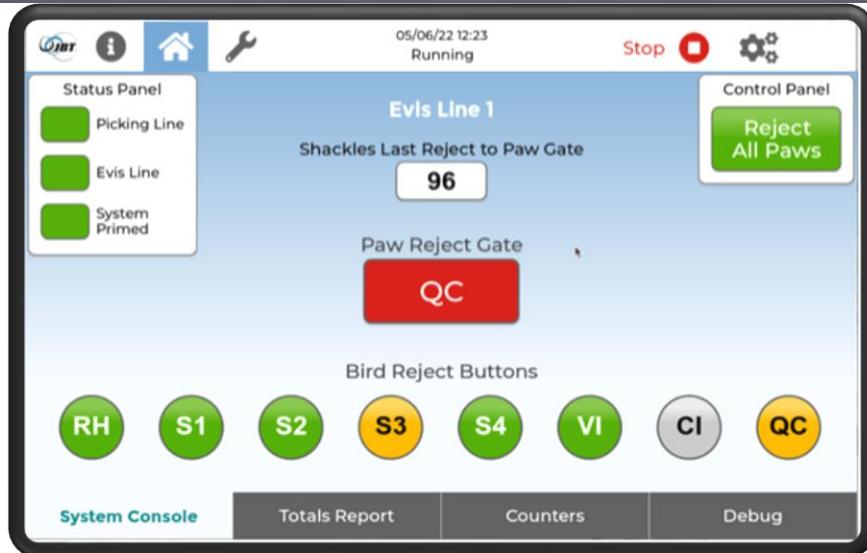




PAW TRACKING SYSTEM



Customer: Wayne Sanderson
Union Springs, AL, USA

Sales Order #: 203606S

Serial #: SN4390

Safety Instructions & Technical Manual

Prepared by: Lisa Stephens

Engineer Approval: Justen Vrabel

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GENERAL INFORMATION

SAFETY

Introduction

We at JBT/Prime Equipment Group, welcome you as an owner/user of JBT/Prime Equipment Group machines.

JBT/Prime Equipment Group designs and manufactures machines that can be operated and maintained safely; however, ultimate personal safety when operating and/or servicing a machine is a shared responsibility between the machine purchaser, and all personnel who operate and service the machine. This shared responsibility, along with other critical safety information, is explained in this section of the manual.

Every effort has been made to provide information and documentation that is representative of the purchased machine model. Serious injury, including death can occur if a machine is not operated and/or serviced in a safe manner. Contact our Customer Care Department if you are not sure of the safe way to perform a task or have questions which could affect the safety of you and your co-workers.

Responsibilities

Machine Builder's Responsibility

JBT/Prime Equipment Group's primary goal is to design machines in a manner that eliminates or minimizes potential hazards.

When potential hazards cannot be designed out or safeguarded, it is JBT/Prime Equipment Group's responsibility to alert machine users of the residual risk(s). JBT/Prime Equipment Group does this using safety signs mounted near or within the hazardous area. JBT/Prime Equipment Group also uses Caution, Warning, and Danger statements throughout the Instruction manual(s) to alert machine users of potential hazards and instruct them on measures to take to avoid personal injury.

We are confident that our machines meet OSHA and other worldwide safety codes and standards.

GENERAL INFORMATION

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Machine Purchaser's Responsibility

According to the OSHA act of 1970, each employer (machine purchaser) has the general duty to furnish each employee (machine user) employment and places of employment which are free from recognized hazards that could cause death or serious physical harm. The employer is also required to comply with standards, rules, and regulations proclaimed by the Secretary of Labor and to post notices which inform the employees of their rights and duties as outlined by all applicable laws. The employer is expected to take necessary action, including the establishment and enforcement of rules, to ensure compliance. Most countries employ the same or similar rules on their respective employers.

It is the responsibility of the employer (machine purchaser) to:

- Provide a work environment free from recognizable hazards and promote the expectation of safe work practices.
- Develop, implement, and enforce a comprehensive safety program for the protection of the employees.
- Provide a comprehensive lockout/tagout policy for employees to follow when adjusting/servicing the machine. Provide locks and lockout devices and "Do Not Start" tags to be used when disconnecting/dumping electrical, pneumatic, hydraulic, and mechanical power and stored energy sources as required under the lockout/tagout policy.

NOTE: "Do Not Start" tags CAN NOT be used as the only means of lockout, they must be used in conjunction with approved locks and/or other lockout devices.

- Provide training for employees that will be operating and servicing the machine, on the safe way to operate and service the machine.

NOTE: Your company can purchase a custom, comprehensive training program for machine users from JBT/Prime Equipment Group.

- Prohibit machine operation when any one of the safety devices is not functional (guards, interlocks, lifelines, safety signs, etc.).

Extra copies of the manuals and literature can be purchased through JBT/Prime Equipment Group's Customer Care Department.

GENERAL INFORMATION

SAFETY

Machine User's Responsibility

Machine user (operator and service technician) safety and the safety of all others in the work area are dependent on everyone forming and practicing good safety habits and exercising common sense, good judgment, and reasonable care while operating/servicing the machine.

The machine mounted safety signs and the Danger, Warning, and Caution statements throughout the Instruction manual(s) alert the machine user to potential hazards and instructs her/him on measures to take to avoid personal injury. The signs and statements, along with the guidelines included in this section of the Instruction manual, will help you, the user, understand your role in safe machine operation/servicing.

GENERAL INFORMATION

SAFETY

Before You Operate or Service the Machine for The First Time

- Read the instruction manual or vendor literature relevant to the upcoming task before you operate/adjust/service the machine. If you have questions, get answers before you begin the upcoming task.
- Prior to clearing wraps/jams, mechanically adjusting, or servicing the machine, lockout/tagout the machine following your company's lockout/tagout policy pertaining to that type of task.
- Take a walk around the machine, reading all safety signs on the machine and noting the locations of the Emergency Stop devices.

NOTE: Prior to machine operation/servicing, know the locations of all Emergency Stop buttons/lifelines and the locations of potential hazards.

- **NEVER** defeat or remove any of the safety devices. Each one performs a specific function and all of them are provided for your protection.
- **NEVER** perform a task that you do not have company authorization to perform. Know which machine-related tasks your company has authorized you to perform. Notify the appropriate person to perform all other tasks.
- **NEVER** enter the machine area when you are under the influence of alcohol, drugs, or medications that can make you less alert or affect your judgment.

GENERAL INFORMATION

SAFETY

At the Beginning of Each Shift

- Remove rings, watches, necktie, etc. Bind long hair, roll up long sleeves that do not fit snugly to your wrists, tuck in loose shirt tails, and make sure all other clothing fits closely to your body.
- Review machine operation, performance, and problems with the previous operator/service technician. Make sure all emergency stop features are functional (interlocks, buttons, lifelines, etc.). **NEVER** operate a machine if any of the emergency stop features are not functioning properly. Make sure all problems are satisfactorily resolved prior to machine start.
- Make sure the machine is free of jams. Clear jams following the jam clearing information in the Instruction manual. **NEVER** clear a wrap, jam, or debris from the machine when the machine is in motion.
- Make sure the machine and the machine area are free of tools and debris.
- Make sure all machine guards and access panels are installed securely.
- **NEVER** operate a machine when any one of the guards or access panels are open, loose, or removed.
- Make sure the machine is prepared to run in a safe manner by following the machine start information in the Instruction manual.
- Prior to starting the machine, be aware of all personnel in the machine area and make sure everyone is clear.

GENERAL INFORMATION

SAFETY

Safety Precautions for Everyone The following information should be used as a supplement to your company's comprehensive safety policies and procedures.

Your company's policies and procedures supersede the following information if, at any time, the two contradict one another.

- Familiarize yourself with your company's safety and lockout/tagout policies and follow them. Prior to adjusting or servicing the machine, make sure you know which lockout/tagout procedure and safety guidelines apply. When in doubt, get answers from your supervisor before you begin.
- Never reach into, clean, lubricate, adjust, climb on, or work on a moving machine for any reason, even when the machine is only being manually turned over or running at jog speed. ALWAYS follow your company's lockout/tagout policy prior to doing any of the above.
- Electrical shock or unexpected machine movement can cause serious injury or death. For your safety, follow your company's lockout/tagout policy as required for each task.
- Moving components can crush and dismember. Keep hair, body parts, loose clothing, etc. away from moving components.
- NEVER deface or remove factory installed safety signs. If a safety sign is illegible, missing, or damaged in any way, report it to your supervisor. She/he will go through the appropriate procedure to obtain a replacement safety sign.
- Machine mounted blades and knives can cause serious injury, including amputation: keep clear of blades and knives. When supplied, always install/use supplied blade edge and knife guards/shields as stated in the Instruction manual.
- Hot surfaces/liquids may cause burns. Fluids under pressure can be extremely hot.
- Allow ample time for surfaces and system components/fluids to cool before servicing the system. Use an appropriate temperature measuring device (not your hand) to monitor the temperature.

If left around the machine area, tools, spare or loose machine parts, and debris can cause serious injury. Use Loctite products (or equivalent) to secure components that are not used as frequent adjusting devices. Keep the machine area clean. When tools and spare machine parts are not in use, store them in the appropriate locations.

GENERAL INFORMATION

SAFETY

- Lifting heavy components and/or dropping them can cause back injuries, muscle strains, and broken foot bones. Obtain assistance when necessary and use adequate lifting and moving devices properly.
- Tripping and slipping can cause serious injury. Keep walkways clear. Walking surfaces must be free of liquids (oil, grease, ink, coffee, etc.) and other debris.
- Equipment surfaces that are touched by hand (operator interface touch screens, control buttons, levers, etc.) must be free of liquids.
- Disconnect/dump all power sources and dissipate stored energy prior to removing guards and/or access panels. Install and secure all guards and access panels after completing an adjustment, clearing a wrap/jam, and/or servicing the machine. Check affected safety devices to make sure they function properly.
- The only personnel in the general work area should be those operating/servicing the machine. Restrict all others from the area.
- Wear protective clothing (hardhat, eye/face shield, gloves, etc.) as necessary.
- Always wear steel mesh reinforced gloves and arm guards (or equivalent) supplied by your company and use supplied edge guards/shields when handling or working near sharp objects (blades, slitters, knives, etc.).
- Use the proper tools and equipment for the task being performed. Check the tools routinely to make sure they are in proper working condition.
- Follow the procedures in the Instruction manual when starting, adjusting, and servicing the machine and when clearing wraps/jams.
- Check safety devices routinely and replace them at the first indication of defectiveness or failure.
- Prior to starting the machine at the beginning of your shift, walk around it and make sure all guards and other safety devices are in place. Always check for "Do Not Start" tags before starting. **NEVER** start the machine until you are sure that everyone in the area is clear of the machine and aware that it is going to be started.

GENERAL INFORMATION

SAFETY

Electrical Safety

This machine uses electricity of sufficient voltage to cause serious injury or death if mishandled.

NOTE: Drive settings have been adjusted and set at JBT/Prime Equipment Group. Consult the parts documentation containing the machine assembly drawings for drive settings. Some machines may have the settings in the instruction manual. Contact JBT/Prime Equipment Group prior to changing any settings.

