but the vacuum assembly is not lifting, inspect the vacuum assembly, including the chain, the rod ends, rod end mount, and the cam follower, to insure that all components are properly attached.

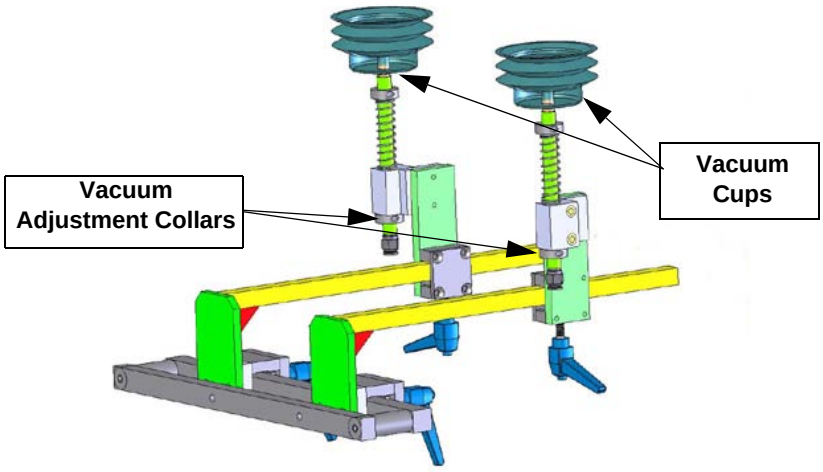


Figure 8-3: Vacuum Assemblies

8.1.2 Vacuum Cups Do Not Impact Bottom Of Blank

If the vacuum cups move but do not impact the bottom of the blank:

1. Lower the collars on the vacuum cups, so that the vacuum cups lift up higher (See Figure 8-3).

2. If the cups still do not impact the blank, adjust the stroke of the vacuum adjustment linkage by moving the vacuum rod end mount further away from the pivot (See Figure 8-2).

8.1.3 Vacuum Does Not Turn ON

If the vacuum cups move properly but there is no suction from the vacuum system:

1. Ensure that the limit switch actuator is making contact with the **'VACUUM ON'** limit switch. If it is not, adjust the position of the limit switch on the guide mount until the actuator makes contact with the switch (See Figure 8-2).

2. Ensure that the **'VACUUM ON'** input (I:0.0/1) light is illuminating when the switch is activated. If the light does not illuminate, then the limit switch may be faulty and should be replaced.

3. Ensure that the **'VACUUM VALVE'** output (O:3.0/0) is being illuminated, and that the output is sending 24VDC. If it is not, the PLC may be faulty and should be replaced.

4. If the output is working properly, check the vacuum valve. If the light on the valve solenoid does not illuminate, check the wiring. If the light does illuminate but the valve does not shift, the valve may be faulty and should be replaced.

5. If the valve is shifting, ensure that the airlines are not cracked or clogged. Ensure that they are properly connected, as shown in the pneumatic diagram.

8.1.4 Vacuum Turns ON, But Is Weak

If the blank will not pick, but the vacuum is turning **ON**, and the cups are moving properly, the suction may be too low. The vacuum should be strong enough that it is difficult to remove a blank from the vacuum cups. To correct this problem:

1. Check the air pressure at the main regulator to ensure that there is adequate air supply. The machine requires 30 cu. ft. of air per minute at 100 PSI.

2. Ensure that the vacuum cups are not damaged or dirty. Clean or replace them as necessary.

3. Ensure that the PIAB vacuum filter elements are clean and free of dirt. If they are dirty, clean them out with compressed air or replace them.

4. If the problem persists, ensure that the main air filter is clean. If it is dirty, replace it with a new one.

5. If the problem still persists, the PIAB vacuum unit may be faulty,. It should be replaced or repaired.

9 ENGINEERING SPECIFICATIONS

9.1 Control Station

The control station is equipped with **'START', 'RESET'** and **'EMERGENCY STOP'** push buttons, **'CYCLE OFF/ON'**, **'GLUE OFF/ON'** and **'JOG/REV/OFF/FWD'** selector switches. The control panel provides an input for a remote demand sensor.

Machine Specifications	
Standard Electrical Features	240 Volt A.C., Three Phases, 60 Hz, 30A
	Control Circuit: 24 VDC
Air Requirements	1 cu. Ft. Per cycle @ 90 PSI
	90 PSI (6.2 bar) at main air regulator
Machine Speed	Up to 25 trays per minute
Machine Size	Weight: 3500 lbs. (approx.)
	Space Required: 145' length x 62' width x 69' height

Electrical Specifications	
Power Supply	Allen Bradley, 230 Volt A.C. to 24 Volt D.C., 4.2 ampere power supply
Limit Switches	Omron Roller Switch
Sensors	Omron
Drive Motor	Baldor
Selector Switches	Allen Bradley, 800 series
Disconnect	Allen Bradley
Relays	Omron
Motor Starter	Allen Bradley Powerflex 40
PLC	Allen Bradley Compact Logics

Valves	
SMC	One, NAV4000-5DZ, 3/2 single solenoid, spring return for main air dump
	Eight, NVFS3120-5DZ-03T, 5/2, single solenoid valves

Vacuum	
SMC	FRL ASSEMBLY AC 50-DUO 3113

Cylinders	
Pneumatic	2 (SMC), NCA1D250-0700-XB5, for opener 2 (SMC), NCA1D250-1800-XB5 for hopper cross pusher 8 (Numatics), UTNN63-025-B for tray grip and tray stack lift 4 (Numatics), 1500DG1-02A for hopper swings 2 (Numatics), 1500DG1.5-02A for hopper gates 2 (Numatics), UTNN050-025-B for tray stop 2 (Numatics), 2000DG3-02A for opener lift 1 (Numatics), P1AK 28A1D-CAAO for center hopper cross pusher

10 SPARE PARTS KIT

RPC-100 - Village Farms

ITEM #	QUANTITY	PART #	DESCRIPTION
1	1	02-308	CONTACT,1 N/C
2	1	02-302	CONTACT,1 N/O
3	2	02-999	SENSOR, 18MM OPTICAL,PNP
4	1	Z00-1018	CYL 1.5 x 1 1/2" S, D. ACT, PIVOT CUSH
5	1	Z00-1009	UNIVERSAL CYL, 63mmB x 25mmS
6	1	Z00-1008	Cyl., 2.0B x 3"S, D. Act., Pivt. Cus
7	1	Z00-1405	UNIVERSAL CYL, 50mmBx 25mmS
8	1	Z00-978	VALVE 5/2 3/8" NPT PORTS
9	2	Z01-1227	DOOR SWITCH C/W KEY CAT 3
10	2	Z01-396	LIMIT SWITCH,LOW OF ROLLER LEVER,DC,M12
11	2	Z02-541	BEARING, LINEAR: 1.1/4"
12	1	Z02-550	BEARING,CAM FOLLOWER
13	2	Z02-653	ROD END MALE 5/8 NF
14	1	Z02-749	ROD END FEMALE 7/16" NF, HEAVY DUTY

11 INDEX

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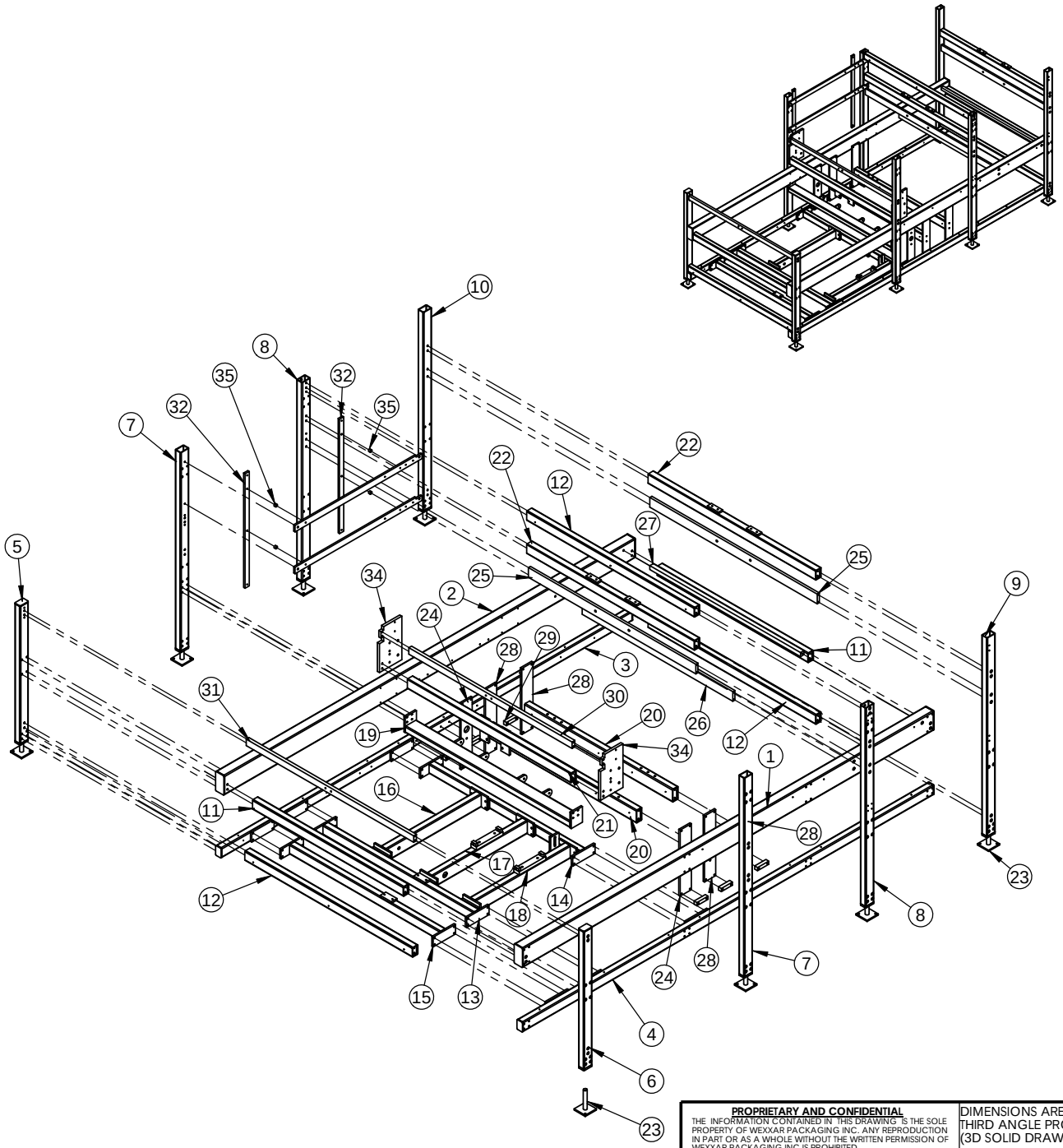


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X21-709	WLDMT, RPC FRAME, RH	1
2	X21-710	WLDMT, RPC FRAME, LH	1
3	X21-711	WLDMT, RPC LOWER FRAME, LH	1
4	X21-712	WLDMT, RPC LOWER FRAME, RH	1
5	X21-713	WLDMT, RPC LEG AR	1
6	X21-714	WLDMT, RPC LEG AL	1
7	X21-715	WLDMT, RPC LEG B	2
8	X21-716	WLDMT, RPC LEG CR	2
9	X21-717	WLDMT, RPC LEG DR	1
10	X21-719	WLDMT, RPC LEG DL	1
11	X21-720	WLDMT, UPPER FRAME CROSS MEMBER	2
12	X21-721	WLDMT, LOWER FRAME CROSS MEMBER	3
13	X21-722	WLDMT, RPC DRIVE MOUNT A	1
14	X21-723	WLDMT, RPC DRIVE MOUNT B	1
15	X21-724	WLDMT, RPC DRIVE MOUNT C	1
16	X21-725	ASSY, DRIVE CROSS MEMBER A	1
17	X21-726	ASSY, DRIVE CROSS MEMBER B	1
18	X21-727	ASSY, DRIVE CROSS MEMBER C	1
19	X21-730	WLDMT, CAM LEVER MOUNT	1
20	X21-737	WLDMT, LINEAR SHAFT MOUNT B	2
21	X21-739	WLDMT, RPC PUSHER LIN. SHAFT MTG, FR	1
22	X21-741	WLDMT, RPC PUSHER LIN. SHAFT MTG, FR	2
23	X21-060	WELDMT, FRAME FOOT	8
24	X11-3155	CAM SHAFT MOUNT	2
25	X11-3164	OPENER LINEAR SHAFT MOUNT	2
26	X11-3206	PUSHER REAR LIN. SHAFT MTG.	1
27	X11-3207	REAR CROSS BAR	1
28	X11-3210	PICK MOUNTING PLATE	4
29	X11-3211	LINEAR SHAFT MOUNT SPACER	6
30	X11-3240	CENTER BEARING SUPPORT BAR A	1
31	X11-3244	CENTER BEARING SUPPORT BAR B	1
32	X11-3248	ELECTRICAL PANEL MOUNT B	2
33	X11-3249	ELECTRICAL PANEL MOUNT A	2
34	X11-3212	CONVEYOR SHAFT MTG, PLATE	2
35	X10-5124	SPACER	4

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

DRAWN BY: AYC

FINISH:

DATE : 03MAR11

APPROVED BY:

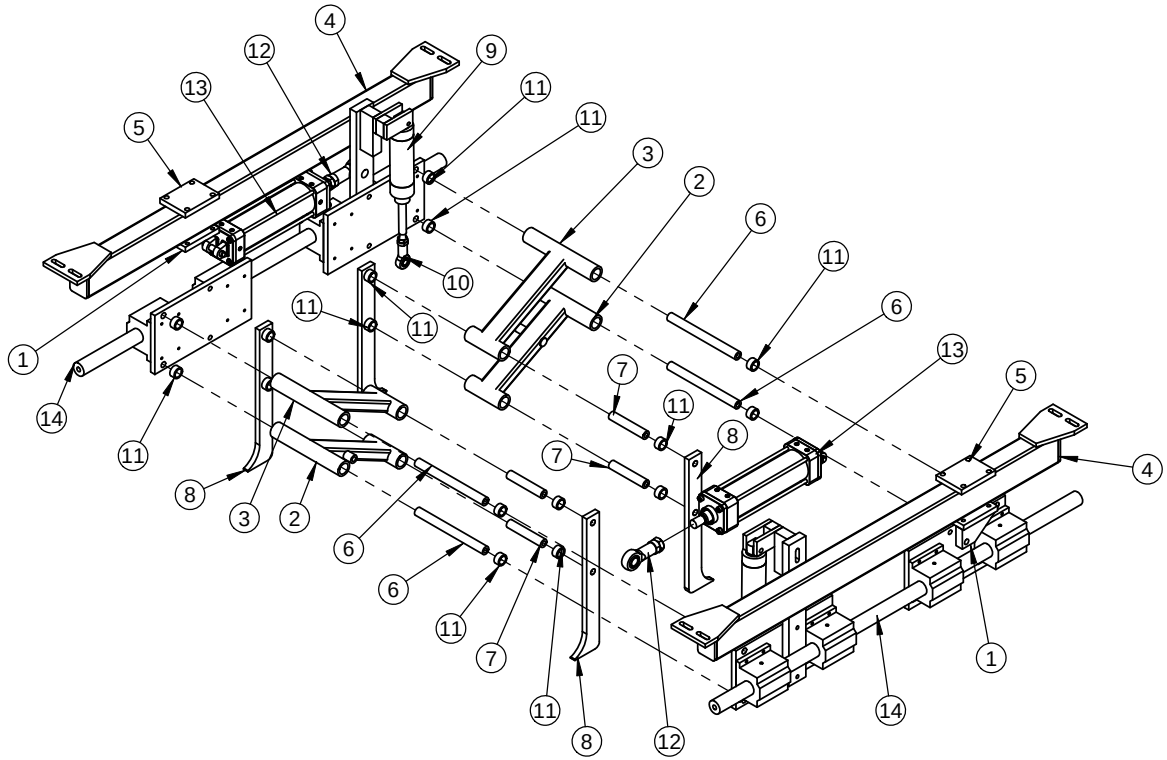
WEXXAR Packaging Inc.