- Permit only trained/qualified electrical technicians to work on electrical components, regardless of whether the components are live or dead.
- Know the location of all electrical disconnects, shutoffs, and similar devices and know what each disable. Refer to the machine assembly drawings for this information.
- Keep electrical areas (and the machine in general) dry. Never work on electrical components while standing on or near wet surfaces.
- Always assume a circuit/component is live until proven dead by proper testing. Always test circuits/components with appropriate test equipment (not your fingers).
- Always be on the lookout for electrical wires and components that are frayed, cut, loose, broken, or exposed. Repair/replace such wires and components before machine power is restored and the machine is operated.
- Prior to machine operation, make sure wires, motor plugs, cables and similar devices are securely connected.
- **Never** remove a lockout device or "Do Not Start" tag unless you were the one who put it there. Notify everyone in the machine area when you remove your lockout/tagout that power is going to be restored to the machine.

GENERAL INFORMATION

SAFETY

Flammable/ Hazardous Materials Safety

Flammable/hazardous materials may be present during the converting process. Improperly handled flammable/hazardous materials can cause serious injuries.

NOTE: Material Safety Data Sheets (MSDS) for all flammable/hazardous materials on your machine, and within systems that your machine is equipped with shall be supplied.

- Familiarize yourself with the potential dangers presented by flammable/hazardous materials on/in your machine. The product label, vendor literature, MSDS sheets, and/or the Instruction manual Caution, Warning, and Danger statements state what precautions should be taken to help prevent injury.
- When handling hazardous materials, wear recommended protective clothing (eye/face shield, gloves, apron, etc.) and carefully follow the directions on the label, in the vendor literature, on the MSDS sheets, and/or in the Instruction manual statements.
- Store cleaning fluids and other spare flammable/hazardous materials in a safe place, away from the machine area. This includes rags and other items that have been contaminated with flammable/hazardous material.
- NEVER store flammable/hazardous materials in containers that are not labeled correctly or in containers that are not approved/appropriate for the material being stored within them.
- Restrict smoking and open flame in areas containing flammable/combustible material.
- Keep fire extinguishers fully charged and in convenient locations throughout the machine area. Have the extinguishers checked routinely and make sure they are rated for the type of flammable/hazardous material being used. NEVER return a used or empty extinguisher to its original location until it has been recharged. Have spare, fully charged extinguishers on hand to replace used extinguishers until they have been recharged.
- Dispose of flammable/hazardous materials in accordance with applicable local, state, and federal regulations.

GENERAL INFORMATION

SAFETY

Hazard Warnings

JBT/Prime Equipment Group uses safety signs mounted near or within potentially hazardous machine areas to warn machine users of residual risks in that area (residual risks are those that could not be completely safeguarded for all instances of use). JBT/Prime Equipment Group also uses Caution, Warning, and Danger statements throughout the Instruction manual to alert machine users of potential hazards and instruct them on measures to take to avoid personal injury.

The safety signs on the machine and the Danger, Warning, and Caution statements throughout the Instruction manual use signal words to identify the seriousness of the potential hazard. These signal words are Danger, Warning, and Caution and are defined on the next page.

GENERAL INFORMATION

SAFETY

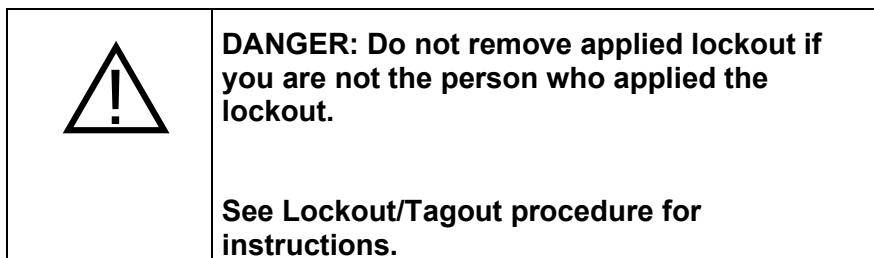
Safety Signs

Machine users must be trained to understand the meaning of these signal words (Danger | Warning | Caution) prior to operating and/or servicing the machine.

If a safety sign is illegible, missing, or damaged in any way, report it to your supervisor. She/he will go through the appropriate procedure to obtain a replacement safety sign.

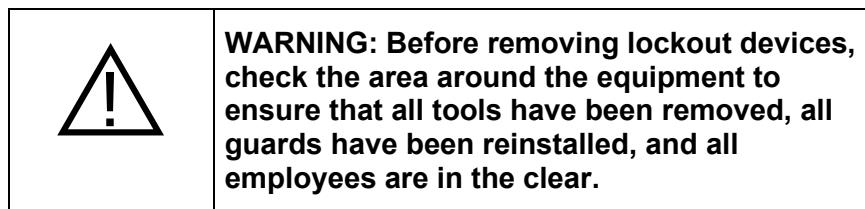
The **DANGER** statement indicates an immediate hazard or unsafe practice that, if ignored, **will** result in **serious injury or death**.

Example:



The **WARNING** statement indicates a potential hazard or unsafe condition that, if ignored, **could** result in **serious injury**.

Example:



GENERAL INFORMATION

SAFETY

The **CAUTION** statement indicates a potential hazard or unsafe condition that, if ignored, **might result in minor injury and/or machine damage.**

Example:

| | |
|---|--|
|  | CAUTION: For continued protection against possible damage to the machine, check the area for debris before starting up the machine. |
|---|--|

GENERAL INFORMATION

SAFETY

Safety During Machine Installation & Disassembly

Machine installation/disassembly presents hazards and unique challenges to those unfamiliar with installation/disassembly techniques. If specified, experienced service technicians will install the machine. If you select an alternative installation company or decide to install the machine yourself, JBT/Prime Equipment Group recommends having our service technician(s) check installation and initially start/adjust the machine.

The following information should be used as a reference guide when installing/disassembling machines. It should not be considered a substitute for experience or assistance.

- Know and comply with applicable federal, state, and local codes regarding machine installation/disassembly.
- Rope/block off the area where the machine is going to be installed/disassembled. Allow only authorized personnel directly related with installation/disassembly within the area.
- Make sure everyone working in the installation/disassembly area is supplied with and wears all necessary protective clothing (hardhats, steel toed footwear, gloves, etc.).
- Review the installation drawing package prior to machine installation. When applicable, the drawings have weights and lift points called out on them.
- If you have questions, get answers before you start to install the machine. Keep the installation drawings at the installation site for quick reference during the installation process.

GENERAL INFORMATION

SAFETY

- Use lifting and moving equipment (overhead cranes, hoists, straps, chains, forklifts, etc.) that meet or exceed each machine section weight. Make sure the lifting and moving equipment is in proper working condition.
- Do not rush. The equipment is only installed once. Doing it safely, thoroughly, and correctly will prevent accidental injury and help ensure satisfactory machine operation.
- Keep the work area clean. Remove debris from the area often. Put away tools that are not being used.
- Install all guards and access panels that may have been removed for shipping purposes.
- **NEVER** defeat or remove any of the safety devices. Each one performs a specific function and all of them are provided for your protection.
- Prior to applying power to the machine, walk around the machine making sure all guards, access panels, interlocks, lifelines, and other safety devices are installed/functional and that all personnel in the area are clear of the machine.

GENERAL INFORMATION

SAFETY

Machine Guarding

JBT/Prime Equipment Group machines are equipped with operator access guards, maintenance access guards, and fixed guards to protect machine users from potential hazards (nips, meshed gears, rotating shafts, spinning blades, etc.).

NOTE: Only authorized personnel should be allowed to open or remove any guard. All guards must be properly closed or reinstalled prior to resuming operation.

Operator Access Guards

Operator access doors and guards are either electronically interlocked (restricts entry to the area until machine components reach zero speed, with or without timer at zero speed) or interlocked (initiates machine shutdown if the machine is in the run mode and a door or guard is opened).

Prior to opening the operator access doors or guards, it is the responsibility of the person that will open the door or guard to place the appropriate lockout/tagout on the machine following your company's lockout/tagout policy.

Both types of interlocks restrict the machine from starting in the run mode if an operator access door or guard is open.

In certain instances, machine jogging is permitted with an operator access door or guard open. This can only be done using the jog control in the immediate vicinity of the opened operator access door or guard. This ensures that machine movement can only be initiated by a person adjacent the open door/guard and that all potential hazards in the immediate area can be seen by her/him.

NOTE: The normal stop control should always be used to trigger all non-emergency machine stops. When the machine is in the run mode, interlocked doors or guards should only be opened to emergency stop the machine when saving life or limb.

GENERAL INFORMATION

SAFETY

Maintenance Access Guards

Maintenance access guards (example: doors to drive components) are typically hinged or removable. They require a tool to open them. Since use of a tool is required, they are not typically interlocked.

Prior to using the tool to open or remove the access panel or guard, it is the responsibility of the person that will open/remove the panel or guard to place the appropriate lockout/tagout on the machine following your company's lockout/tagout policy. Close/replace the access panel or guard prior to removing the lockout/tagout.

Fixed Guards

Fixed guards are used to cover machine areas that are infrequently accessed. These types of guards are not interlocked, hinged; or in any way, designed to allow operator or service technicians easy access to the area.

Fixed guards should only be removed by company authorized personnel (maintenance personnel, service technicians, etc.).

Prior to removing a fixed guard, it is the responsibility of the person that will remove the fixed guard to place the appropriate lockout/tagout on the machine following your company's lockout/tagout policy. Install all removed fixed guards prior to removing the lockout/tagout.

GENERAL INFORMATION

SAFETY

Pressurized System Safety

The machine could be equipped with pneumatic and hydraulic systems to move and control machine components. These systems are typically under pressures high enough to cause serious injury if mishandled.

- Obtain company training/authorization prior to servicing a pressurized system.
- Use the proper tools and equipment for the task being performed. Check the tools routinely to make sure they are in proper condition.
- Fluids under pressure can be extremely hot. Allow ample time for the system fluid/components to cool before servicing the system. Use an appropriate temperature measuring device (not your hand) to monitor the temperature.
- Lockout/tagout the machine and relieve stored energy in the pressurized system following your company's lockout/tagout policy prior to servicing/disassembling any portion of the system.
- Never operate or pressurize a system that has worn/damaged components. Never adjust pressurized systems beyond the recommended setting/range. The Machine Setting section of the Instruction manual provides base pressure settings for all pressurized systems that are not run at line pressure. These base settings could require minimal adjustment to best suit actual running conditions. Do not increase/decrease machine stopping times without consulting JBT/Prime Equipment Group.

GENERAL INFORMATION

WARNING LABELS AND LOCATIONS



SAFETY STICKER MAY COME OFF DUE TO USE OF HIGH-PRESSURE WATER. IF A STICKER IS MISSING IT MUST BE REPLACED IMMEDIATELY.

| PART NO. | DESCRIPTION | QTY. | IMAGE |
|----------|---|------|--|
| 19883 | SAFETY STICKER, WARN, VOLTAGE, HORIZONTAL | 1 | A small image of a safety sticker. It features a white background with a black outline of a person. In the top right corner, there is a red rectangular box with the word "DANGER" in white capital letters. |

GENERAL INFORMATION

SYSTEM DESCRIPTION

System Description

JBT Paw Tracking System maintains precise track of chicken paws after they are separated from the rest of the bird, so that the paws can be automatically discarded when a USDA official rejects a chicken on the evisceration line. The paws are tracked using a series of photoeyes on the Kill Line and the Evisceration Line, and by knowing how many shackles are between the various photoeyes and the USDA Inspection Stations. If the system uses a Paw Conveyor at the end of the Kill Line, Timed Virtual Shackles keep track of the paws as they travel the Paw Conveyor to the Paw Reject Gate.