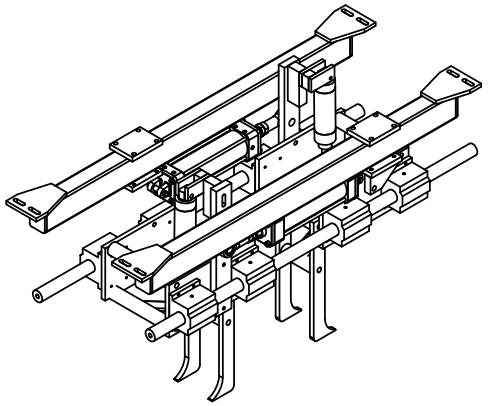
TITLE: ASSY, FRAME RPC

DWG.NO. **X21-757**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X21-734	WLDMT, OPENER CYL MOUNT	2
2	X21-735	WLDMT, OPENER LIFT ARM A	2
3	X21-736	WLDMT, OPENER LIFT ARM B	2
4	X21-742	WLDMT, OPENER CYL MTG, REAR	2
5	X11-3186	OPENER CYL. MOUNT CLAMP	2
6	X11-3192	OPENER LIFT ARM SHAFT A	4
7	X11-3193	OPENER LIFT ARM SHAFT B	4
8	X11-3194	RPC OPENER	4
9	Z00-1033	CYL 2"B X 3"S, D. ACT, PIVOT, CUSH	2
10	Z02-160	ROD END FEMALE 1/2 NF	2
11	Z02-635	SLEEVE: 3/4ID x 1OD x 1/2"L	16
12	Z02-741	ROD END NF - FEMALE - 3/4"	2
13	Z00-1449	Cylinder 2 1/2" bore x 18" stroke - SMC	2
14	X21-800	ASSY, OPENER LINEAR BEARING/	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

WEXXAR Packaging Inc.

TITLE: ASSY, RPC OPENER

MATERIAL: AS SHOWN

DRAWN BY: AYC

FINISH: AS SHOWN

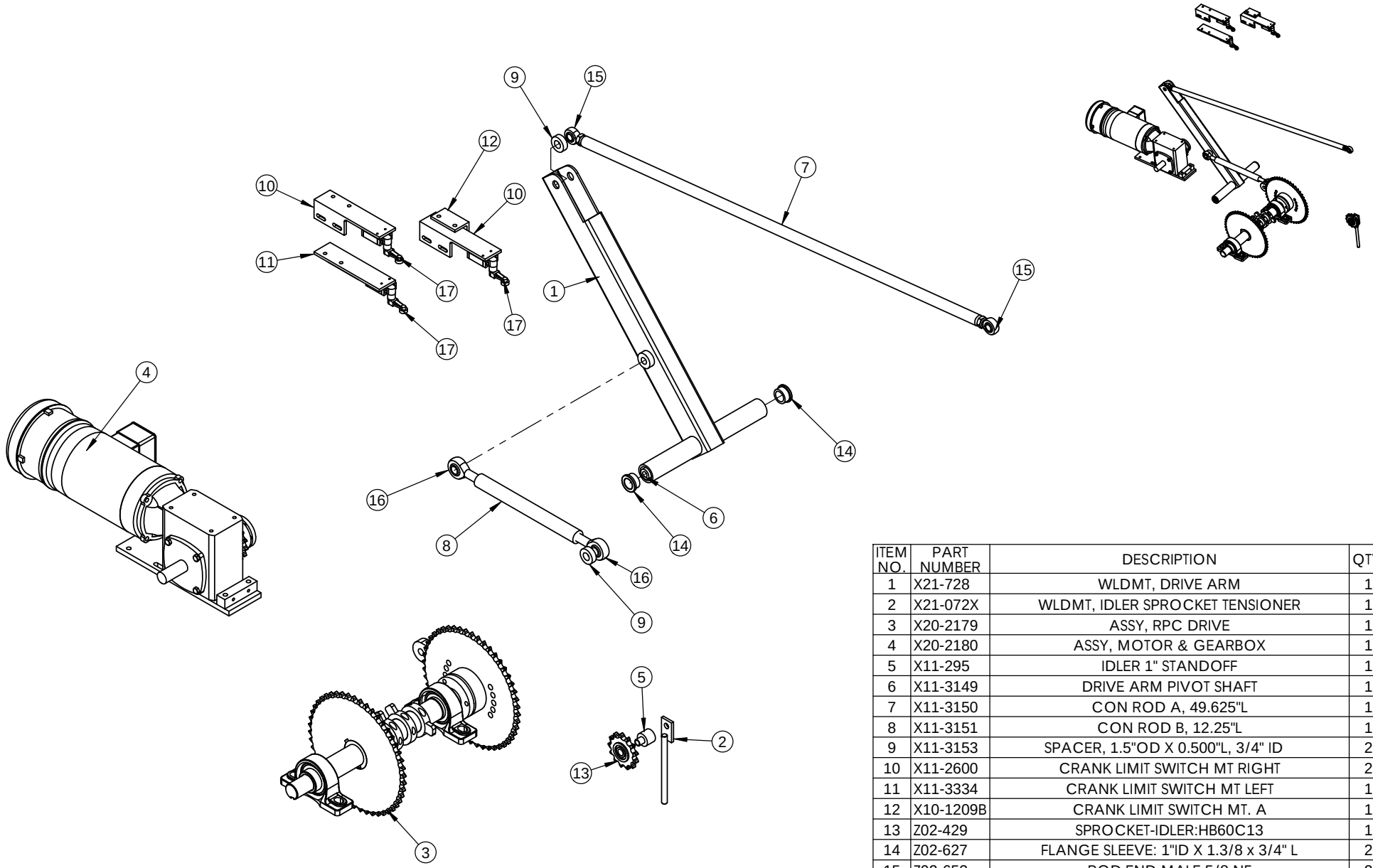
DATE : 23MAR11

APPROVED BY:

DWG.NO. **X21-768**

REV.

Rev.	DESCRIPTION	DATE	By



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X21-728	WLDMT, DRIVE ARM	1
2	X21-072X	WLDMT, IDLER SPROCKET TENSIONER	1
3	X20-2179	ASSY, RPC DRIVE	1
4	X20-2180	ASSY, MOTOR & GEARBOX	1
5	X11-295	IDLER 1" STANDOFF	1
6	X11-3149	DRIVE ARM PIVOT SHAFT	1
7	X11-3150	CON ROD A, 49.625"L	1
8	X11-3151	CON ROD B, 12.25"L	1
9	X11-3153	SPACER, 1.5"OD X 0.500"L, 3/4" ID	2
10	X11-2600	CRANK LIMIT SWITCH MT RIGHT	2
11	X11-3334	CRANK LIMIT SWITCH MT LEFT	1
12	X10-1209B	CRANK LIMIT SWITCH MT. A	1
13	Z02-429	SPROCKET-IDLER:HB60C13	1
14	Z02-627	FLANGE SLEEVE: 1"ID X 1.3/8 x 3/4" L	2
15	Z02-653	ROD END MALE 5/8 NF	2
16	Z02-686	ROD END MALE 3/4 NF	2
17	Z01-396	LIMIT SWITCH,LOW OF ROLLER LEVER,DC,M12	3

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

WEXXAR Packaging Inc.

TITLE: ASSY, RPC DRIVE

MATERIAL: AS SHOWN

DRAWN BY: AYC

FINISH:

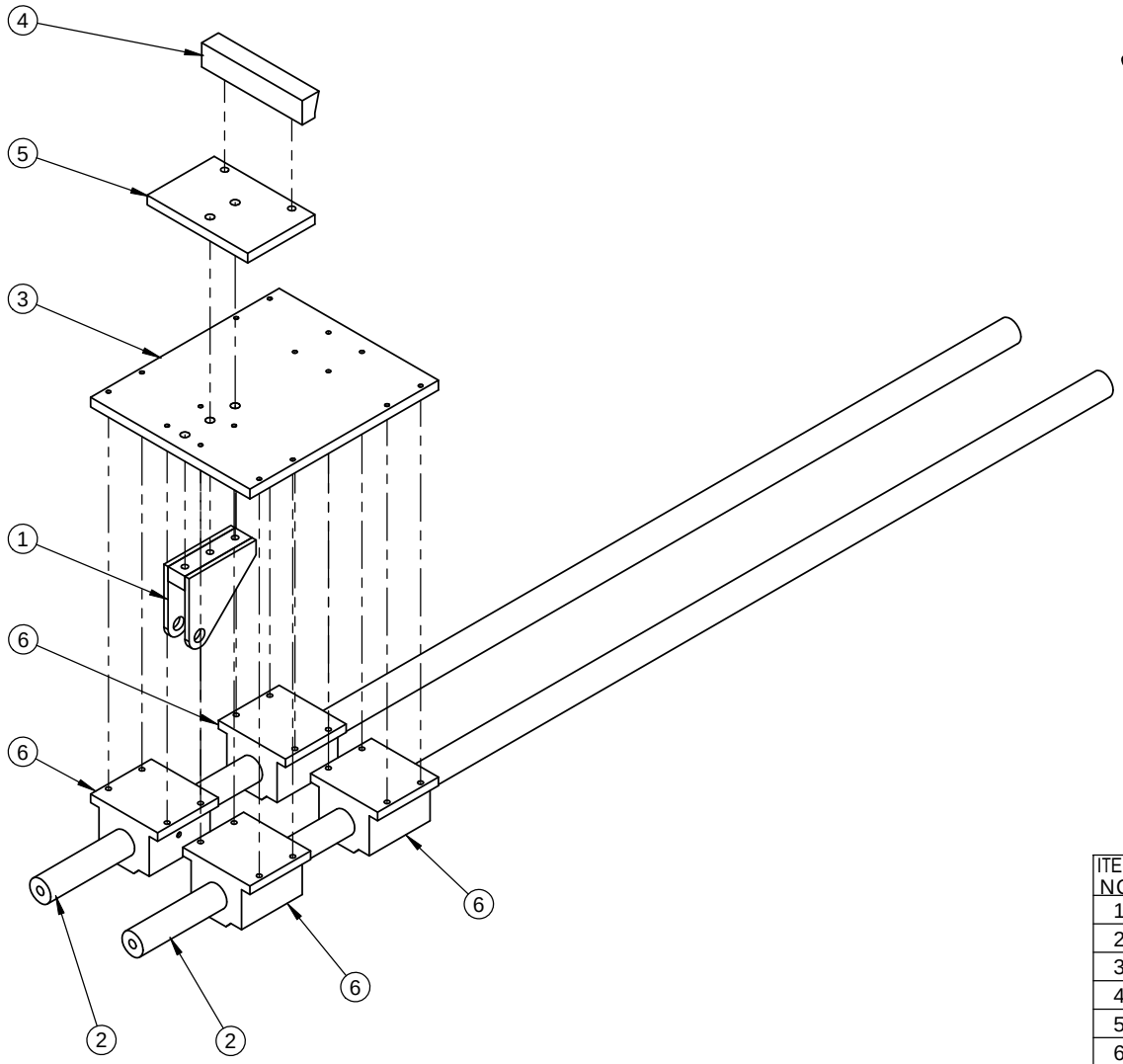
DATE : 2MAR11

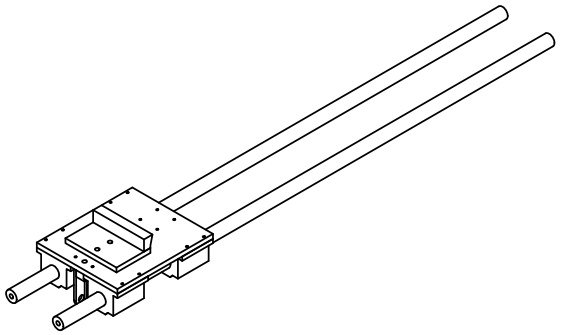
APPROVED BY:

DWG.NO. **X21-767**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X21-740	WLDMT, PUSHER LINK MOUNT	1
2	X11-3208	PUSHER LINEAR SHAFT	2
3	X11-3213	PUSHER LINEAR BRG PLATE	1
4	X11-3214	PUSHER BLOCK	1
5	X11-3215	PUSHER BLOCK MOUNT	1
6	Z02-541	BEARING, LINEAR 1.1/4" SELF ALIGNING	4

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

WEXXAR Packaging Inc.

TITLE: ASSY, RPC PUSHER

MATERIAL: AS SHOWN

DRAWN BY: AYC

FINISH: AS SHOWN

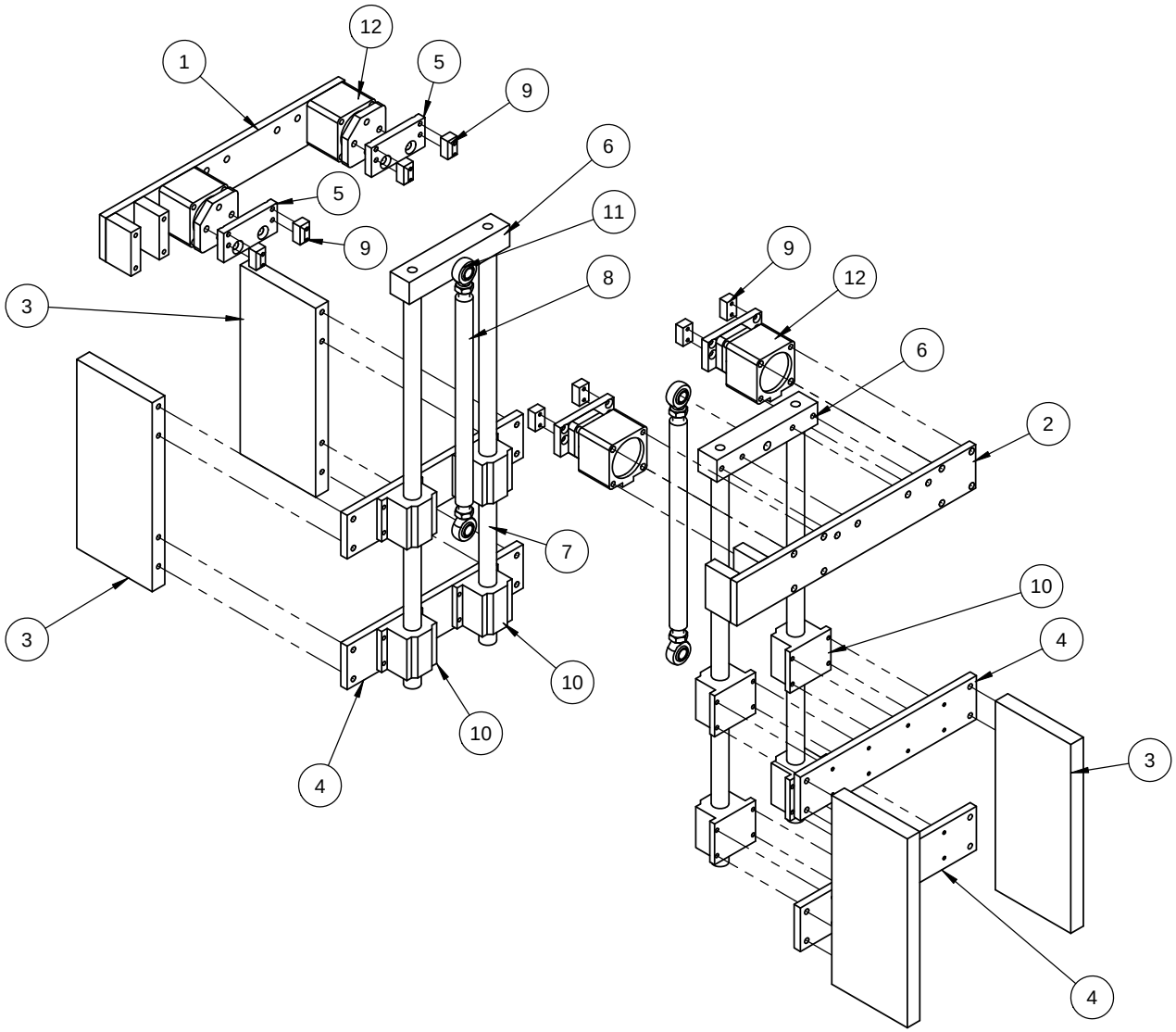
DATE: 10MAR11

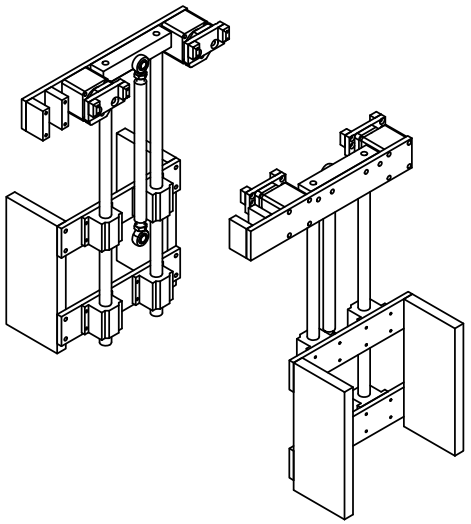
APPROVED BY:

DWG.NO. **X21-766**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X21-746	WLDMT, PICK MOUNT, RH	1
2	X21-747	WLDMT, PICK MOUNT, LH	1
3	X11-3202	PICK LINEAR SHAFT MOUNT	4
4	X11-3209	PICK LINEAR BEARING MOUNT	4
5	X11-3225	GRIPPER BLOCK MOUNT	4
6	X11-3274	ROD END MOUNT	2
7	X11-3283	PICK LINEAR SHAFT	4
8	X11-3328	PICK LIFT CON ROD	2
9	X11-3284	RPC GRIPPER	8
10	Z02-542	BEARING, LINEAR: 1" - SPB 16 (NSK)	8
11	Z02-653	ROD END MALE 5/8 NF	4
12	Z00-1009	UNIVERSAL CYL, 63mmB x 25mmS	4

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

FINISH: AS SHOWN

DATE : 23MAR11

DRAWN BY: AYC

APPROVED BY:

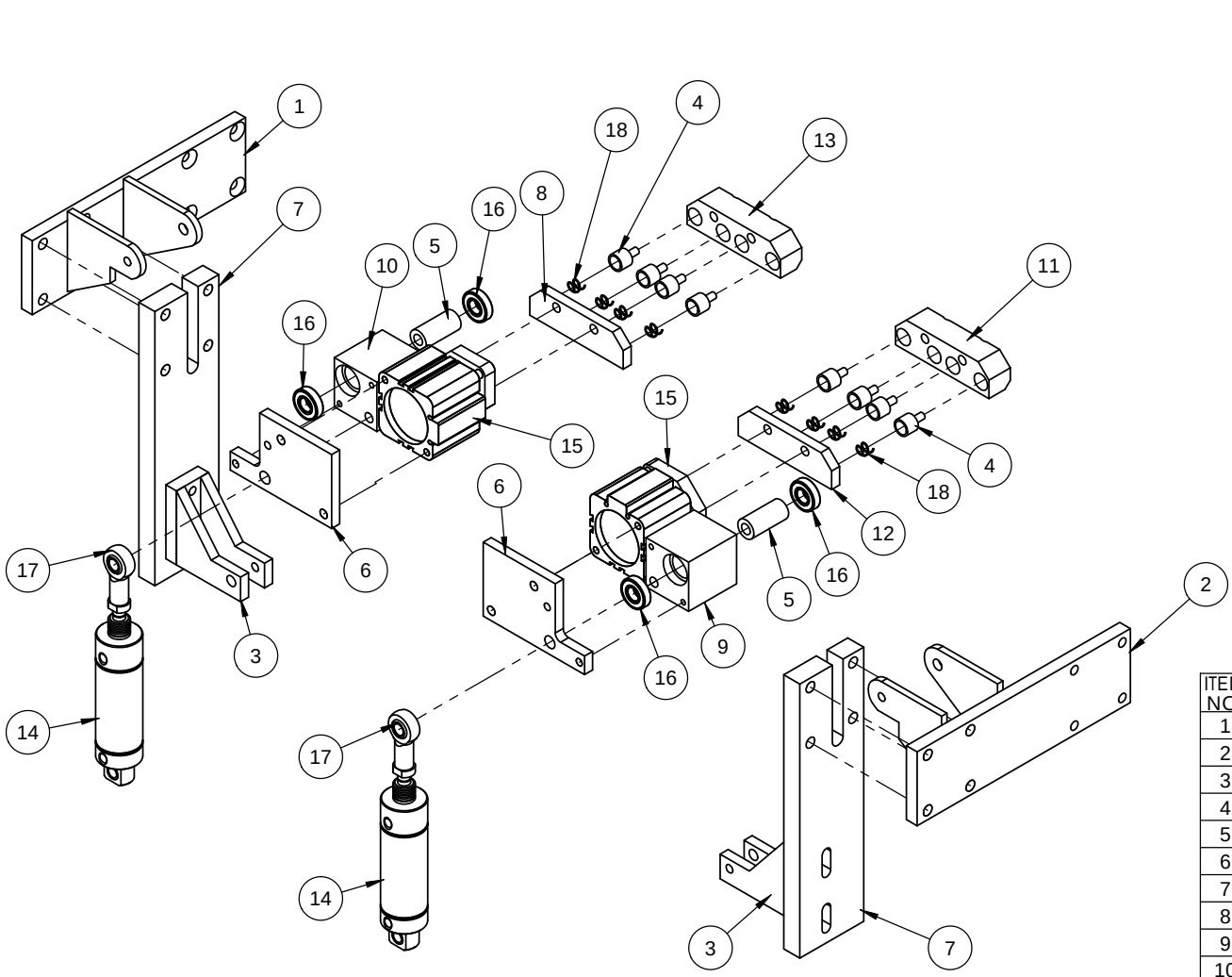
WEXXAR Packaging Inc.

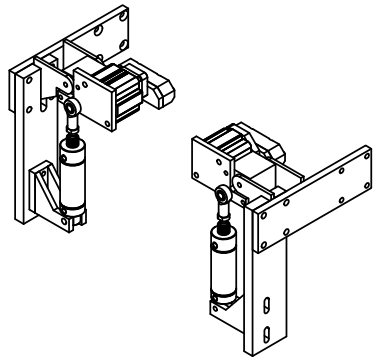
TITLE: ASSY, PICK LIFT

DWG.NO. **X21-765**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X21-743	WLDMT, RPC ROTARY MOUNT, RH	1
2	X21-744	WLDMT, RPC ROTARY MOUNT, LH	1
3	x21-745	WLDMT, CYL REAR PIVOT	2
4	X11-3222	ROTARY BLOCK PIN	8
5	X11-3223	SPACER, 0.75"OD X 1.63"L, 13/32"ID	2
6	X11-3224	ROTARY BLOCK CYL PLATE	2
7	X11-3285	ROTARY CYL MTG PLATE	2
8	X11-3358	ROTARY BLOCK BACK PLATE, LH	1
9	X11-3286	ROTARY BEARING BLOCK RH	1
10	X11-3287	ROTARY BEARING BLOCK LH	1
11	X11-3288	ROTARY BLOCK	1
12	X11-3289	ROTARY BLOCK BACK PLATE	1
13	X11-3359	ROTARY BLOCK, LH	1
14	Z00-1003	CYL1.5x2"S,D.ACT,PIVOT CUSH	2
15	Z00-1008	UNIVERSAL CYLINDER, 50mmB x 25mmS	2
16	Z02-101	BALL BEARING, 1/2 ID x 1 1/8 X 3/8	4
17	Z02-749	ROD END FEMALE 7/16" NF, HEAVY DUTY	2
18	06-101	SPRING, HOLD DOWN ROLLER	8

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

FINISH: AS SHOWN

DRAWN BY: AYC

DATE : 01APR11

APPROVED BY:

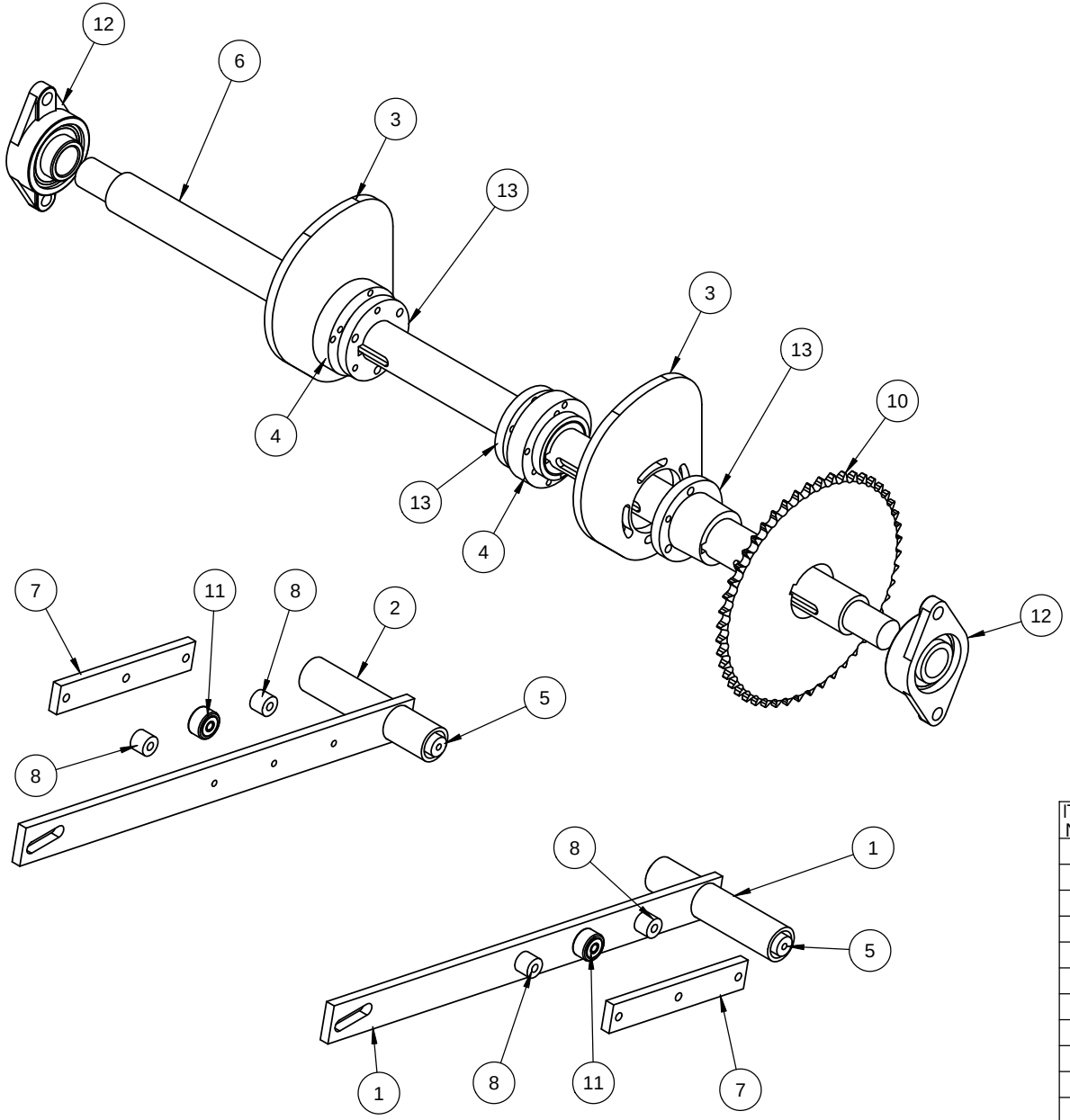
WEXXAR Packaging Inc.

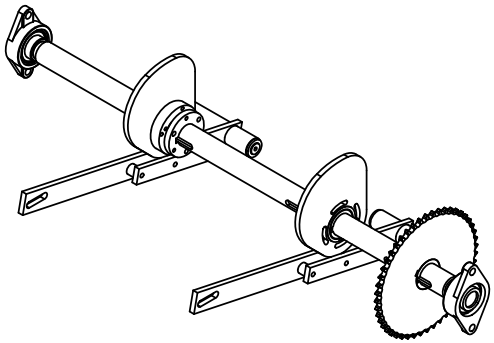
TITLE: ASSY, ROTARY FOLDER

DWG.NO. **X21-764**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X21-729	WLDMT, CAM LEVER, LH	1
2	X21-738	WLDMT, CAM LEVER, RH	1
3	X11-013	VACUUM CAM ADJ.	2
4	X11-079	BROWNING HUB	2
5	X10-1652	VACUUM PIVOT ARM SHAFT	2
6	X11-3143	VACUUM CAM SHAFT, 52.5"	1
7	X11-3157	CAM FOLLOWER BRACE	2
8	X10-6086	SPACER, 1" OD X 0.807"L, 13/32"ID	4
9	X10-3904	BUSHING, VACUUM PIVOT	4
10	Z02-428	SPROCKET:H 60 Q 48 -	1
11	Z02-550	BEARING,CAM FOLLOWER: YCRS 22	2
12	Z02-545	BEARING, FLANGE: 1.1/2 x 2 Bolt - Nachi	2
13	Z02-607	TAPER BUSHING: Q1 X 2	3

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN
FINISH: AS SHOWN
DATE : 28MAR11
DRAWN BY: AYC
APPROVED BY: -

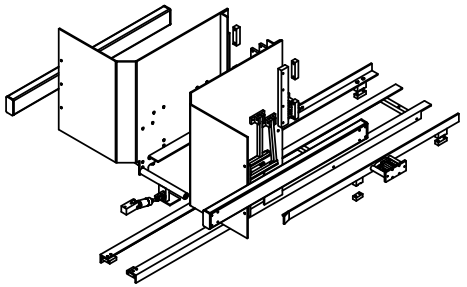
WEXXAR Packaging Inc.