The words “photoeye” and “sensor” are used interchangeably in this manual.

Options

Kill line that splits to single evis, or 2 evis lines

Up to 12 Reject Buttons on the evis line

2 to 4 brackets on the evis line

Fixed speed or variable speed conveyors

JBT Efficiency Management System

Some installations also include JBT EMS (Efficiency Management System) software that runs on a Windows computer in a nearby office. The JBT EMS software continuously uploads data during the day and stores it in a Microsoft SQL Server database. The program makes this data available to users via reports, charts, status screens, printing, automatic report emailing, alarms and many other useful features. There is also a client version of the software that allows users to run the program on their own computer in their office.

GENERAL INFORMATION

EQUIPMENT TRAINING RECORD

All Sanitation and Maintenance personnel must be trained in the following areas. Prime Equipment Group recommends you keep a record of personnel training. Prime Equipment Group is willing to assist with training, following a request to do so. Please feel free to call Prime Equipment Group for additional information.

- Installation and product application
- Disassembly and sanitation
- Instruction and parts manual
- Daily periodic maintenance
- Wearing parts
- Assembly and setup for operation
- Safety features and precautions
- Troubleshooting
- Recommended spare parts inventory
- Routine preventative maintenance schedule

GENERAL INFORMATION

LIMITED WARRANTY

Products purchased from Manufacturer are warranted only by the Manufacturer's warranty that the Product provided herein is of their standard quality and operable and that the Product will be free from defects in workmanship and material. The warranty period, for Product sold by Manufacturer and not expressly made subject to a different warranty, is one hundred twenty (120) days from date of receipt by Customer. There is no insurance against or warranty of any type for production loss due to late or damaged Product shipments. The Manufacturer makes no express or implied statutory warranties other than as expressly set forth herein.

Manufacturer shall for a period of one hundred twenty (120) days from the date any Product sold hereunder is received by Customer, repair or replace at its option, free of charge and F.O.B. point of manufacture, any nonconforming or defective parts or Product that upon inspection by Manufacturer, are deemed to be nonconforming or defective. Manufacturer shall, however, only be required to repair or replace such parts or Products if Customer (i) owned the nonconforming or defective parts or Product continuously from the original date of delivery, (ii) stored and maintained such parts and Product in accordance with Manufacturer's recommendations and standard industry practices and (iii) notified Manufacturer in writing of any nonconformance or defective parts or Product within fifteen (15) days following the date the nonconformity or defect became reasonably apparent. Further the obligations of Manufacturer hereunder do not apply to the repair or replacement of Products within the aforementioned warranty period for (a) misuse, negligence or accident, (b) normal maintenance services, (c) normal replacement of service items in connection with such service, (d) normal deterioration due to wear and tear, (e) use of non-manufacturer (OEM) replacement parts. The remedy provided in this Warranty shall be the sole and exclusive remedy of Customer in the event of defective or nonconforming parts or Product, and shall be void if the Product has been altered in any manner or has been moved from its original location without the written approval of the Manufacturer. The repair or replacement of any parts or Products

under the foregoing provision does not extend the warranty beyond the warranty period described above. All electric motors, controls and other electrical services and their component parts, hydraulic motors, controls and other hydraulic services and their component parts, pneumatic controls, pneumatic services and other pneumatic components, bearings, gearboxes etc. are not included within this Warranty; the warranty with respect to these parts being limited to the manufacturer of these parts, a copy of which may be obtained from Manufacturer upon request. Customer will be responsible for the shipping/packaging costs associated with the safe and expedient return of warranted parts. The Warranty can only be claimed if genuine Manufacturer spare parts are used for repairs and maintenance of the Product.

MANUFACTURER'S UNDERTAKINGS AS CONTAINED IN THIS WARRANTY AS SPECIFIED ABOVE SHALL BE IN LIEU OF ANY OTHER GUARANTY OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. IN ADDITION, IT IS EXPRESSLY AGREED BETWEEN THE PARTIES THAT THE MANUFACTURER HAS NOT MADE ANY REPRESENTATIONS OR WARRANTY AND THERE IS NO AGREEMENT THAT THE PRODUCT PURCHASED HEREUNDER WILL MEET ANY PARTICULAR

STANDARD UNLESS CUSTOMER HAS SUPPLIED MANUFACTURER WITH WRITTEN SPECIFICATIONS OF THE PRODUCT AND THE MANUFACTURER HAS AGREED IN WRITING THAT THE PRODUCT WILL MEET SPECIFIC STANDARDS SPECIFIED BY THE CUSTOMER. CUSTOMER UNDERSTANDS AND ACKNOWLEDGES THAT THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE TERMS HEREOF UNLESS OTHERWISE NOTED IN PURCHASE AGREEMENT.

NO CLAIM OF ANY KIND, INCLUDING, BUT NOT LIMITED TO CLAIMS OF NEGLIGENCE AND BREACH OF CONTRACT, WHETHER AS TO PRODUCT DELIVERED OR SERVICES RENDERED OR FOR NON-DELIVERY OF PRODUCT OR NON-PERFORMANCE OF SERVICES SHALL BE GREATER THAN THE PURCHASE PRICE OF THE PRODUCT OR SERVICES IN RESPECT OF WHICH THE CLAIM IS MADE. WITHOUT LIMITING THE FOREGOING, MANUFACTURER'S LIABILITY HEREUNDER SHALL, UNDER NO CIRCUMSTANCES, EXCEED THE PURCHASE PRICE SET FORTH IN THIS QUOTATION.

MANUFACTURER SHALL, IN NO EVENT, BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT OR SPECIAL DAMAGES, LOSS OF BUSINESS PROFIT, PERSONAL INJURY, BUSINESS INTERRUPTION AND LOSS OF BUSINESS, EVEN IF MANUFACTURER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND ANY CLAIM BY CUSTOMER TO SUCH DAMAGES, WHETHER BASED ON TORT, CONTRACT OR OTHERWISE IS HEREBY EXPRESSLY WAIVED AND EXCLUDED.

OPERATIONS AND INSTRUCTIONS

SPECIFICATIONS

SN4390 Utilities.

Electrical.

- Customer is responsible for providing an electrical drop to the controller and for terminating into it.
 - Dedicated 120VAC, Single Phase, 60HZ, 6 Amps
- Customer is responsible for running the existing wire from each of the hardware components to the new controller and for replacing any worn or damaged wire. JBT Prime recommends shielded 10 conductor 22AWG communication wire. The JBT Prime tech will be responsible for terminating the wire.
 - 24VDC.

Network/Ethernet.

- Customer is responsible for running shielded CAT 6 ethernet cable from the controller to their nearest network switch.
- Customer is responsible for providing a static IP address for the controller. PLEASE NOTE CUSTOMER HAS PROVIDED THE FOLLOWING.
- Static IP Address Paw Tracking Controller
 - IP Address: 10.116.70.151
 - SN: [255.255.255.0](#)
 - GW: 10.116.70.254
 - DNS1: [167.110.87.115](#)
 - DNS2: [167.110.212.4](#)
- Customer is responsible for providing remote VPN access to the controller to JBT Prime Principal Software Engineer Chris Freeman chris.freeman@jbtc.com.

Mounting

- Customer is responsible for all labor and material needed to mount the equipment and for providing and running any needed conduit.

OPERATIONS AND INSTRUCTIONS

SPECIFICATIONS

MRS3101-SO203606S Utilities.

Electrical.

- Customer is responsible for plugging the computer into a standard 120VAC wall outlet. This computer should be placed in a dry climate controlled room like an office.

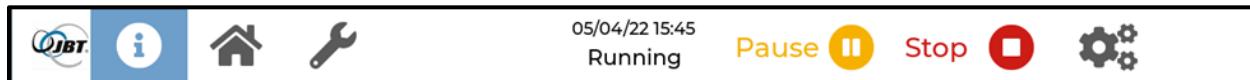
Network/Ethernet.

- Customer is responsible for running shielded CAT 6 ethernet cable from the controller to their nearest network switch.
- Customer is responsible for providing a static IP address for the controller. PLEASE NOTE CUSTOMER HAS PROVIDED THE FOLLOWING.
- Static IP Address MARS EMS Reporting PC
 - IP Address: 10.116.70.150
 - SN: 255.255.255.0
 - GW: 10.116.70.254
 - DNS1: 167.110.87.115
 - DNS2: 167.110.212.4
- Customer is responsible for providing remote VPN access to the controller to JBT Prime Principal Software Engineer Chris Freeman
chris.freeman@jbtc.com.

OPERATIONS AND INSTRUCTIONS

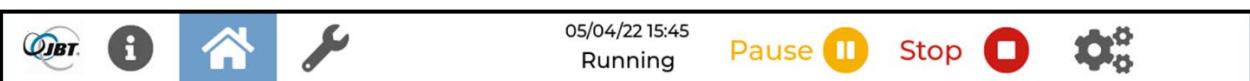
NAVIGATION SITE MAP

JBT System Navigation Site Map



- **Info/About**

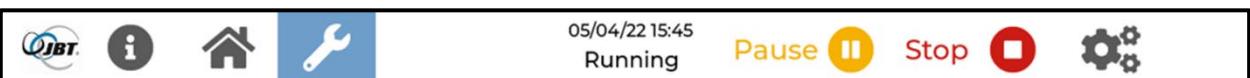
- Company
- Contact Info
- Software Version



- **Home**

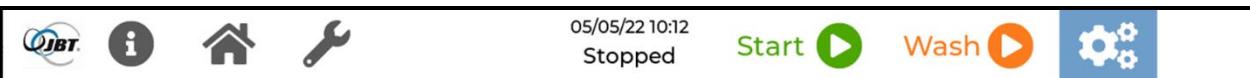
- **System Console**

- Counter
- Debug
 - Show Block Times, Compare Sensors, Trolley Debug Data



- **Tools**

- Operator
 - Reject Buttons
 - Line Count Data
- Maintenance
 - Reject Settings
 - Blocktimes
 - Shackle Counts
 - Conveyors/Gates
 - Line Speeds
 -
- Hardware
 - Hardware Test Screens
 - I/O List



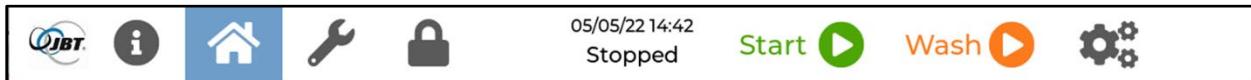
- **Advanced Settings**

- **Advanced**
 - Controller
 - Security
- **Admin**
 - General
 - JBT Adv Admin

OPERATIONS AND INSTRUCTIONS

NAVIGATION BAR

Navigation Bar



The Navigation Bar is the 1st layer of navigation. The selected icon is shown in blue.

| Icon | Name | Description |
|---------------------------|--|---|
| | Info (About) | Info about the company, contact info, program name and version. |
| | Home | The home screen shows the system in action. Startup and time-outs default to this screen. |
| | Operator System | The Tools section contains tools used by operators and their supervisors. |
| | Lock Screen | Lock the system (optional icon) |
| | Logged on Security Level Touch to manually logout. | <ul style="list-style-type: none">• Operator (Green): not shown if operator passwords are turned off.• Maintenance (Purple)• Advanced (Orange)• Super User (Red) Used during installation. |
| 05/04/22 15:45 Running | System State | The center of the navigation bar shows the current time and system state |
| | Start | Start the System. There is an option on Controller Setup to Autostart after Power-Up. |
| | Stop | Stop the System. Passcode required to stop the system. |
| | Advanced Settings | The Settings section contains advanced System Settings, Security Settings, and Admin Settings. |

OPERATIONS AND INSTRUCTIONS

NAVIGATION OVERVIEW

JBT System Navigation

Navigation Overview

Navigation occurs in the following steps. Some screens may not use each of these steps (for example, the screen may not need setup buttons on the left), however the steps are always in this order.