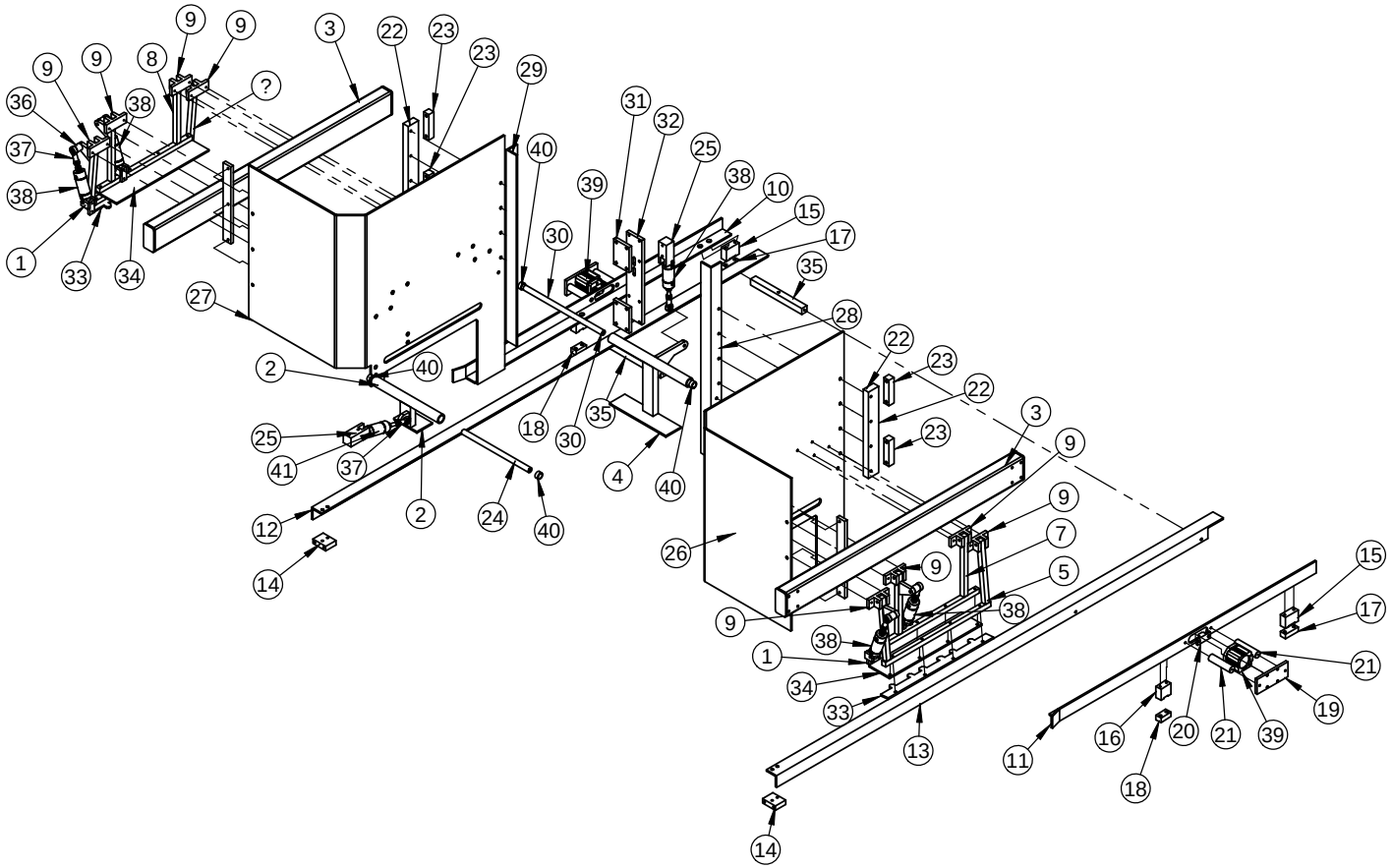
TITLE
ASSY, CAM SHAFT
-

DWG.NO. **X21-763**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X22-185	WLDMT, TRAP DR. CYL. MTG	4
2	X21-749	WLDMT, FRONT HOPPER GATE	1
3	X21-751	WLDMT, HOPPER PLATE SUPPORT	2
4	X21-752	WLDMT, REAR HOPPER GATE	1
5	X21-753	WLDMT, RPC CLAMP SWING, RH	1
6	X21-754	WLDMT, RPC CLAMP SWING, LH	1
7	X21-755	WLDMT, RPC SLIDE SWING, RH	1
8	X21-756	WLDMT, RPC SLIDE SWING, LH	1
9	X12-1853	TRAP DOOR PIVOT MOUNT	8
10	X11-3159	RPC SIDE GUIDE, lH	1
11	X11-3160	RPC SIDE GUIDE, RH	1
12	X11-3161	RPC LOWER RAIL, LH	1
13	X11-3162	RPC LOWER RAIL, RH	1
14	X11-3165	LOWER RPC GUIDE FRONT MOUNT	2
15	X11-3166	RPC SIDE GUIDE MOUNT A	2
16	X11-3167	RPC SIDE GUIDE MOUNT B	2
17	X11-3168	RPC SIDE GUIDEJ MOUNT CLAMP A	2
18	X11-3169	RPC SIDE GUIDEJ MOUNT CLAMP B	2
19	X11-3196	RPC GRIPPER MOUNT	2
20	X11-3197	RPC GRIPPER	2
21	X11-3198	SPACER, 1" OD X 4.100" L, 1/4" TAP	4
22	X11-3217	HOPPER SIDE PLATE MTG A	2
23	X11-3245	HOPPER SIDE PLATE MTG CLAMP	4
24	X11-3256	FRONT HOPPER GATE SHAFT	1
25	X11-3257	REAR CYLINDER CLEVIS	2
26	X11-3298	HOPPER PLATE, RH	1
27	X11-3299	HOPPER PLATE, LH	1
28	X11-3300	HOPPER BACK PLATE, LH	1
29	X11-3301	HOPPER BACK PLATE, RH	1
30	X11-3306	REAR HOPPER GATE SHAFT	1
31	X11-3307	GATE CYL MOUNT CLAMP	2
32	X11-3308	GATE CYL MOUNT	1
33	X11-3309	RPC LOCK PLATE	2
34	X11-3310	HOPPER SLIDE GATE PLATE	2
35	X11-3343	LOWER GUIDE RAIL SPACER	2
36	X10-6085	IDLER WHEEL ROD END SPACER	4
37	Z02-749	ROD END FEMALE 7/16" NF, HEAVY DUTY	6
38	Z00-1002	CYL.1.5x1"S,D.ACT.PIVT.CUS	5
39	Z00-1008	UNIVERSAL CYLINDER, 50mmB x 25mmS	2
40	Z02-635	SLEEVE: 3/4ID x 1OD x 1/2"L	4
41	Z00-1002	CYL.1.5x1"S,D.ACT.PIVT.CUS	1

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

FINISH: AS SHOWN

DATE : 10MAR11

DRAWN BY: AYC

APPROVED BY:

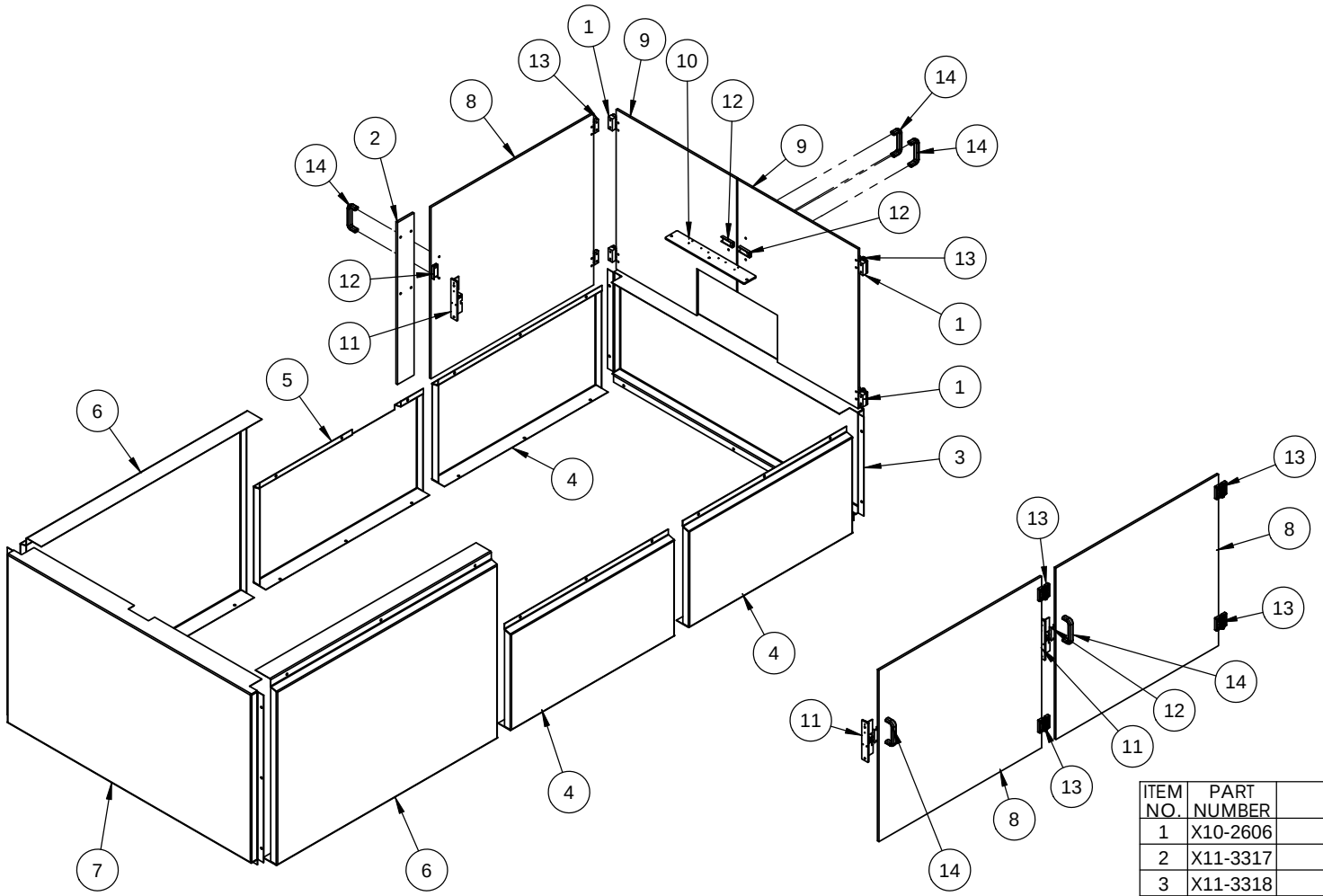
WEXXAR Packaging Inc.

TITLE: ASSY, HOPPER RPC

DWG.NO. **X21-762**

REV.

Rev.	DESCRIPTION	DATE	By



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X10-2606	HINGE SPACER	4
2	X11-3317	PANEL SIDE GUARD	1
3	X11-3318	FRONT GUARD	1
4	X11-3319	SIDE GUARD A	3
5	X11-3320	SIDE GUARD B	1
6	X11-3321	HOPPER SIDE GUARD	2
7	X11-3322	REAR GUARD	1
8	X11-3323	LEXAN GUARD	3
9	X11-3324	REAR LEXAN GUARD DOOR	2
10	X21-718	ASSY, SWITCH MOUNT	1
11	X21-784	ASSY, SWITCH MOUNT SIDE DOOR	3
12	Z02-725	MAGNET: CHANNEL	5
13	Z04-660	HINGES: Heavy Duty - CFA.65 CH-6	10
14	Z04-664	HANDLE: STD DUTY M.643/140 B-5/16-18	5

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN
FINISH: AS SHOWN
DRAWN BY: AYC
DATE : 24MAR11
APPROVED BY:

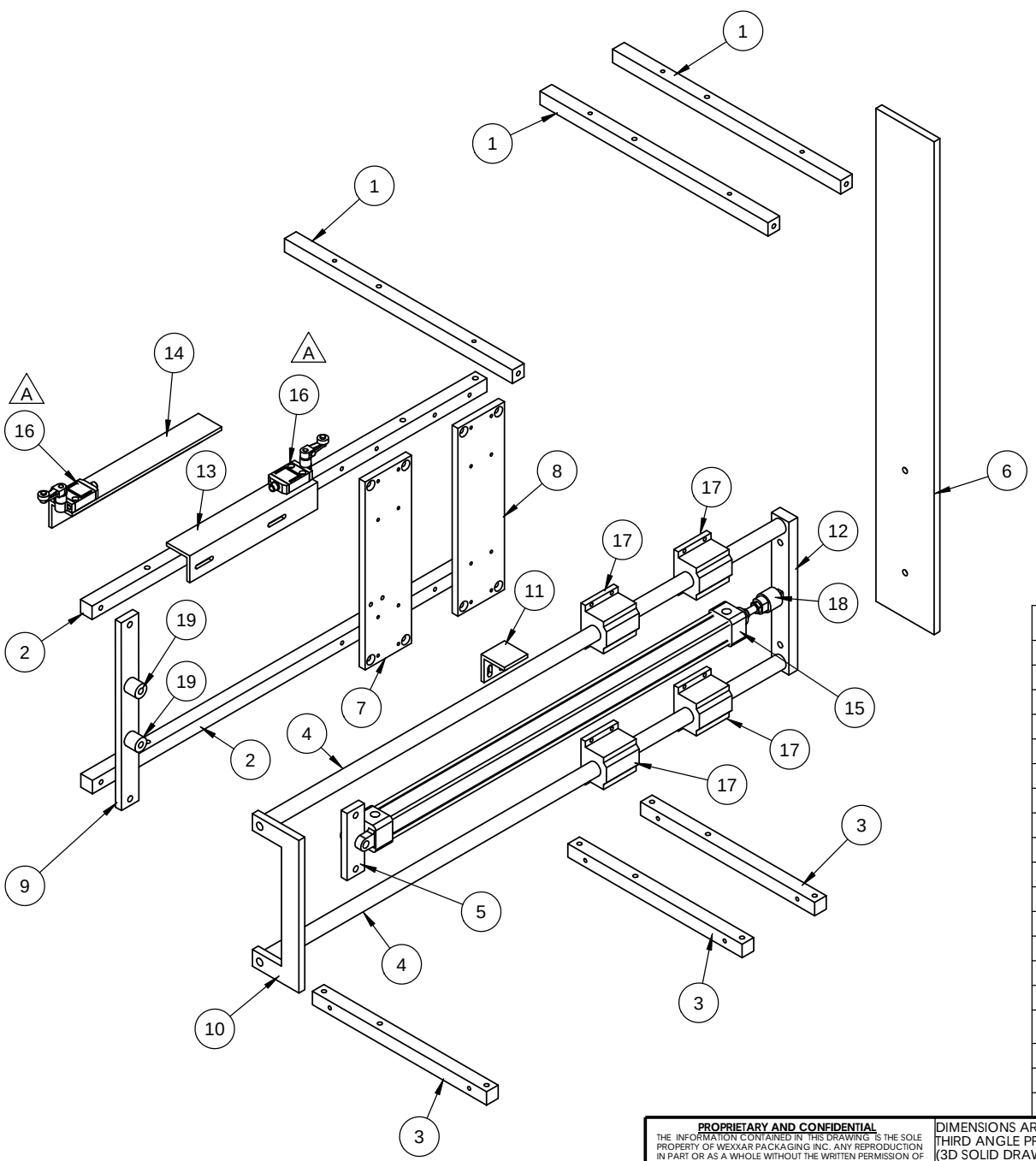
WEXXAR Packaging Inc.