Sample navigation steps to a setup screen:

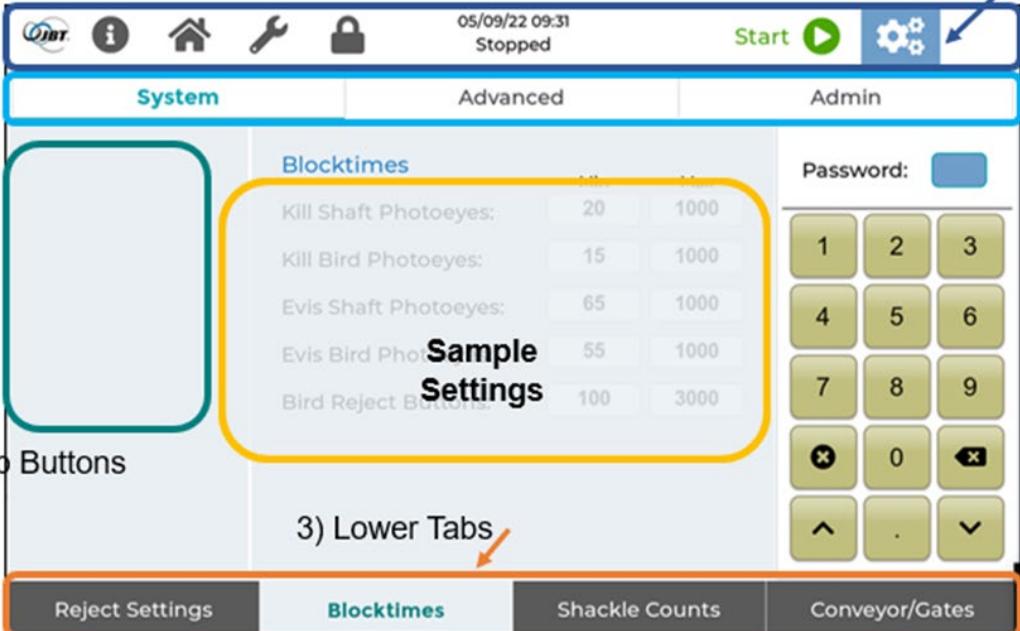
2) Upper Tabs

4) Setup Buttons

1) Icons on Navigation Bar

| Kill Shaft Photoeyes: | 20 | 1000 |
|-----------------------|-----|------|
| Kill Bird Photoeyes: | 15 | 1000 |
| Evis Shaft Photoeyes: | 65 | 1000 |
| Evis Bird Photoeyes: | 55 | 1000 |
| Bird Reject Buttons: | 100 | 3000 |

3) Lower Tabs



Settings (Cogs) – System (Upper Tab) – Block Times (Lower Tab) – No Setup Buttons

Copy to All button copies the values of the 1st entity to other entities.

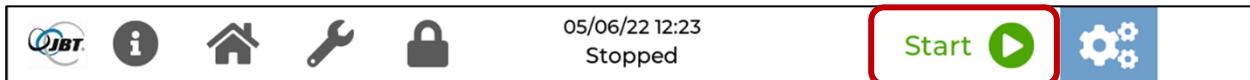


OPERATIONS AND INSTRUCTIONS

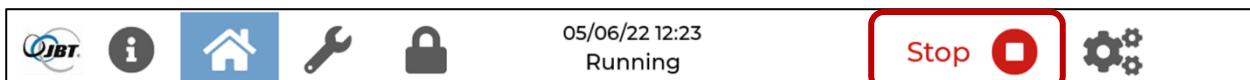
SYSTEM CONTROLS

System Console – System Controls

System controls are located on the navigation bar.



The **Paw Tracking System** is started by touching the **Start** button on the **Navigation Bar**. It is also started automatically if a button isn't touched within 20 seconds after powering up the **JBT Controller**. An option to enable/disable autostart on power-up is on Settings (Cogs) – Advanced (Top Tab) – Controller (Bottom Tab)



Touch the Stop icon to stop the system. A Level 1 Operator or above password is required to stop the system.

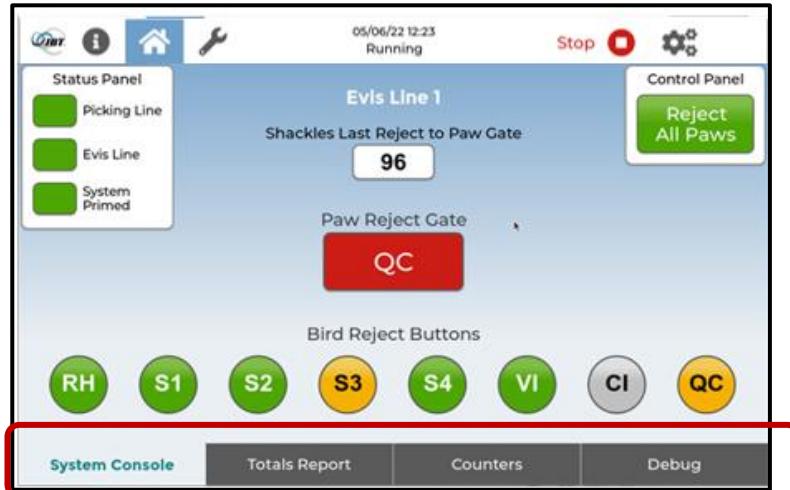
Adjusting Settings

Touch the **Tools (Wrench)** icon to access the **Operator Tools** such as Bird Reject Button activation, Hardware Test, or Line Count Setup.

Touch the **Settings (Cogs)** icon for system configuration settings..

It is not necessary to stop the system to adjust the settings.

System Console Screens



Screens associated with the system console/home screen are accessed by the tabs across the bottom of the home screen

OPERATIONS AND INSTRUCTIONS

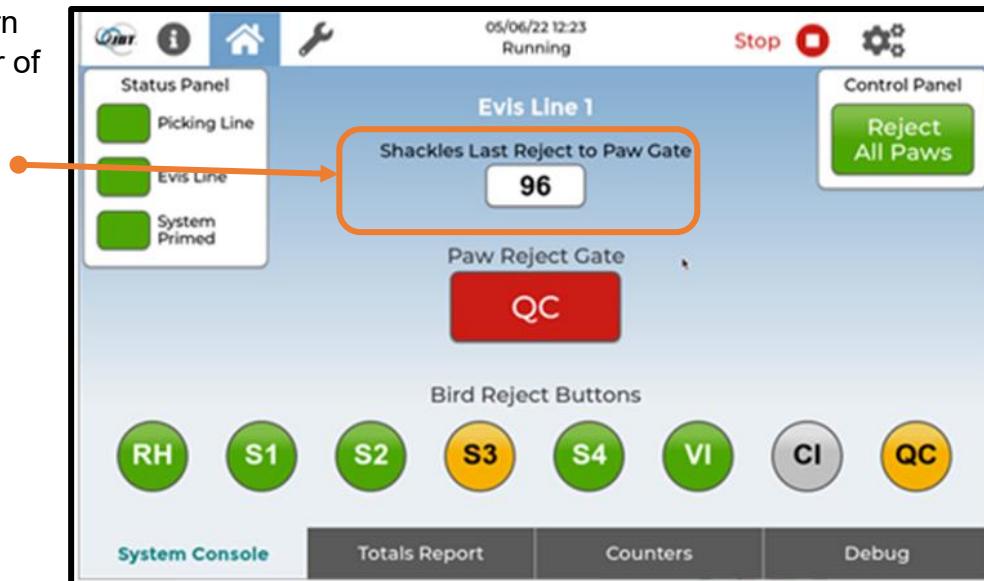
PAW SCREEN

System Console – Paw Screen

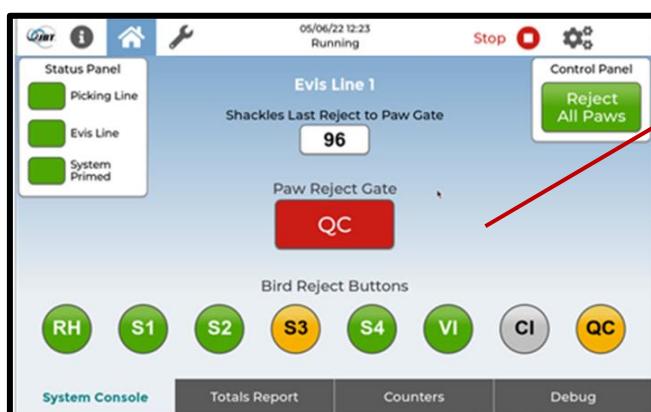
The System Console shows the current status of your system. The colored blocks on the System Console show the status of the indicated line(s), gate(s), and Bird Reject Buttons. Your System Console screen will display your plant's configuration of USDA reject buttons and paw reject gates.

Shackles Before Last Reject: The number of shackles the kill line is ahead of the last USDA button on the evisceration line.

The block will turn red if the number of shackles ahead drops to zero.



Paw Gate: The block will be green if the paw gate is closed and not rejecting paws. The block will be red if the gate is open. The block also contains a code showing the cause of the most recent paw rejection.



The Paw Gate is open (red) and rejecting paws for the QC Reject Button.

The S3 & QC Reject Buttons are yellow because paws are pending for rejection once they reach the paw reject gate.

OPERATIONS AND INSTRUCTIONS

SYSTEM CONSOLE - PAW SCREEN

Paw Rejection Codes:

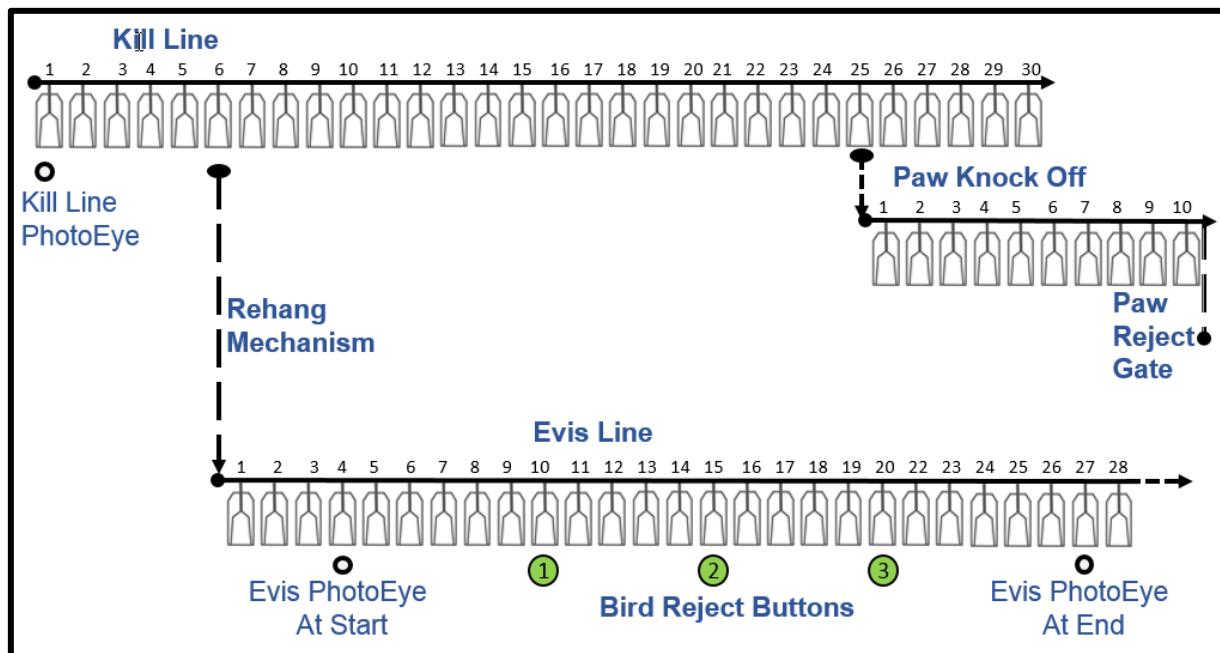
- A Number or Letter corresponding to a USDA reject button as defined for your system.
- ‘E’ The Evis Line was either stopped or behind the Kill Line.
- ‘B’ A bird was present on the Kill Line but is missing on the Evisceration Line.