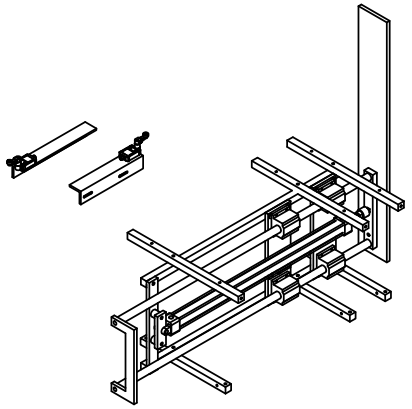
TITLE: ASSY, GUARDS RPC

DWG.NO. **X21-761**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X11-3237	UPPER CENTER PUSHER MOUNT	3
2	X11-3290	CENTER PUSHER BRG PLATE BAR	2
3	X11-3291	CENTER PUSHER LOWER MTG	3
4	X11-3293	CENTER CR. PUSHER LIN. SHAFT	2
5	X11-3294	PUSHER CYL REAR CLEVIS	1
6	X11-3295	CENTER CROSS PUPSHER	1
7	X12-2495	CROSS PUSH LIN. BEARING PL.A	1
8	X12-2496	CROSS PUSH LIN. BEARING PL.B	1
9	X12-2497	CROSS PUSH CYL. MOUNT A	1
10	X12-2501	CROSS PUSH LIN. SHAFT BAR	1
11	X12-2502	CROSS PUSH CYL. SUPPORT	1
12	X12-2514	CROSS PUSHER ROD END MTG	1
13	X12-2582	SWITCH MOUNT ANGLE	1
14	X12-2583	SWITCH MOUNT ANGLE	1
15	Z00-1451	1.5" B x 28" S Rear Clevis w/Cushion & 1	1
16	Z01-396	LIMIT SWITCH,LOW OF ROLLER LEVER,DC,M12	2
17	Z02-542	BEARING, LINEAR: 1" - SPB 16 (NSK)	4
18	Z02-751	ALIGNMENT COUPLER 7/16UNF	1
19	X12-2499	SPACER, 1" OD X 0.938" L, 13/32" ID	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

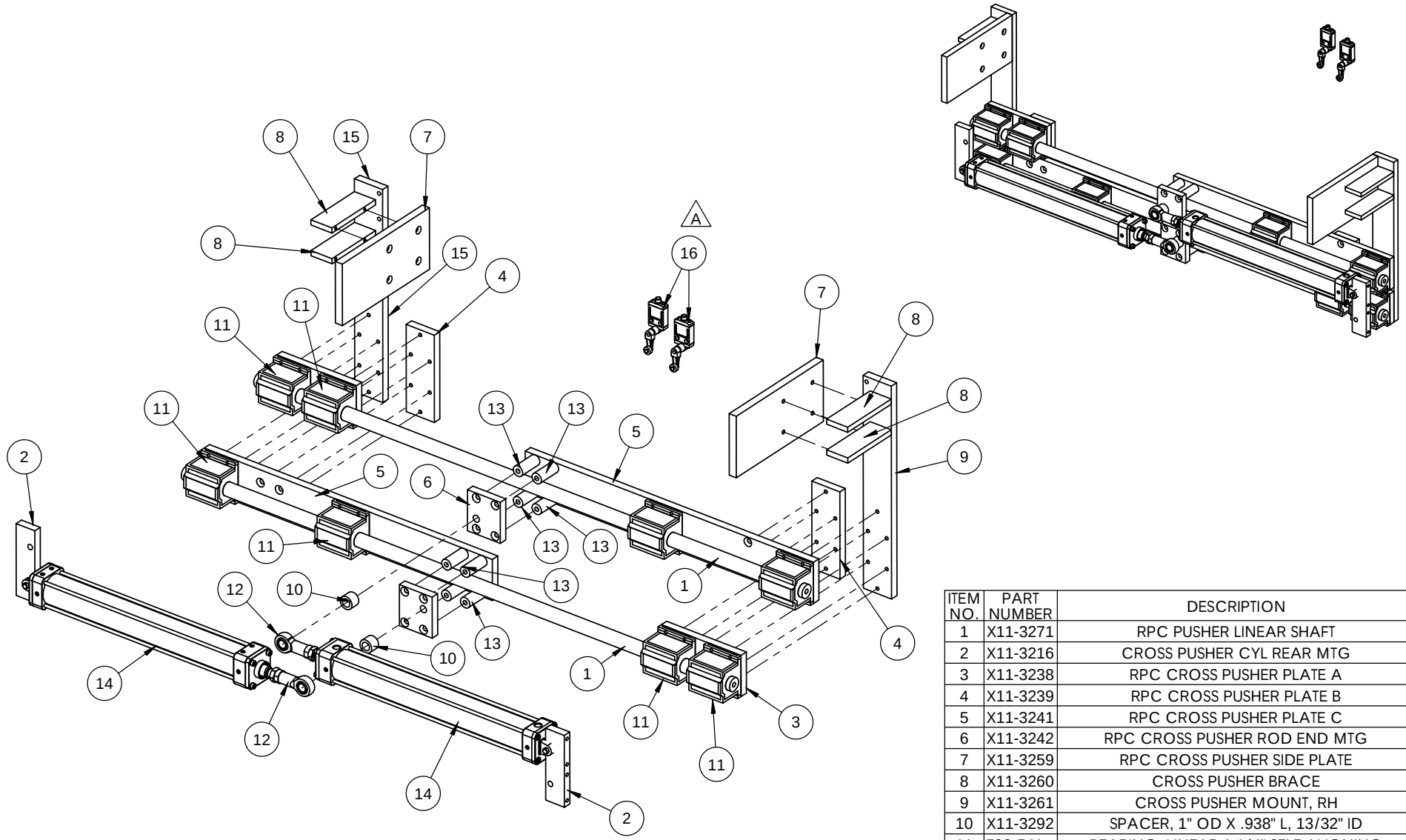
TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

WEXXAR Packaging Inc.

TITLE: ASSY, CENTER CROSS PUSHER

MATERIAL: AS SHOWN
FINISH: AS SHOWN
DATE: 23MAR11
DRAWN BY: AYC
APPROVED BY:
DWG.NO. **X21-760**
REV. **A**

Rev.	DESCRIPTION	DATE	By
A	REPLACED Z01-1275 WITH Z01-396	26APR11	AYC



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X11-3271	RPC PUSHER LINEAR SHAFT	2
2	X11-3216	CROSS PUSHER CYL REAR MTG	2
3	X11-3238	RPC CROSS PUSHER PLATE A	2
4	X11-3239	RPC CROSS PUSHER PLATE B	2
5	X11-3241	RPC CROSS PUSHER PLATE C	2
6	X11-3242	RPC CROSS PUSHER ROD END MTG	2
7	X11-3259	RPC CROSS PUSHER SIDE PLATE	2
8	X11-3260	CROSS PUSHER BRACE	4
9	X11-3261	CROSS PUSHER MOUNT, RH	1
10	X11-3292	SPACER, 1" OD X .938" L, 13/32" ID	2
11	Z02-541	BEARING, LINEAR 1.1/4" SELF ALIGNING	8
12	Z02-741	ROD END NF - FEMALE - 3/4"	2
13	X11-3353	SPACER, 1" OD X .3.313" L, 13/32" ID	8
14	Z00-1450	Cylinder 2 1/2" bore x 18" stroke - SMC	2
15	X11-3262	CROSS PUSHER MOUNT, LH	1
16	Z01-396	LIMIT SWITCH,LOW OF ROLLER LEVER,DC,M12	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

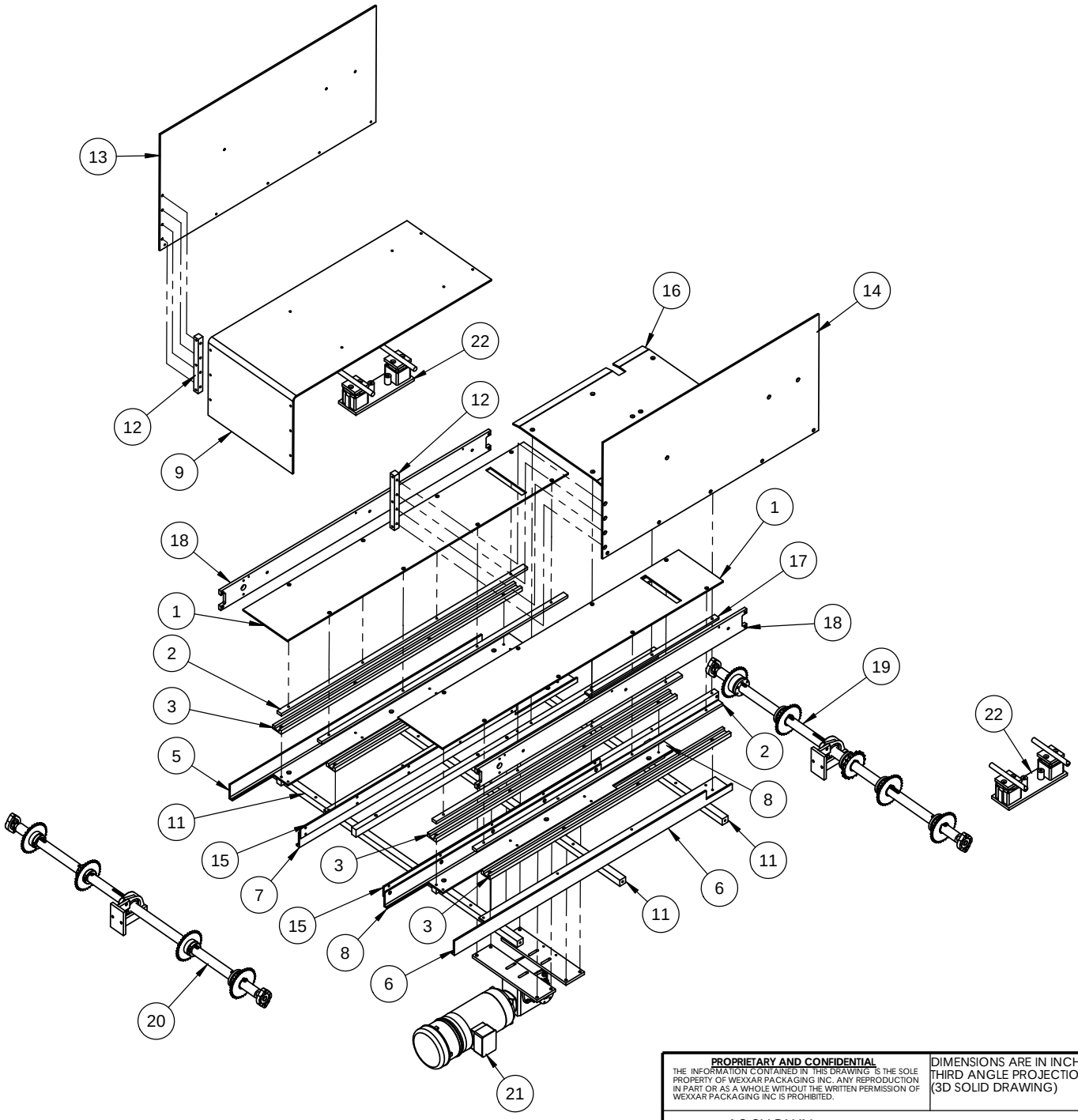
TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

WEXXAR Packaging Inc.

TITLE: ASSY, SIDE PUSHERS

MATERIAL: AS SHOWN
FINISH: AS SHOWN
DATE: 23MAR11
DRAWN BY: AYC
APPROVED BY:
DWG.NO. **X21-759**
REV. **A**

Rev.	DESCRIPTION	DATE	By
A	ADDED Z01-396	26APR11	AYC



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X11-3226	CONVEYOR TOP PLATE	2
2	X11-3227	CONVEYOR TOP PLATE SPACER	4
3	X11-3228	CONVEYOR CHAIN RAIL	4
4	X11-3229	CHAIN RAIL SUPPORT BAR	4
5	X11-3230	INNER INFEED RAIL, LH	1
6	X11-3231	INNER INFEED RAIL, RH	1
7	X11-3232	OUTER INFEED RAIL, RH	1
8	X11-3233	OUTER INFEED RAIL, LH	1
9	X11-3234	CENTER CONVEYOR GUARD	1
10	X11-3235	CENTER CONV. MOUNT BAR	2
11	X11-3236	CENTER CONV. CROSS BAR	3
12	X11-3243	HOPPER SIDE PLATE MTG B	2
13	X11-3246	INFEED SIDE PLATE, RH	1
14	X11-3247	INFEED SIDE PLATE, LH	1
15	X11-3250	INFEED SIDE PLATE MOUNT	2
16	X11-3253	CROSS FEED PLATE	1
17	X11-3254	CROSS FEED PLATE SPACER	2
18	X11-3255	CONVEYOR SIDE PLATE	2
19	X20-2194	ASSY, DRIVE SHAFT, INFEED CONV.	1
20	X20-2195	ASSY, IDLE SHAFT, INFEED CONV.	1
21	X29-1761	ASSY, MOTOR 1HP/GEARBOX 30:1	1
22	X29-1765	ASSY, HOPPER GATE AND CYC.	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN
FINISH: AS SHOWN
DATE : 23MAR11
DRAWN BY: AYC
APPROVED BY:

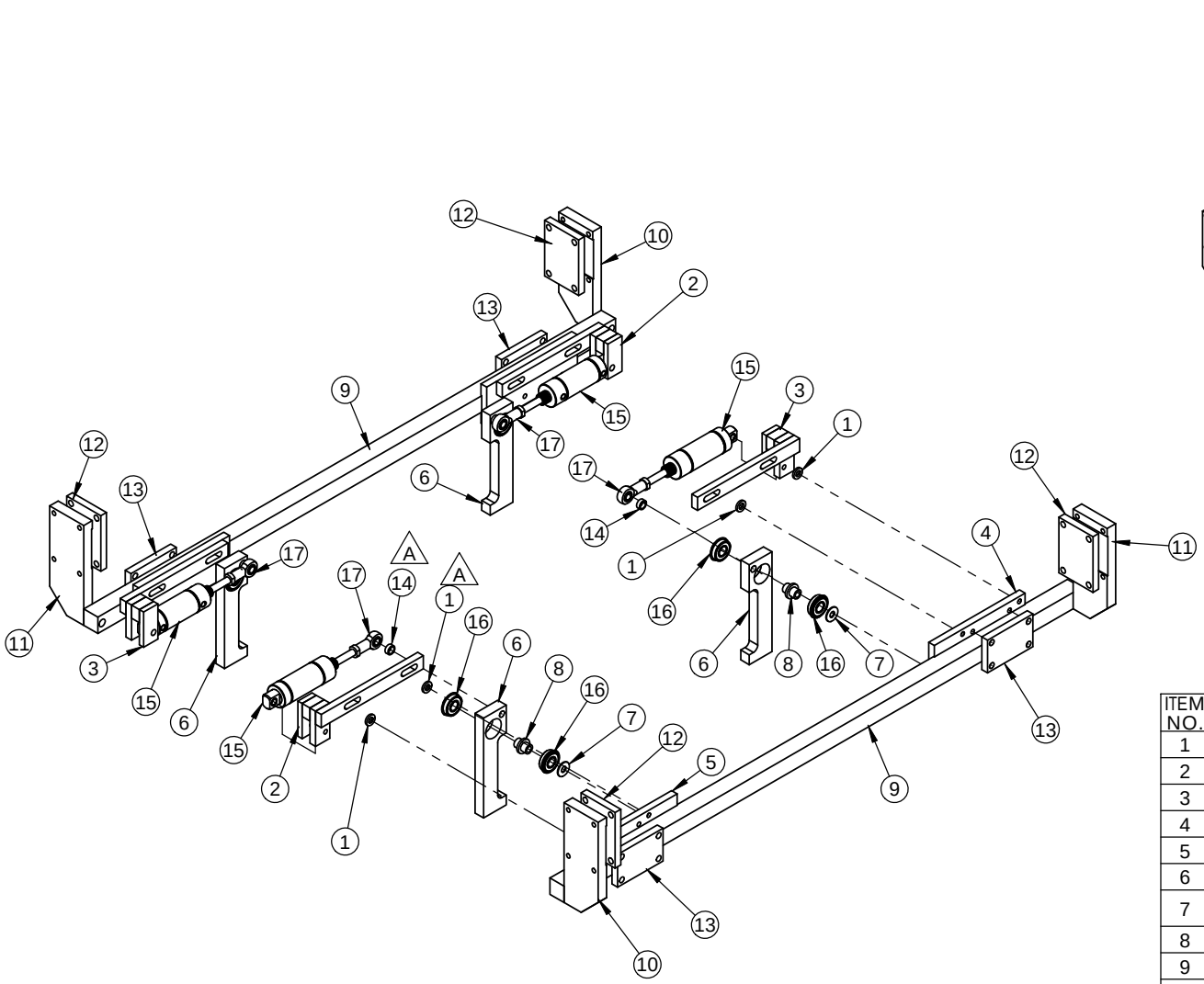
WEXXAR Packaging Inc.

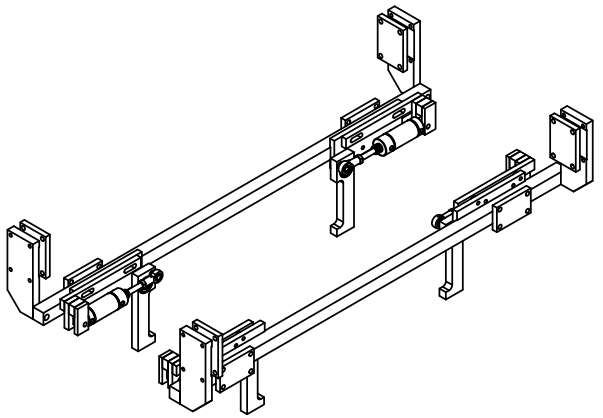
TITLE: ASSY, INFEED CONVEYOR

DWG.NO. **X21-758**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X80-1023	SPACER, 0.75" OD X .125" L, 13/32" ID	8
2	X21-731	WLDMT, PRC LOCKER CYL. MTG,	2
3	X21-732	WLDMT, PRC LOCKER CYL. MTG,	2
4	X11-3178	LOCKER MOUNT PLATE, RH	2
5	X11-3179	LOCKER MOUNT PLATE, LH	2
6	X11-3180	LOCKER HAMMER	4
7	X11-3181	SPACER, 1" OD X 0.063" L, 13/32" ID	4
8	X11-3182	LOCKER HAMMER SHAFT	4
9	X11-3195	LOCKER MOUNT BAR	2
10	X11-3199	LOCKER MOUNT BAR PLATE, RH	2
11	X11-3200	LOCKER MOUNT BAR PLATE, RH	2
12	X11-3201	LOCKER MOUNT BAR PLATE CLAMP	4
13	X11-3327	LOCKER MOUNT CLAMP	4
14	X10-6139	SPACER,5/8ODX15/32IDX1/4L	4
15	Z00-1018	Cyl. 1.5B x 1.5S, D.ACT, C/W ADJ CUSHION	4
16	Z02-551	BEARING, RETAINING ROLLER	8
17	Z02-749	ROD END FEMALE 7/16" NF, HEAVY DUTY	4

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

WEXXAR Packaging Inc.