Bird Reject Buttons Color Codes:

- **Green:** Reject Button is not pressed, and no paws are pending for rejection once they reach the paw reject gate.
- **Red:** Reject Button is currently being pressed.
- **Yellow:** Reject Button is not pressed, but paws are pending for rejection when they reach the paw reject gate.

Paw Tracking System Diagram

The diagram is for visual purposes only. Each plant has a unique configuration based on the number of shackles, Evis Lines, Paw Gates and USDA Bird Reject Buttons.



OPERATIONS AND INSTRUCTIONS

SYSTEM CONSOLE - TOTALS REPORT

System Console – Totals Report

The Totals Report shows the number of paws rejected since the beginning or the current shift or since the most recent ‘Clear Totals’.

| Reject Button | Button Used | Before/After Count |
|-------------------------------|-------------|--------------------|
| RH | 1 | 11 |
| S1 | 0 | 0 |
| S2 | 2 | 16 |
| S3 | 1 | 11 |
| S4 | 1 | 11 |
| VI | 2 | 22 |
| CI | 0 | 0 |
| QC | 2 | 22 |
| Evis Line Down Count | 80 | 80 |
| Bird Missing Count | 18 | 38 |
| Reject All Button Count | 0 | 0 |
| Total Paw Reject Count | 106 | 210 |

The Totals Report shows the number of paws rejected by each method:

- A USDA Bird Reject button was pressed.
- The Evis Line was down or behind.
- A bird was missing on the Evis Line that was present on the Kill Line.
- The manual ‘Reject All button’ was pressed.

The column to the left shows the number of paw pairs rejected without including the reject Before and After counts. The column to the right shows the totals including the Before and After counts.

| Reject Button | Button Used | Before/After Count |
|---------------|-------------|--------------------|
| RH | 1 | 11 |

🛠 Settings: The number of paws to reject before and after is specified under Settings - System - Reject Settings.

Clear Totals

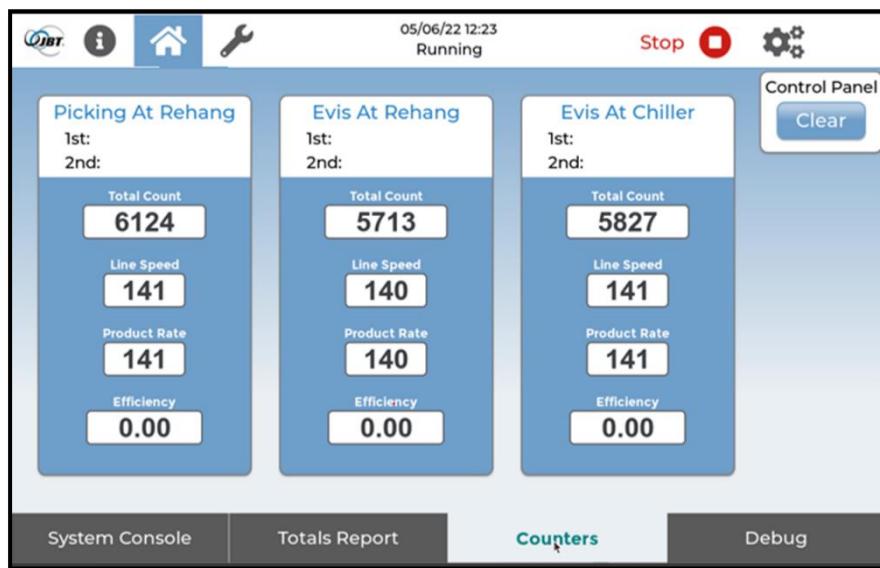
Totals are automatically cleared at the beginning of each shift or can be cleared manually by touching the Clear Totals button on the screen.

OPERATIONS AND INSTRUCTIONS

EVIS LINE COUNTER

System Console – Evis Line Counter

The Evis Line Counter Screen displays information for the Primary Evisceration Line after the shift is completed.



Total Count: The total number of birds counted for the current shift.

Line Speed: The number of shackles counted for the previous minute.

Product Rate: The number of shackles with product (a bird) on them that were counted for the previous minute. The product rate will be displayed with a green background if the rate is at the desired rate or with a red background if below the desired rate.

Product Efficiency: The total bird count divided by a projected bird count for the current shift, multiplied by 100 to reach a percentage.

OPERATIONS AND INSTRUCTIONS

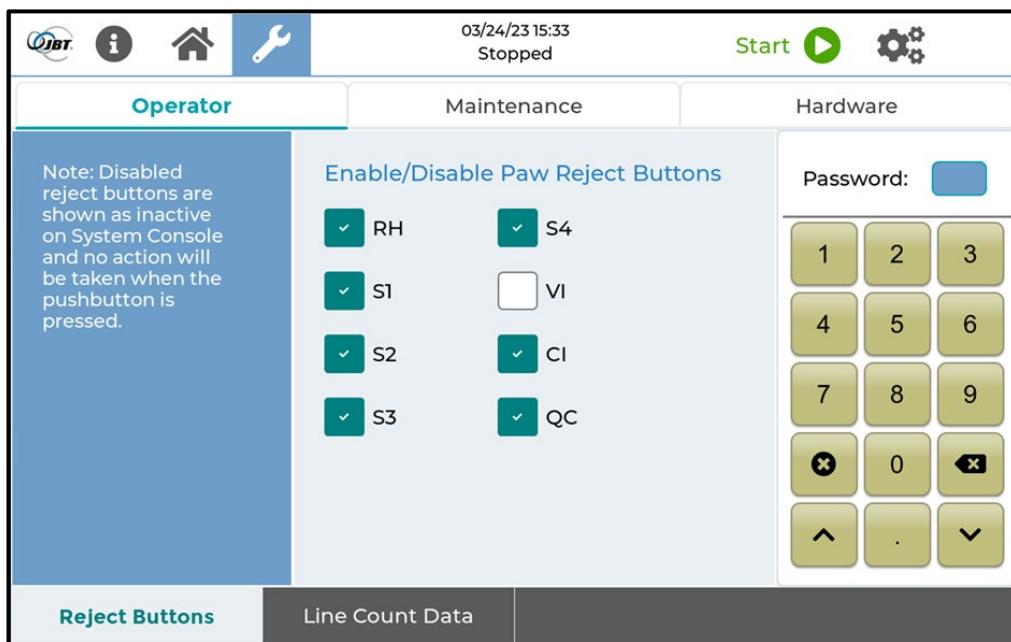
REJECT BUTTONS

Tools (Wrench) – Operator – Reject Buttons



Navigation: Tools (Wrench) – Operator (Upper Tab) – Reject Buttons (Lower Tab)

Security Level: Level 1 Operator Password or above



Your screen will display the number and names of bird reject buttons that have been configured for your system.

Disabled bird reject buttons are shown as inactive on the Paw System Console. No action will be taken when an inactive pushbutton is pressed.

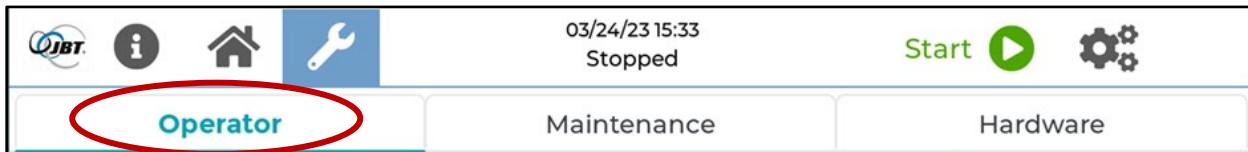


Note: The red 'Save' button serves as a reminder to save changes before leaving the screen.

OPERATIONS AND INSTRUCTIONS

LINE COUNT DATA

Tools (Wrench) – Operator - Line Count Data



Navigation: Tools (Wrench) – Line Count Data (Upper Tab)

Security Level: Level 1 Operator Password or above

Note: This report is only accessible if a counter has been configured for these options.

This screenshot displays the 'Most Recent Line Count Data' section of the software. It contains a table with eight columns: Kill Trolley Count, Kill Trolley Delta, Evis Trolley Count, Evis Shackle Count, Evis Missing Shackles, Evis Trolley Delta 2, Evis Trolley Delta 3, and Evis Trolley Delta 4. All values in the table are currently 0. Below the table are sections for 'Trolley Delta Current Settings' (400, 0, 0, 725) and 'Most Recent Kill Trolley Debug Data' (0, 0, 0, 0, 0). At the bottom are buttons for 'Reject Buttons' and 'Line Count Data'.

| Kill Trolley Count | Kill Trolley Delta | Evis Trolley Count | Evis Shackle Count | Evis Missing Shackles | Evis Trolley Delta 2 | Evis Trolley Delta 3 | Evis Trolley Delta 4 |
|--------------------|--------------------|--------------------|--------------------|-----------------------|----------------------|----------------------|----------------------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

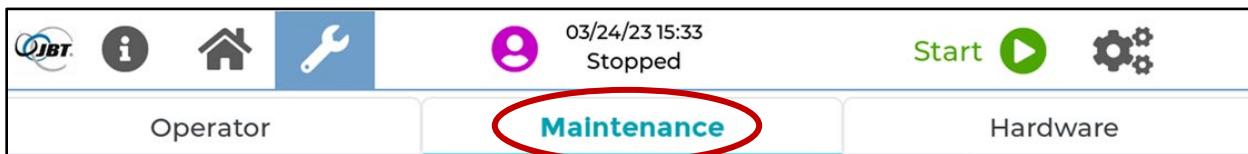
The Line Count Data screen shows the 4 most recent Trolley Counts, Shackle Counts and Trolley Deltas. See Line Count Setup for more information.

The Shackles Missing column is calculated by subtracting the Shackle Count from the Trolley Count. The Shackle Count is only used with Evisceration Lines and the Shackles Missing value indicates how many trolleys on the Evisceration Line are missing the shackle portion below that holds the bird. The shackle portion is typically made of plastic and can break off from the trolley.

OPERATIONS AND INSTRUCTIONS

REJECT SETTINGS

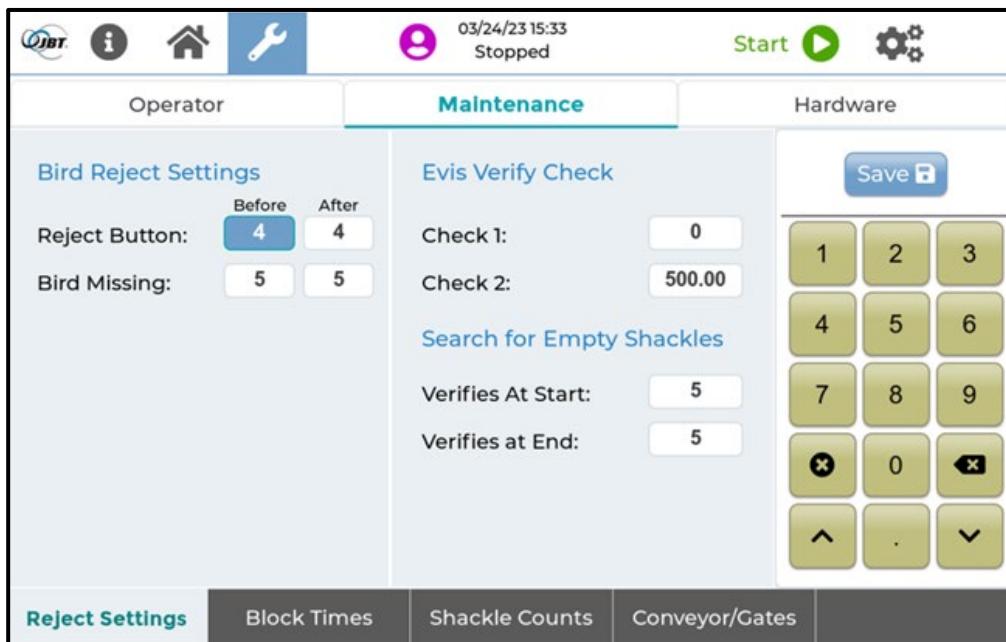
Tools (Wrench) – Maintenance – Reject Settings



Navigation: Tools (Wrench) – Maintenance (Upper Tab) – Reject Settings (Lower Tab)

Security Level: Level 2 System Password or above

Only items configured for your system will be included on this screen.



Paw Pairs To Reject Before/After: The number of additional paws to reject before/after for the bird a USDA inspector is currently rejecting by pressing their reject button. These values ensure that the correct paws are rejected if the USDA inspector was either a little early or a little late when they pressed their button.

Bird Missing Paws Before/After: The number of additional pairs of paws to reject before and after a missing bird.

Evis Verify Check 1: The number of shackles the Kill Line is allowed to see in a row without the Evis Line seeing any shackles go by before paws will automatically start being rejected as they pass the start of the Evis Line.

Evis Verify Check 2: The number of seconds the Evis Line can be stopped before all the paws on the entire Kill Line will be discarded.

OPERATIONS AND INSTRUCTIONS

REJECT SETTINGS

Search for Empty Shackles

The first Search Shackles field is **Missing Rehang Search Shackles**, which is the number of shackles to search forward and backward for an empty shackle on the Kill Line when a bird is not seen at the set of Evis Photoeyes at the start of the Evis Line. If a shackle without a bird on the Kill Line is not found, then paws will be rejected since a bird must have fallen off in the Rehang mechanism.

The second Search Shackles field is **Missing Evis Search Shackles**, which is the number of shackles to search forward and backward for an empty shackle on the Evis Line when a bird is not seen at the Evis At End Photoeyes. If a shackle without a bird on the Evis Line is not found, then paws will be rejected since a bird must have fallen off the Evis line between the Evis Photoeyes At Start and the Evis Photoeyes At End.

OPERATIONS AND INSTRUCTIONS

BLOCK TIMES

Tools (Wrench) – Maintenance – Block Times



Navigation: Tools (Wrench) – Maintenance (Upper Tab) – Block Times (Lower Tab)

Security Level: Level 2 System Password or above

This screenshot shows the 'Maintenance' tab selected in the JBT control panel. Under the 'Block Times' section, the following settings are displayed:

| | Min | Max |
|-----------------------|-----|------|
| Kill Shaft Photoeyes: | 24 | 1000 |
| Kill Bird Photoeyes: | 15 | 1000 |
| Evis Shaft Photoeyes: | 20 | 1000 |
| Evis Bird Photoeyes: | 15 | 1000 |
| Bird Reject Buttons: | 250 | 3000 |

To the right of the settings is a numeric keypad with a 'Save' button. At the bottom, there are tabs for 'Reject Settings', 'Block Times' (which is active), 'Shackle Counts', and 'Conveyor/Gates'.

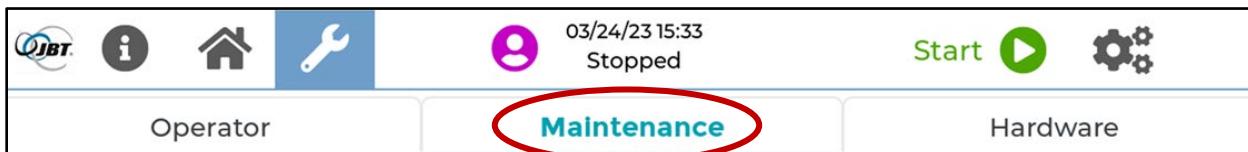
Block Times control the minimum and maximum photoeye block times required for a block to be considered valid, and the minimum and maximum press times for the USDA bird reject buttons.

All the values are specified in milliseconds. Generally, the minimum and maximum block times for photoeyes that are blocked and unblocked by the shaft of a shackle are lower than the times for photoeyes blocked and unblocked by the bird hanging from the shackle.

OPERATIONS AND INSTRUCTIONS

SHACKLE COUNTS

Tools (Wrench) – Maintenance – Shackle Counts



Navigation: Tools (Wrench) – Maintenance (Upper Tab) – Shackle Counts (Lower Tab)

Security Level: Level 2 System Password or above

A screenshot of the Maintenance - Shackle Counts screen. On the left, there are input fields for 'To Evis Transfer' (24), 'To Verifies at Start' (10), 'Shackle Count From At Start' (725), and 'Shackles to Paw Knockoff' (400). In the center, there are more input fields for 'At Start to Reject Buttons': RH: 20, S1: 300, S2: 400, S3: 500, S4: 600, VI: 700, CI: 810, QC: 860. To the right is a numeric keypad with a 'Save' button. At the bottom, there are tabs for Reject Settings, Block Times, Shackle Counts (which is highlighted in green), and Conveyor/Gates.

Shackles To Evis Transfer: The number of shackles from the Kill Line Start Photoeye to the point where the Bird transfers from the Kill Line to the Evisceration Line at the Rehang.

Shackles To Verifies At Start: The number of shackles from the Bird Transfer point to the first pair of **Bird Verify** photoeyes on the Evis Line. Your installation may have only one pair of Bird Verify photoeyes or no photoeyes. The **Bird Verify** Photoeyes provide for discarding the paws if a Bird was present when it passed the Kill Line Photoeyes but is missing when it passes the Bird Verify photoeyes. Typically, the Bird Verify Photoeyes will be near the beginning of the Evisceration Line to discard paws when a bird falls off at the Rehang.

Shackles To Verifies at End: The number of shackles from the Verifies at Start Photoeye to the Verifies At End Photoeye, after the last Bird Reject Button.

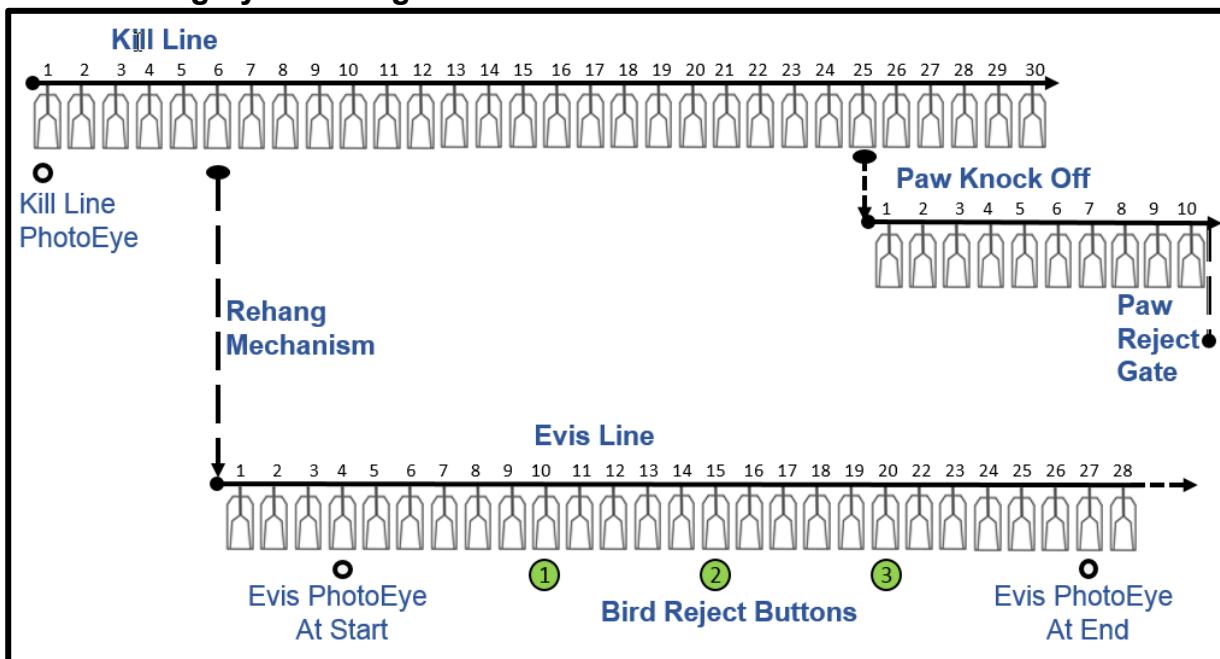
OPERATIONS AND INSTRUCTIONS

SHACKLE COUNTS

Shackles To Paw Knockoff: The number of shackles from the Kill Shaft Photoeye to the end of the Kill Line where the paws either fall on the Paw Conveyor or exit the system if there is no paw conveyor.

Shackles To Evis Bird Reject Buttons: The number of shackles from the Evis Photoeye at Start (Bird Verify Photoeyes) to the Bird Reject buttons.

Paw Tracking System Diagram

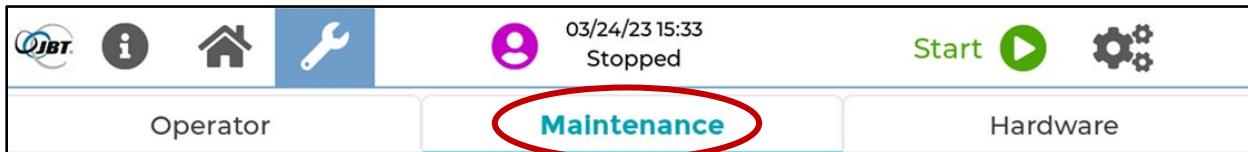


The diagram above is for visual purposes only. Each plant has a unique configuration based on the number of shackles, Evis Lines, Paw Gates and USDA Bird Reject Buttons.

OPERATIONS AND INSTRUCTIONS

CONVEYORS/GATES

Tools (Wrench) – Maintenance – Conveyor/Gates



Navigation: Tools (Wrench) – Maintenance (Upper Tab) – Conveyor/Gates (Lower Tab)

Security Level: Level 2 System Password or above

A screenshot of the Maintenance tab on the JBT control panel. It shows settings for Conveyors, Gate Open Times, and a numeric keypad for entering values. The keypad includes buttons for numbers 1-9, 0, and backspace, along with arrows for decimal and sign.