TITLE: ASSY, RPC LOCK HAMMER

MATERIAL: AS SHOWN

FINISH: AS SHOWN

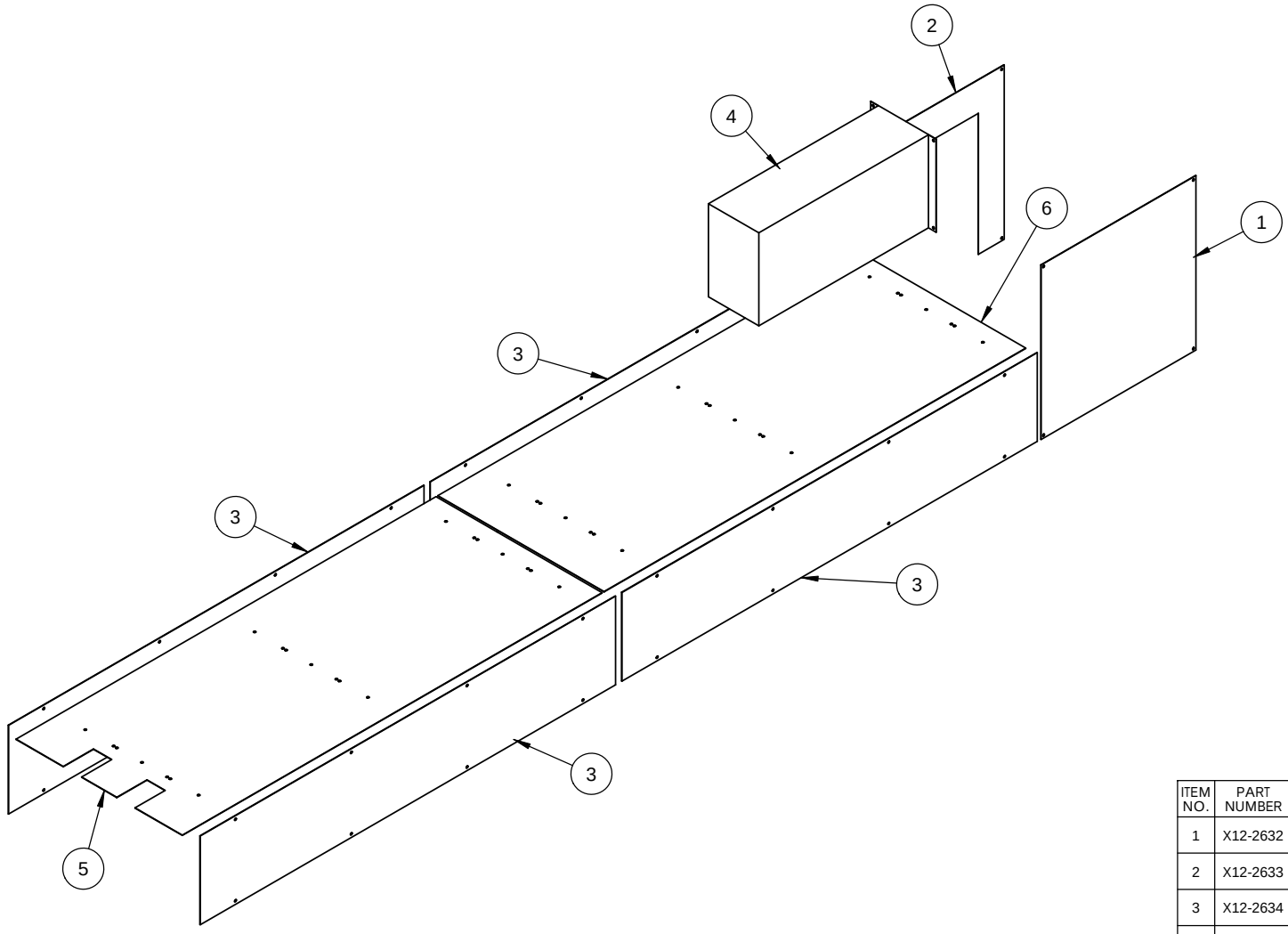
DATE: 07MAR11

DRAWN BY: AYC

APPROVED BY:

DWG.NO. **X21-769** REV. **A**

Rev.	DESCRIPTION	DATE	By
A	REPLACE X80-0779 WITH X80-1023 AND X10-3358 WITH X10-6139	4/4/2011	AYC



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X12-2632	SIDE GUARD A	1
2	X12-2633	SIDE GUARD B	1
3	X12-2634	SIDE GUARD C	4
4	X12-2537	CROSS PUSHER GUARD	1
5	X12-2636	TOP CONVEYOR GUARD B	1
6	X12-2635	TOP CONVEYOR GUARD A	1

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

DRAWN BY: L.L.

FINISH:

DATE : 11MAR11

APPROVED BY: -

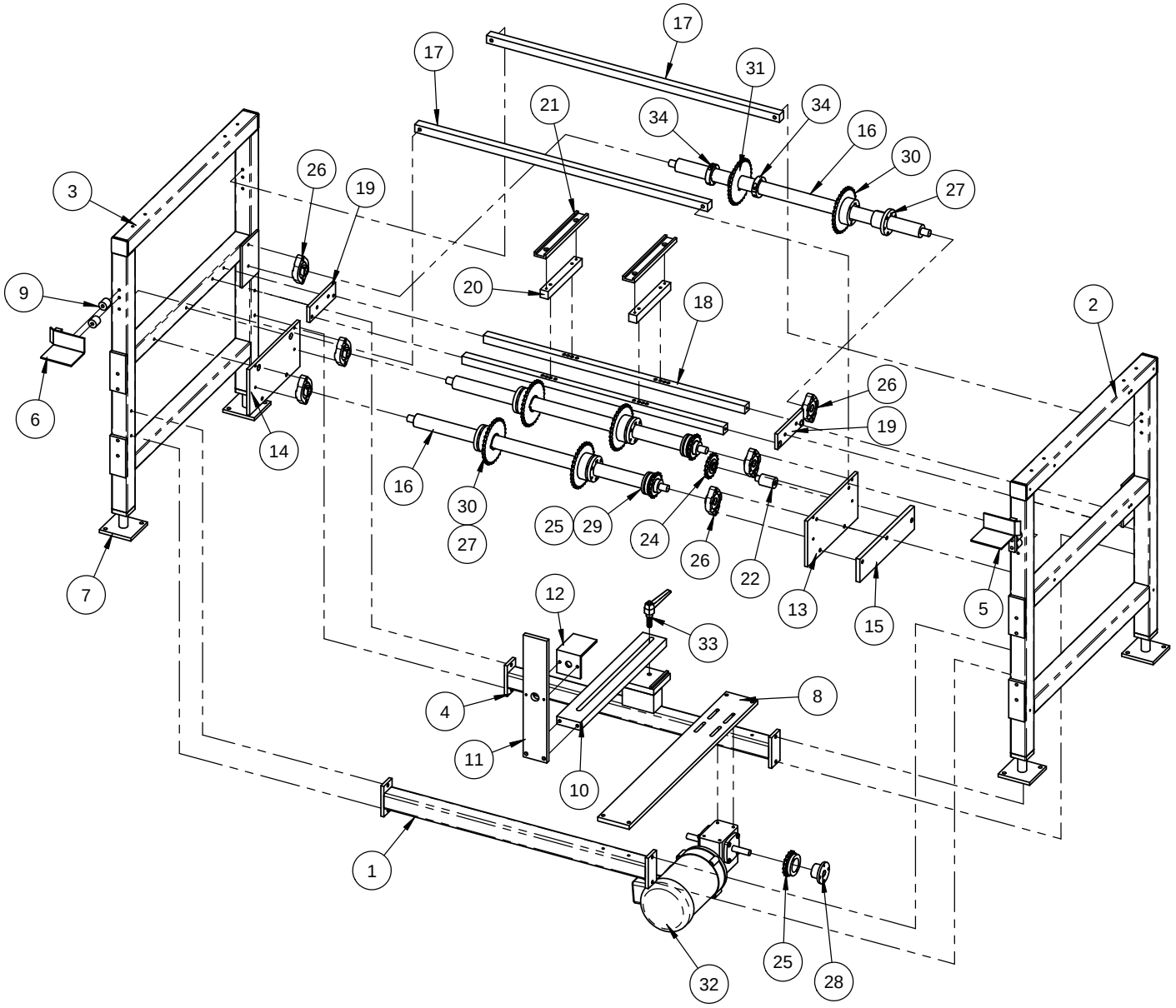
WEXXAR Packaging Inc.

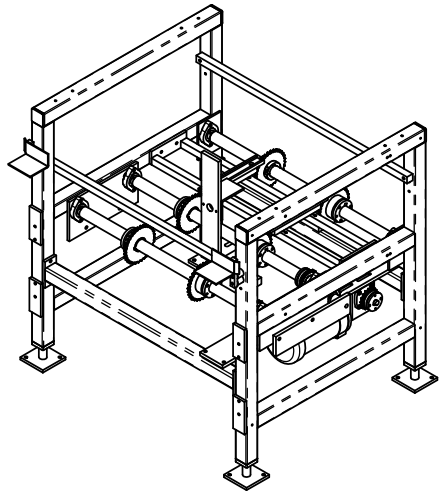
TITLE
ASSY, STACKER GUARDS
-

DWG.NO. **X22-449**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X22-299	WLDMT, FR. LOWER CROSS MEM	1
2	X22-454	WLDMT, STACKER FRAME, LH	1
3	X22-455	WLDMT, STACKER FRAME,RH	1
4	X22-300	WLDMT, LOWER CROSS MEM REAR	1
5	X22-402	WLDMT, TRAY GUIDE,LH	1
6	X22-403	WLDMT, TRAY GUIDE,RH	1
7	X21-060	WELDMT, FRAME FOOT	4
8	X12-352X	GEAR BOX MOUNT	1
9	X10-919	SPACER, 1"OD X 1"L, 11/32"ID	4
10	X12-581	BACK STOP SLIDE	1
11	X12-582	BACK STOP	1
12	X12-605	SENSOR MOUNT ANGLE	1
13	X12-974L	CYL MOUNT CROSS BAR PLATE LH	1
14	X12-974R	CYL MOUNT CROSS BAR PLATE RH	1
15	X12-980	IDLER MOUNT	1
16	X12-1585	STACKER SHAFT, 33"L	3
17	X12-1611	CROSS GUIDE MOUNT	2
18	X12-2518	CHAIN RAIL MOUNT BAR	2
19	X12-2520	CHAIN RAIL MTG. BAR PL.B	2
20	X12-2522	CHAIN RAIL GUIDE BAR B	2
21	X12-2524	CHAIN RAIL GUIDE B	2
22	X11-296A	IDLER STANDOFF, 1.75" LONG	1
23	Z02-278	REDUCER: 20:1, 56C DUAL OUTPUT SHAFT	1
24	Z02-430	SPROCKET - IDLER: HB40C17X5/8	1
25	Z02-435	SPROCKET: H40H17 - Tsubaki	3
26	Z02-548	FLANGE BEARING 3/4	6
27	Z02-616	TAPER BUSHING: P1 x 1.1/2	5
28	Z02-618	TAPER BUSHING: H-5/8	1
29	Z02-623	TAPER BUSHING: H-1.1/2	2
30	Z02-881	SPROCKET:H40P32	5
31	Z02-882	SPROCKET:H40B32 c/w 1-1/2"Bore	1
32	05-006	MOTOR 208/230/460,3,1760,0.33HP	1
33	Z04-661	RATCHET HANDLE:1/2x1/2NCx1.	1
34	Z02-675	COLLARS: Split - 1.1/2" (2-pc. black)	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

DRAWN BY: L.L.

FINISH:

DATE : 11MAR11

APPROVED BY: -

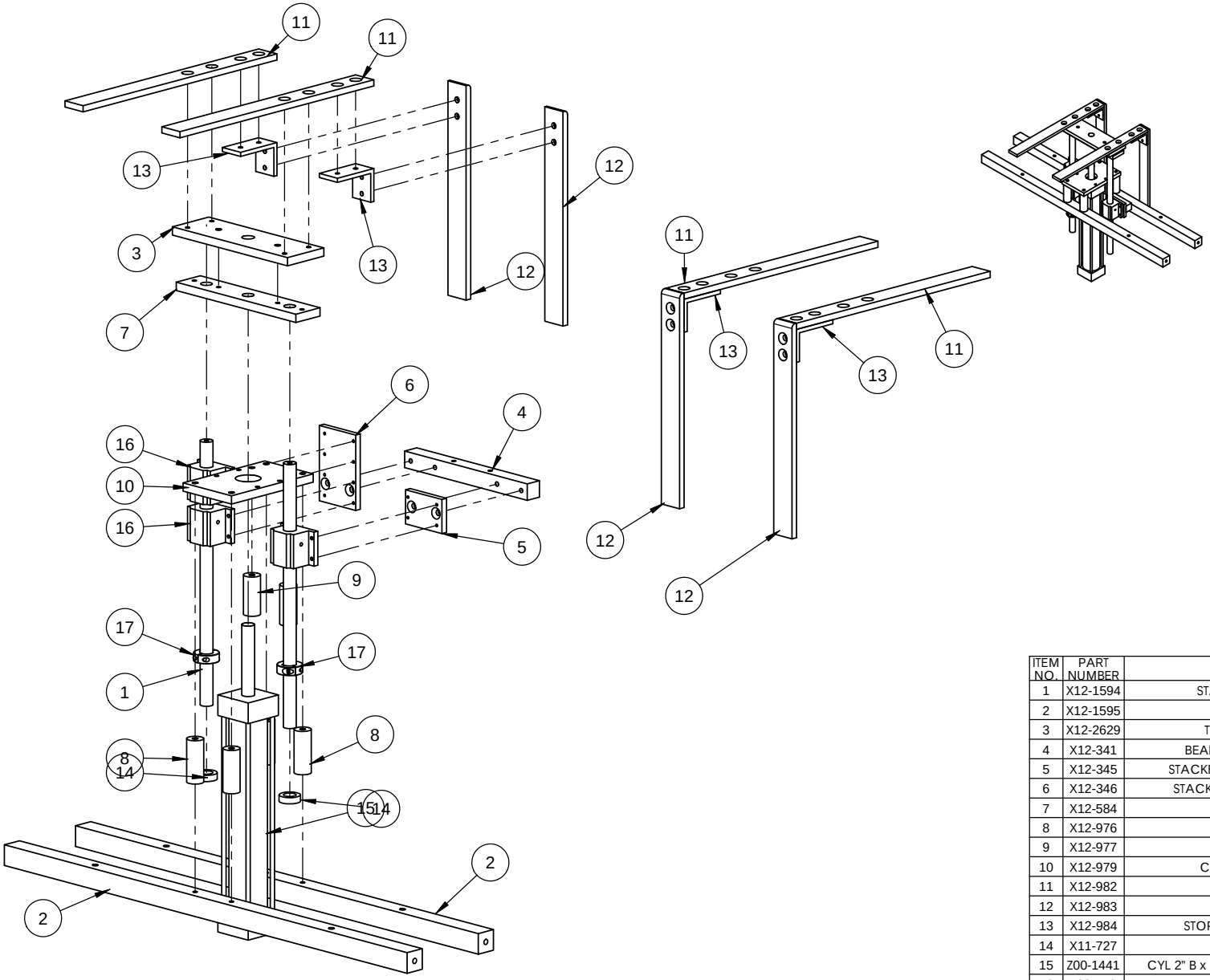
WEXXAR Packaging Inc.