First Conveyor Travel Time: The number of seconds it takes a pair of paws to travel across the first fixed speed conveyor. Your installation may not have a fixed speed conveyor.

Paw Conveyor Travel Time 1: The number of seconds, at normal conveyor speed, required for a pair of paws to travel to the Paw Reject Gate on the variable speed Paw Conveyor.

Paw Conveyor Travel Time 2: The number of seconds at the first slow speed, required for a pair of paws to travel to the Paw Reject Gate.

Paw Conveyor Travel Time 3: The number of seconds at the slowest conveyor speed, required for a pair of paws to travel to the Paw Reject Gate.

OPERATIONS AND INSTRUCTIONS

CONVEYORS/GATES

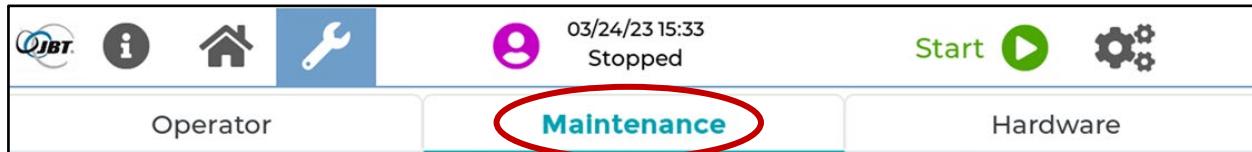
Shackles To Slow Paw Conveyor: The lowest number of shackles the Kill Line and Paw Conveyor can be ahead of the last USDA inspection station before the paw conveyor is slowed. Slowing the paw conveyor gives more travel time for the paws on the paw conveyor hopefully allowing the Evis Line to catch back up to the Kill Line. The system supports two thresholds to slow the paw conveyor.

Reject Gates Open Time: The number of seconds the Bird Missing and Paw reject gates should stay open when rejecting paws.

OPERATIONS AND INSTRUCTIONS

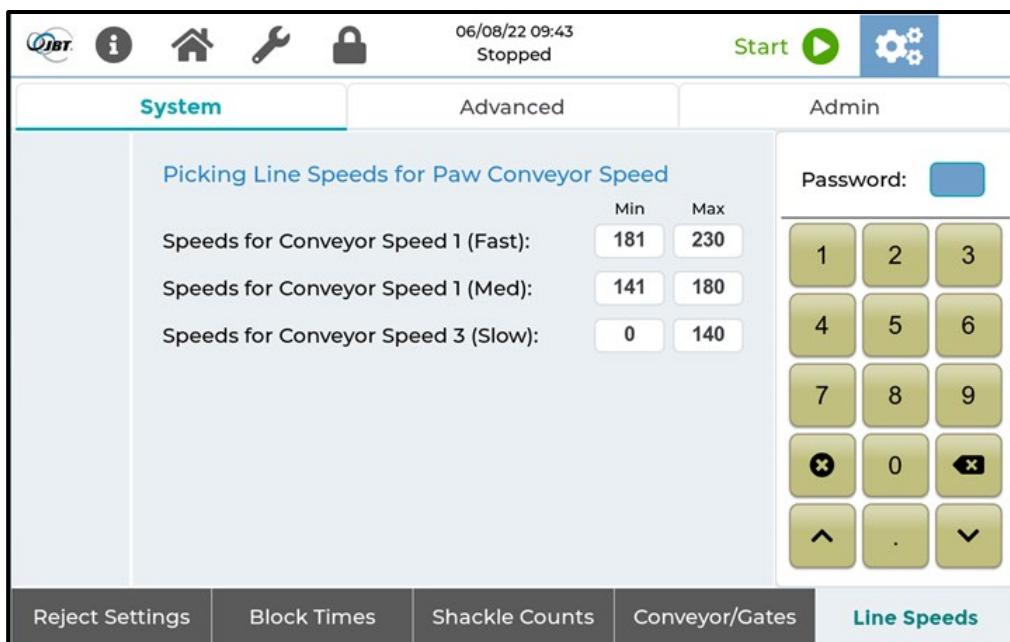
LINE SPEEDS

Tools (Wrench) – Maintenance – Line Speeds



Navigation: Tools (Wrench) – Maintenance (Upper Tab) – Line Speeds (Lower Tab)

Security Level: Level 2 System Password or above



The Line Speed tab is only visible when ‘Use Kill Line Speeds for Paw Conveyor Speed’ is enabled. See Settings – Advanced – Controller Setup for more information.

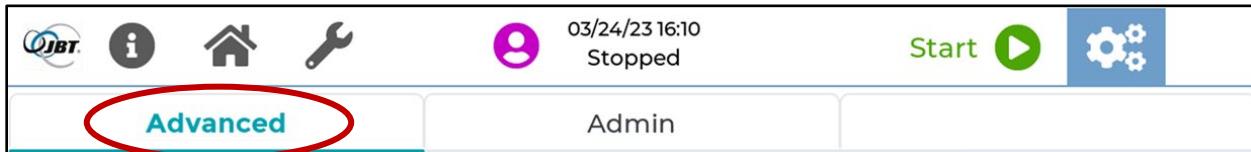
If using a variable speed conveyor, the conveyor can be slowed either by shackle-count (see Settings (Cogs icon) - System (upper tab) – Conveyors/Gates (lower tab) or based on the kill line speed.

The Line Speeds page supports controlling the paw conveyor speed based on the range of min / max speeds.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - CONTROLLER

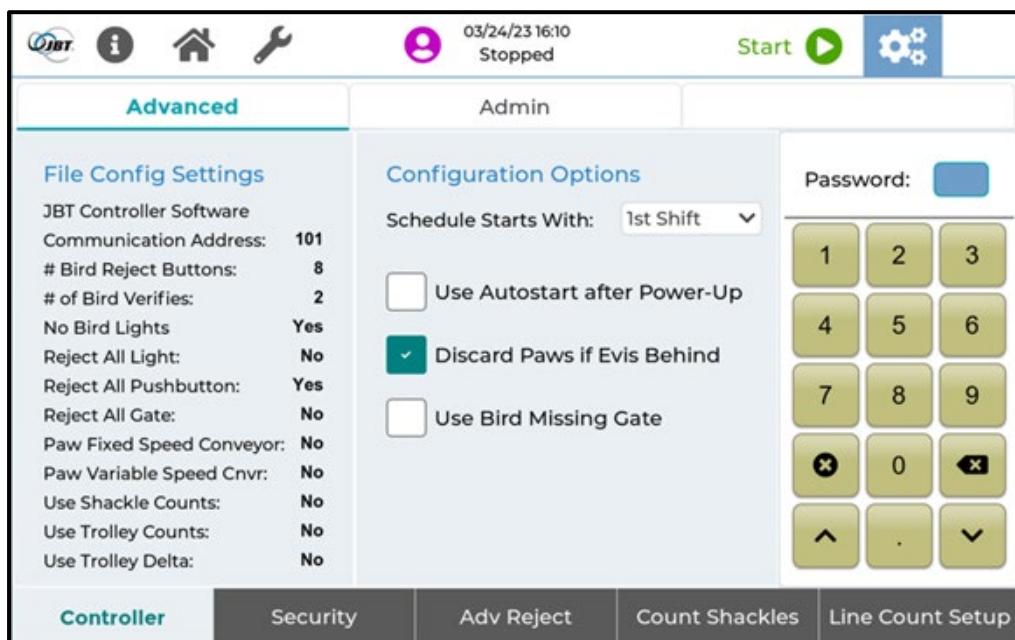
Adv Settings (Cogs) – Advanced - Controller



Navigation: Adv Settings (Cogs) – Advanced (Upper Tab) – Controller (Lower Tab)

Security Level: Level 3 Advanced Password or above

These values are usually set during the initial installation.



File Config Settings: Configuration settings that are specified in your plant's configuration file.

Communication Address: Assigned number from 101 to 110 to uniquely identify this JBT Controller when communicating with the computer running the **JBT Efficiency Management System** program in a nearby office.

Configuration Options

Schedule Starts with 3rd Shift: Select the appropriate option for the plant's schedule.

Use Autostart after Power-up: Select to have the software automatically start after a power-outage or reset.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - CONTROLLER

Discard Paws when Evis Behind: Enables automatically discarding paws when the Evis Line falls behind the Kill Line. Paws which are linked to Birds on the Evis Line will reach the end of the Paw Conveyor before the associated bird has been inspected. If this occurs, any paws that reach the end of the Paw Conveyor before the bird has passed the last reject button will be automatically rejected.

Use Bird Missing Gate: Enables the Bird Missing Gate functionality. The Missing Gate will be displayed on the System Console as shown below.

Use Kill Line Speed to Set Paw Conveyor Speed: This option is only available for variable speed conveyors. The conveyor can be slowed by shackle-count as shackles slow down, or when the kill line speed is in a certain range. Enabling this option allows a range of min/max speeds for each conveyor speed. (See Settings – System – Line Speeds)

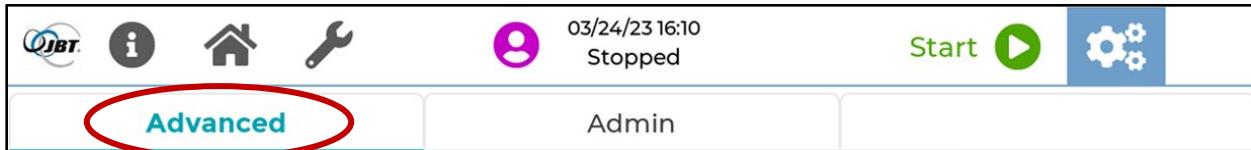
Note: The Line Speed Tab is only visible when this option is enabled.

Note: This option will only be available if your configuration supports enabling this feature.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - SECURITY

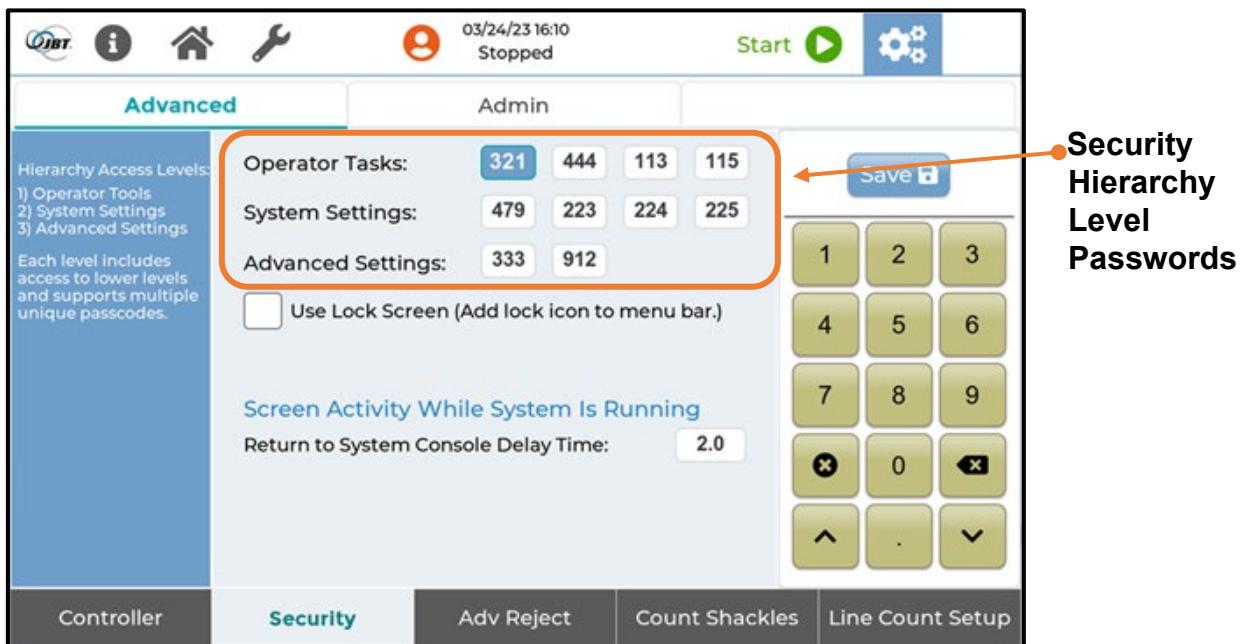
Adv Settings (Cogs) – Advanced - Security



Navigation: Adv Settings (Cogs) – Advanced (Upper Tab) – Security (Lower Tab)

Security Level: Level 3 Advanced Password

The Gen 2 Security has changed from Gen 1's individual passwords managed externally, to a **hierarchy style managed by the plant**.