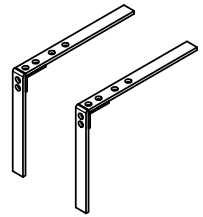
TITLE
ASSY, STACKER FRAME
-

DWG.NO. **X22-448**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	X12-1594	STACKER LINEAR SHAFT	2
2	X12-1595	LIFT MOUNT	2
3	X12-2629	TRAY LIFT CROSSBAR	1
4	X12-341	BEARING MOUNT BRACKET	1
5	X12-345	STACKER LINEAR MOUNT SINGLE	1
6	X12-346	STACKER LINEAR MOUNT DUAL	1
7	X12-584	LIFT PLATE MOUNT	1
8	X12-976	SPACER	4
9	X12-977	SPACER	2
10	X12-979	CYLINDER LIFT MOUNT	1
11	X12-982	LIFT BAR	4
12	X12-983	STOP PLATE	4
13	X12-984	STOP PLATE MOUNT ANGLE	4
14	X11-727	SLIDE BUMPER	2
15	Z00-1441	CYL 2" B x 9" S, FLANGE MOUNT 1" ¾-16	1
16	Z02-540	BEARING, LINEAR: 3/4"	3
17	Z02-300	LOCK COLLAR SPLIT 3/4", ZINC PLATED	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

DRAWN BY: L.L.

FINISH:

DATE : 11MAR11

APPROVED BY: -

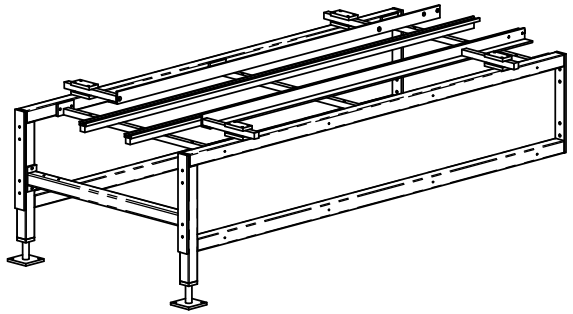
WEXXAR Packaging Inc.

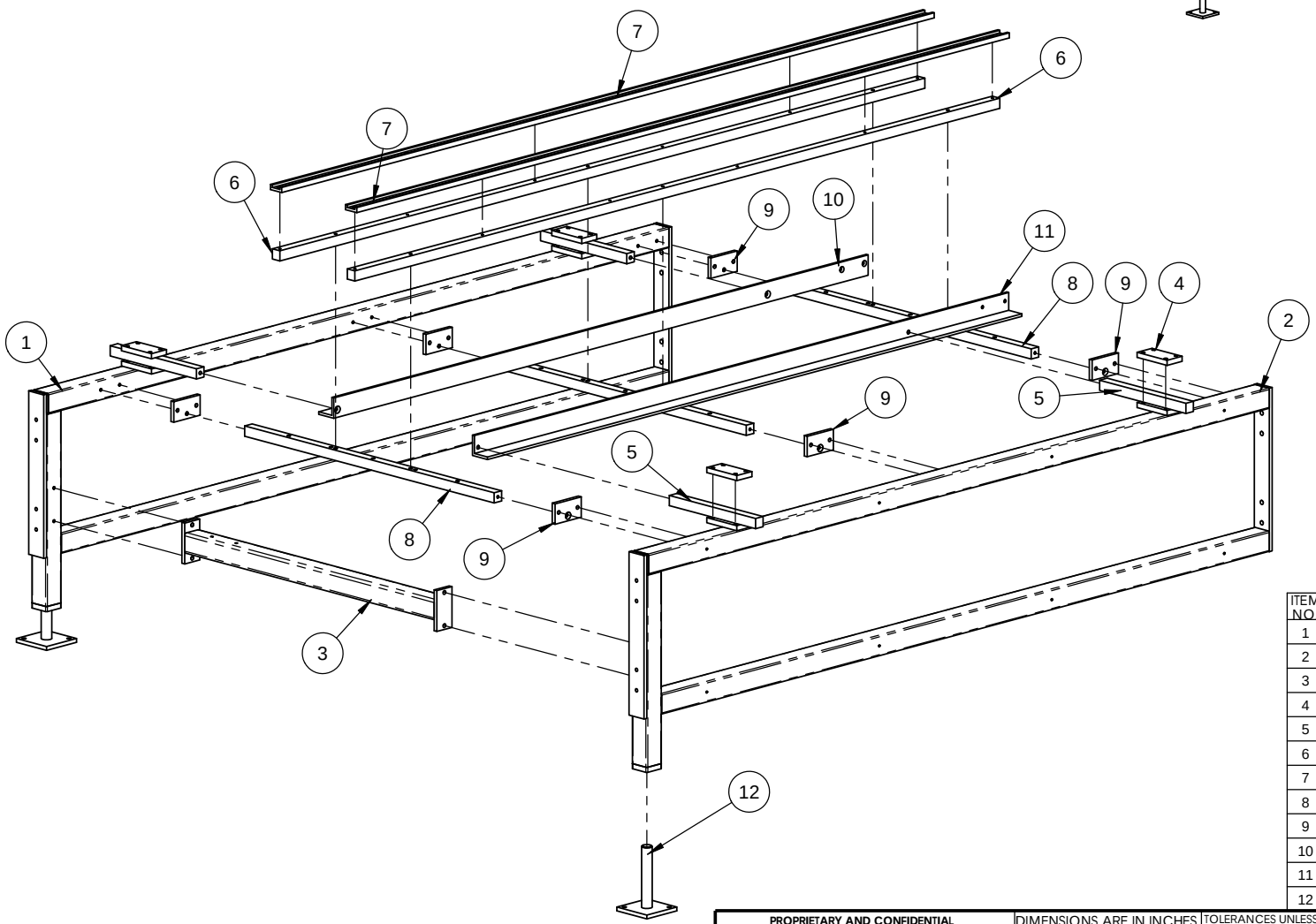
TITLE
ASSY, STACKER LIFT
-

DWG.NO. **X22-447**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	X22-450	WLDMT, STACKER INFEED FR., AL	1
2	X22-451	WLDMT, STACKER INFEED FR., AR	1
3	X22-299	WLDMT, FR. LOWER CROSS MEM	1
4	X12-2481	SIDE GUIDE CLAMP	4
5	X12-2527	INFEED SIDE GUIDE RAIL MOUNT	4
6	X12-2617	STACKER INFEED CHAIN RAIL GUIDE	2
7	X12-2619	STACKER INFEED CHAIN RAIL A	2
8	X12-2621	CHAIN RAIL MOUNTING BAR	3
9	X12-2622	CHAIN RAIL MOUNTING PLATE	6
10	X12-2623	STACKER INFEED GUIDE RAIL,AL	1
11	X12-2624	INFEED SIDE GUIDE RAIL, AR	1
12	X21-060	WELDMT, FRAME FOOT	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

DRAWN BY: L.L.

FINISH:

DATE : 14MAR11

APPROVED BY:

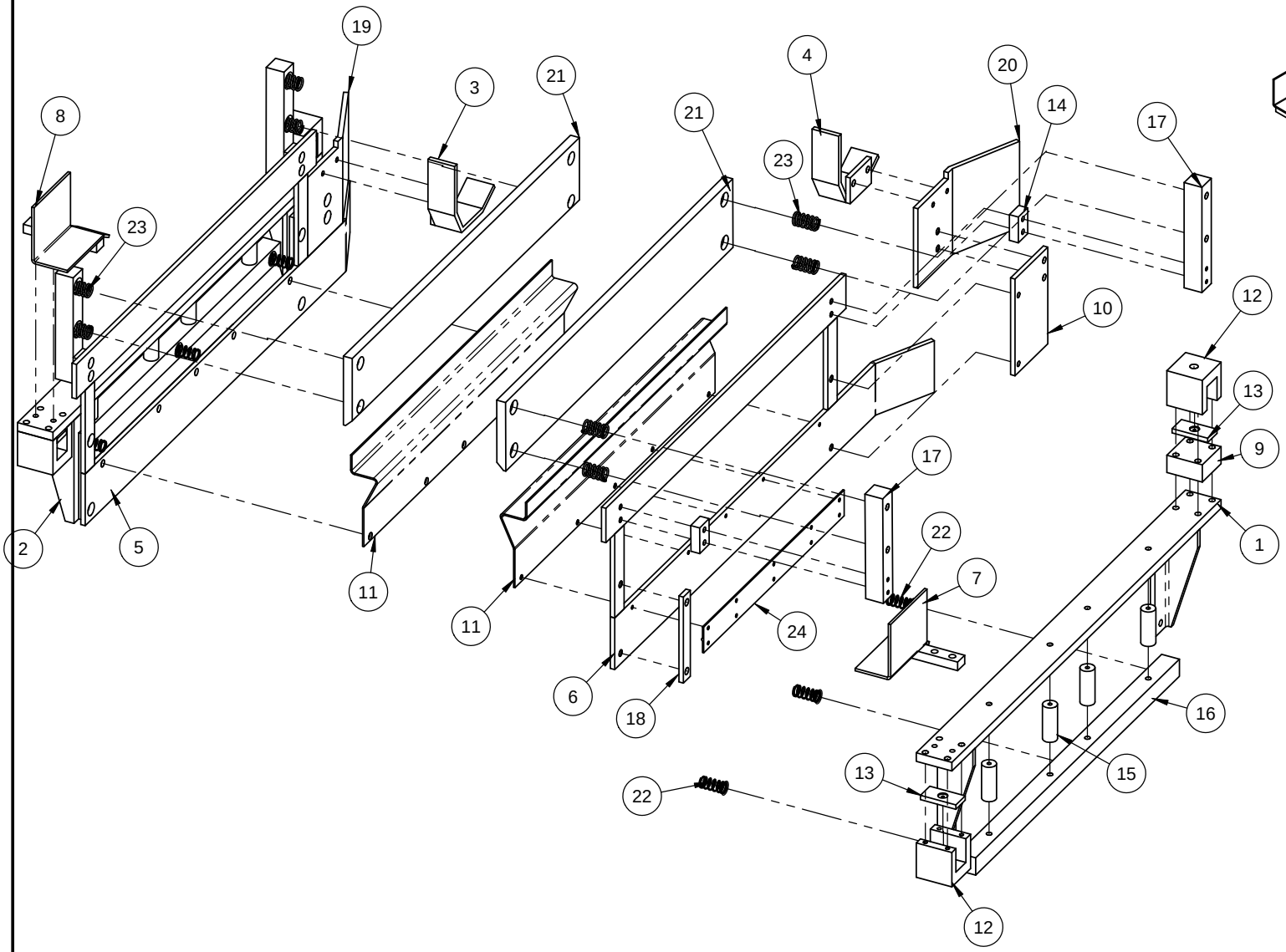
WEXXAR Packaging Inc.

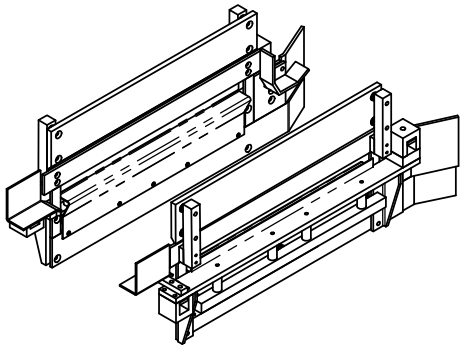
TITLE
ASSY, STACKER, INFEED SECTION

DWG.NO. **X22-446**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X22-104X	SHELF MOUNT LEFT	1
2	X22-105X	SHELF MOUNT RIGHT	1
3	X22-190L	WELD, TOP GUIDE LH	1
4	X22-190R	WELD, TOP GUIDE RH	1
5	X22-400	WLDMT, INFEED GUIDE, RH	1
6	X22-401	WLDMT, INFEED GUIDE, LH	1
7	X22-402	WLDMT, TRAY GUIDE,LH	1
8	X22-403	WLDMT, TRAY GUIDE,RH	1
9	X12-2542	GUIDE BLOCK SPACER	2
10	X12-2543	MOUNT PLATE TOP GUIDE	2
11	X12-2528	LIFT LEDGE	2
12	X12-342	GUIDE BLOCK	4
13	X12-365	SLIDE GUIDE CLAMP PLATE	4
14	X12-407	SPACER TOP GUIDE	4
15	X12-415X	SPACER	8
16	X12-416X	LIFT SIDE BAR	2
17	X12-468	MOUNT PLATE TOP GUIDE	4
18	X12-482	REAR FILLER PLATE	2
19	X12-601L	INFEED GUIDE EXTEND PLATE	1
20	X12-601R	INFEED GUIDE EXTEND PLATE	1
21	X12-467	MOUNT PLATE TOP GUIDE	2
22	Z06-085	SPRING COMPRESSION 0D = 0.60	6
23	Z06-088	SPRING, COMPRESSION	8
24	Z02-729	HINGE BAR 2" x 72" - Piano Hinge	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

FINISH:

DATE : 29OCT10

DRAWN BY: L.L.

APPROVED BY: -

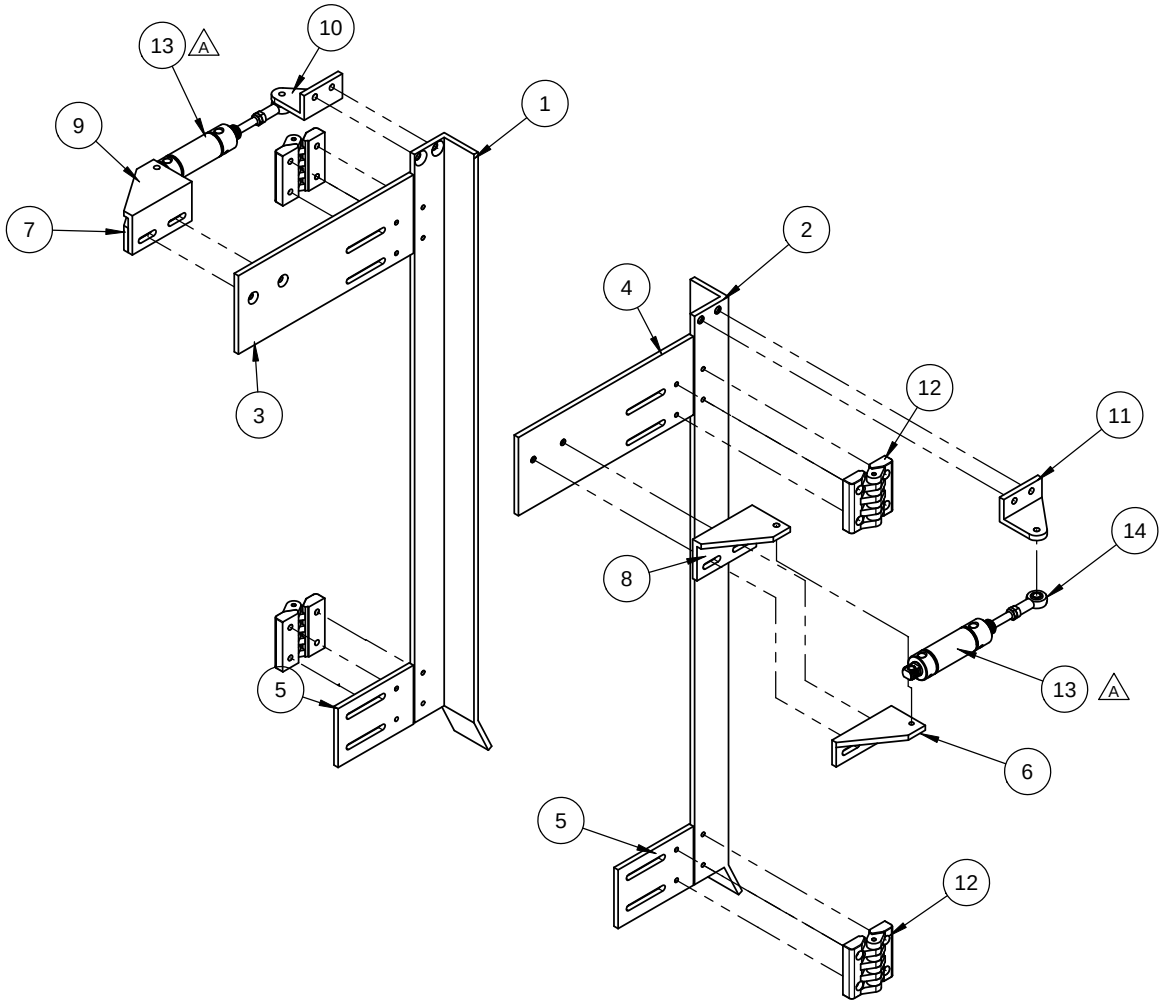
WEXXAR Packaging Inc.

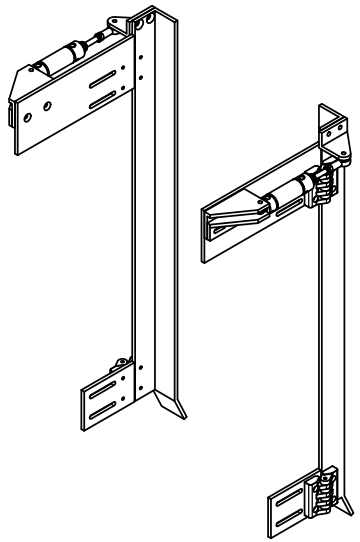
TITLE
ASSY, STACKER LIFT STOP
-

DWG.NO. **X22-410**

REV.

Rev.	DESCRIPTION	DATE	By





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X12-2503	SIDE FRONT TRAP GUIDE, LH	1
2	X12-2504	SIDE FRONT TRAP GUIDE, RH	1
3	X12-2505	TRAP GUIDE UPPER MOUNT, LH	1
4	X12-2506	TRAP GUIDE UPPER MOUNT, RH	1
5	X12-2507	TRAP GUIDE LOWER MOUNT	2
6	X12-2508	TRAP GUIDE CYL, REAR MTG AL	1
7	X12-2509	TRAP GUIDE CYL, REAR MTG AR	1
8	X12-2510	TRAP GUIDE CYL, REAR MTG BL	1
9	X12-2511	TRAP GUIDE CYL, REAR MTG BR	1
10	X12-2512	TRAP GUIDE CYL, FR. MTG, LH	1
11	X12-2513	TRAP GUIDE CYL, FR. MTG, RH	1
12	Z04-660	HINGES: Heavy Duty - CFA.65 CH-6	4
13	Z00-1004	CYL. 1.1/16"BX1"S, D.ACT	2
14	Z02-153	ROD END FEMALE 5/16" NF	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

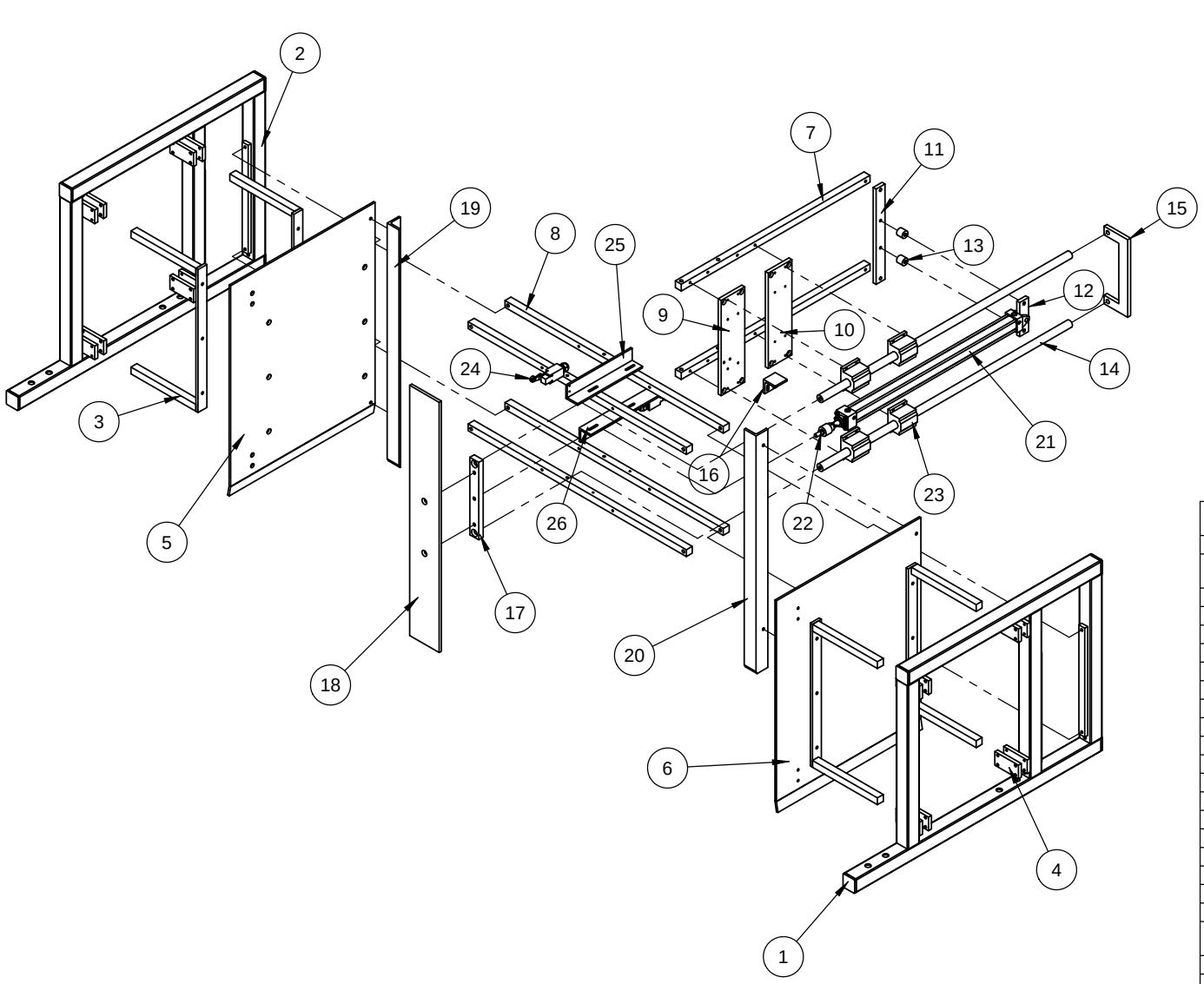
TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

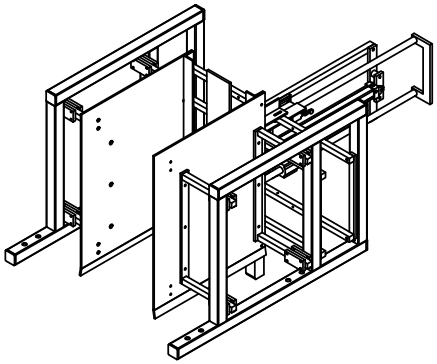
WEXXAR Packaging Inc.

TITLE: ASSY, TRAP GUIDES STACKER

MATERIAL: AS SHOWN
FINISH:
DATE: 27OCT10
DRAWN BY: RS
APPROVED BY:
DWG.NO. **X22-407**
REV. **A**

Rev.	DESCRIPTION	DATE	By
A	REPLACED P/No.: Z00-1097 WITH Z00-1004. ECO# 4701	14APR11	L.L.





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X22-395	WLDMT, STACKER,CR. PUSHER FR.,LH	1
2	X22-396	WLDMT, STACKER,CR. PUSHER FR.,RH	1
3	X22-399	WLDMT, STACKER SIDE GUIDE MTG	4
4	X12-2481	SIDE GUIDE CLAMP	8
5	X12-2491	STACKER SIDE GUIDE, LH	1
6	X12-2492	STACKER SIDE GUIDE, RH	1
7	X12-2493	CROSS PUSHER MTG BAR A	2
8	X12-2494	CROSS PUSHER MTG BAR B	4
9	X12-2495	CROSS PUSH LIN. BEARING PL.A	1
10	X12-2496	CROSS PUSH LIN. BEARING PL.B	1
11	X12-2497	CROSS PUSH CYL. MOUNT A	1
12	X12-2498	CROSS PUSH CYL. MOUNT B	1
13	X12-2499	CROSS PUSH CYL. MTG. SPACER	2
14	X12-2500	CROSS PUSH LIN. SHAFT 42.313" LONG	2
15	X12-2501	CROSS PUSH LIN. SHAFT BAR	1
16	X12-2502	CROSS PUSH CYL. SUPPORT	1
17	X12-2514	CROSS PUSHER ROD END MTG	1
18	X12-2515	CROSS PUSHER PLATE	1
19	X12-2516	SIDE BACK GUIDE, LH	1
20	X12-2517	SIDE BACK GUIDE, RH	1
21	Z00-1036	CYL 1.5 B x 26"S, D.ACT, CLEVIS, CUSH	1
22	Z02-751	ALIGNMENT COUPLER 7/16UNF	1
23	Z02-542	BEARING, LINEAR: 1" - SPB 16 (NSK)	4
24	Z01-1275	LIMIT ROLLER SWITCH, OMRON,	2
25	X12-2582	SWITCH MOUNT ANGLE	1
26	X12-2583	SWITCH MOUNT ANGLE	1

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

WEXXAR Packaging Inc.

TITLE: ASSY, CROSS PUSHER STACKER

MATERIAL: AS SHOWN

DRAWN BY: RS

FINISH:

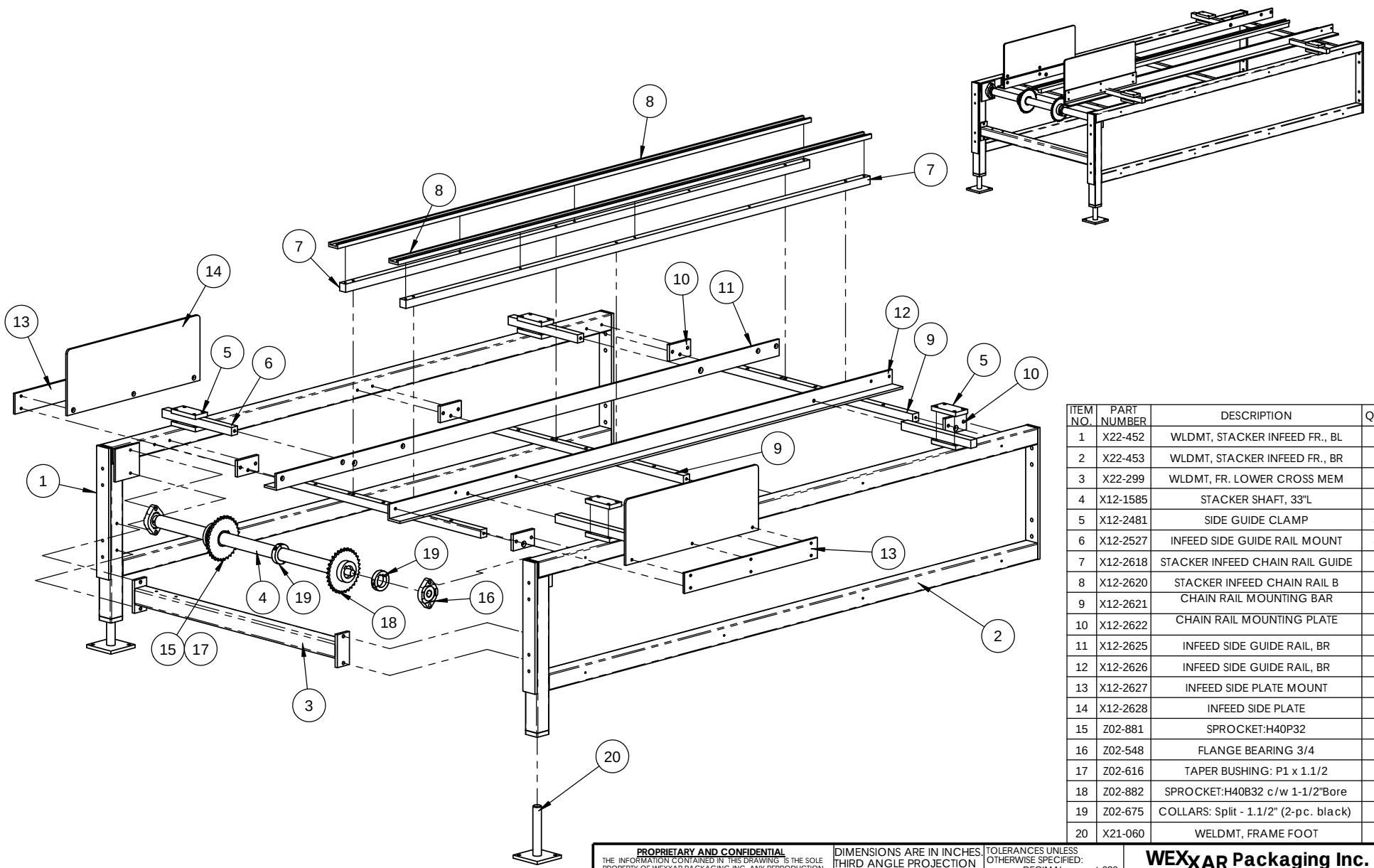
DATE : 26OCT10

APPROVED BY:

DWG.NO. **X22-406**

REV.

Rev.	DESCRIPTION	DATE	By



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	X22-452	WLDMT, STACKER INFEED FR., BL	1
2	X22-453	WLDMT, STACKER INFEED FR., BR	1
3	X22-299	WLDMT, FR. LOWER CROSS MEM	1
4	X12-1585	STACKER SHAFT, 33"L	1
5	X12-2481	SIDE GUIDE CLAMP	4
6	X12-2527	INFEED SIDE GUIDE RAIL MOUNT	4
7	X12-2618	STACKER INFEED CHAIN RAIL GUIDE	2
8	X12-2620	STACKER INFEED CHAIN RAIL B	2
9	X12-2621	CHAIN RAIL MOUNTING BAR	3
10	X12-2622	CHAIN RAIL MOUNTING PLATE	6
11	X12-2625	INFEED SIDE GUIDE RAIL, BR	1
12	X12-2626	INFEED SIDE GUIDE RAIL, BR	1
13	X12-2627	INFEED SIDE PLATE MOUNT	2
14	X12-2628	INFEED SIDE PLATE	2
15	Z02-881	SPROCKET:H40P32	1
16	Z02-548	FLANGE BEARING 3/4	2
17	Z02-616	TAPER BUSHING: P1 x 1.1/2	1
18	Z02-882	SPROCKET:H40B32 c/w 1-1/2"Bore	1
19	Z02-675	COLLARS: Split - 1.1/2" (2-pc. black)	2
20	X21-060	WELDMT, FRAME FOOT	2

DIMENSIONS ARE IN INCHES.
THIRD ANGLE PROJECTION
(3D SOLID DRAWING)

TOLERANCES UNLESS OTHERWISE SPECIFIED:
DECIMAL ±.030
FRACTIONAL ±1/32
ANGULAR ±1°

MATERIAL: AS SHOWN

DRAWN BY: L.L.

FINISH:

DATE : 14MAR11

APPROVED BY:

WEXXAR Packaging Inc.

TITLE
ASSY, STACKER, INFEED SECTION

DWG.NO. **X22-463**

REV.

Rev.	DESCRIPTION	DATE	By