Security
Hierarchy
Level
Passwords

Security Hierarchy

Passwords are evaluated by security level, and higher level passwords work on lower level tasks. For example, an Operator password is only valid on Operator tasks, whereas a System level password works on both Operator and System levels, and Advanced passwords work on Operator, System and Advanced tasks.

Level 1 Operator passwords are required for Operator type activity such as enabling reject buttons

Level 2 System Setting passwords are required for system configuration changes. These passwords should only be given to those who have the knowledge and authority to change system settings. Level 2 passwords also work for Level 1 Tasks.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - SECURITY

Level 3 Advanced Setting passwords are required for advanced system settings that should only be done by trained individuals. Level 3 passwords also work for Level 1 & Level 2 Tasks.

Use Lock Screen

The Lock Screen setting controls the appearance of a lock icon on the menu bar, shown above. Touching the lock icon disables the menu bar and shows a 'System is Locked' message screen. Unchecking this setting removes the lock icon from the header menu.

Unlock Screen Passcode

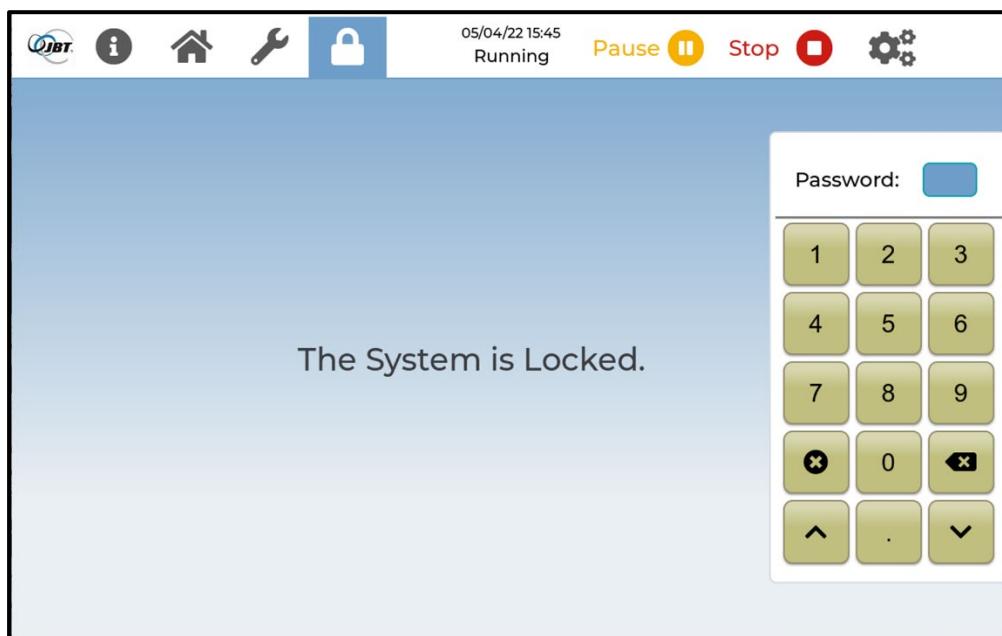
Enter a passcode to unlock the system. Unlock using the unlock passcode **or any other valid passcode**. The unlock passcode, and all configured passcodes can be used to unlock the system.

Return to System Console Delay Time

If the system is running, the home screen/system console is not the active screen, and there has been no user activity, the system will return to the home screen after the configured amount of time has passed.

System Console Screen Lock Delay Time

If the system console is being displayed, and there has been no user activity, the screen locks after the configured minutes

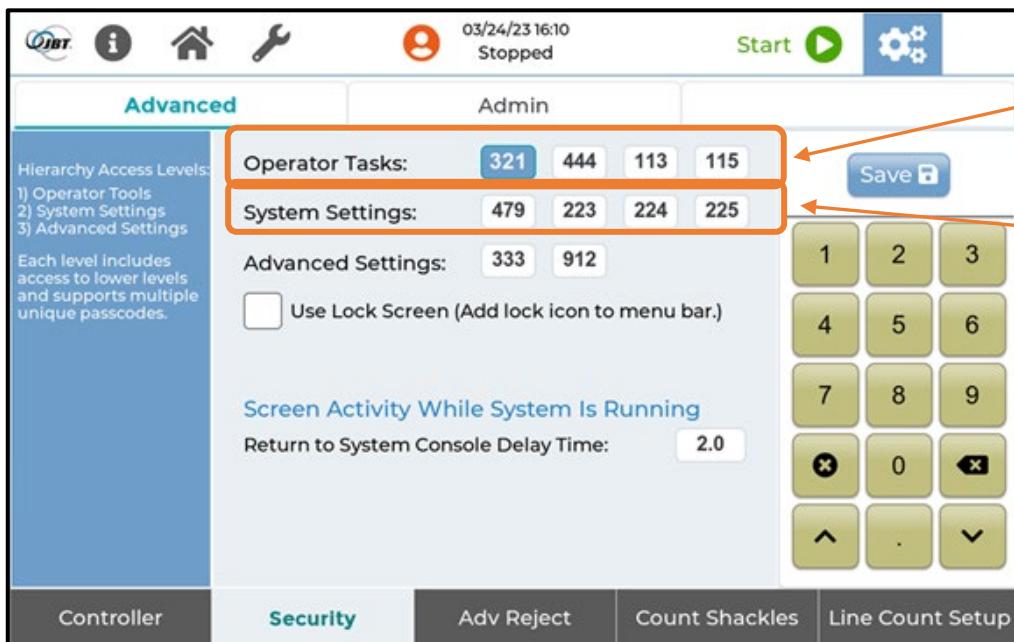


OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - SECURITY

Plant Managed Passwords

Gen 2 provides a designated login to manage passwords at the plant level. The Security Admin password only works on the Security Screen and can't be used to perform system tasks. Operator and System levels support up to 4 different passwords, and Advanced Level support 2 passwords.



Invalid Passwords

Passwords must be three digits and can not start with 0. An invalid password entry will be changed back to the original value and a red border added to the textarea block to alert the user that the entered password was rejected.

When to Assign 4 Different Passwords

The Operator Tasks example above shows four different passwords which can be given to the various operators as needed.

When to Assign Same Passwords

For plants transitioning from Gen1 to Gen2, it's possible that only one or two people need a system level password, or everyone is used to using a certain password. **Using the same password allows the plant to continue with their Gen1 password and assign other passwords at their convenience.**

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - ADVANCED REJECT SETTINGS

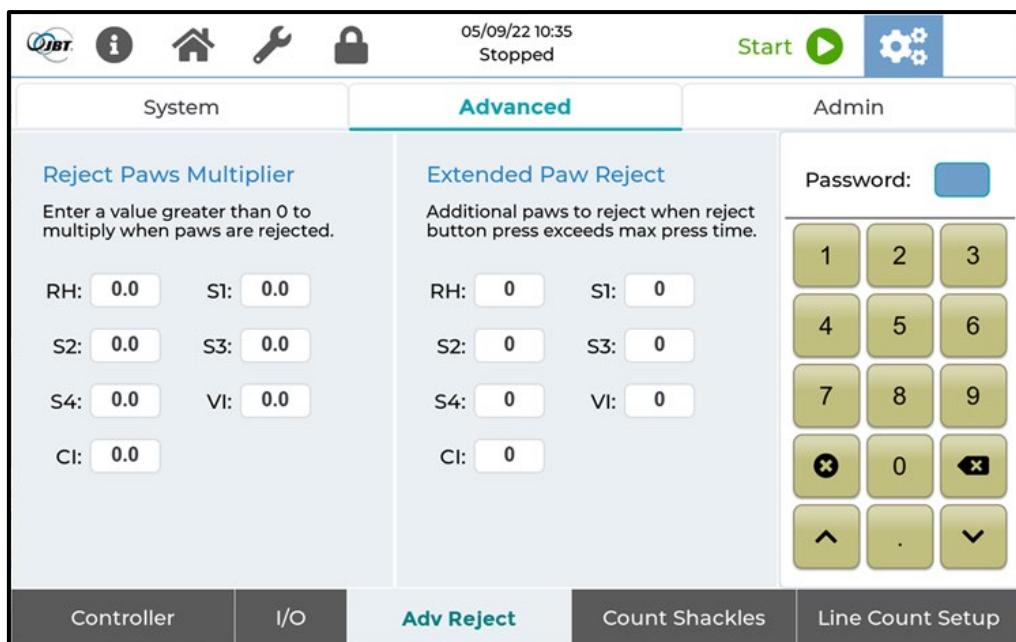
Adv Settings (Cogs) – Advanced – Adv Reject Settings



Navigation: Adv Settings (Cogs) – Advanced (Upper Tab) – Adv Reject (Lower Tab)

Security Level: Level 3 Advanced Password or above

Due to the high impact of these settings, changes should not be made to these settings without guidance from a JBT Technician.



Reject Paws Multiplier: The multiplier is used to calculate the number of paws to reject before and after the reject button is pressed. If the before/after count is set to 5/5 (see System Setup 3), a multiplier of 2 would reject 10/10 paws before/after each time the associated reject button is pressed.

Extended Reject Paws After: The extended reject option only takes effect when the associated button is held longer than the max press time (see Settings - System -Reject Settings).

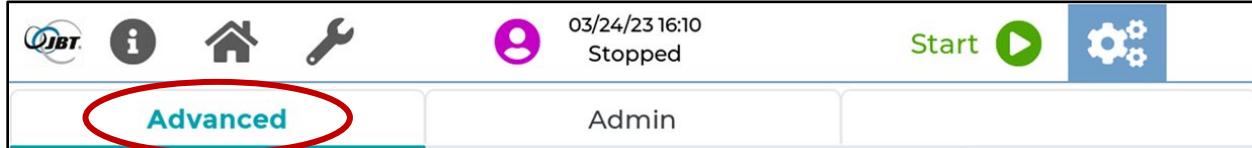
If the operator holds the button longer than the max press time, the following occurs:

- 1) Paws flagged for discard during normal button press will be canceled.
- 2) The specified number of paws, starting when the button was originally pressed, will be flagged for discard.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - COUNT SHACKLES

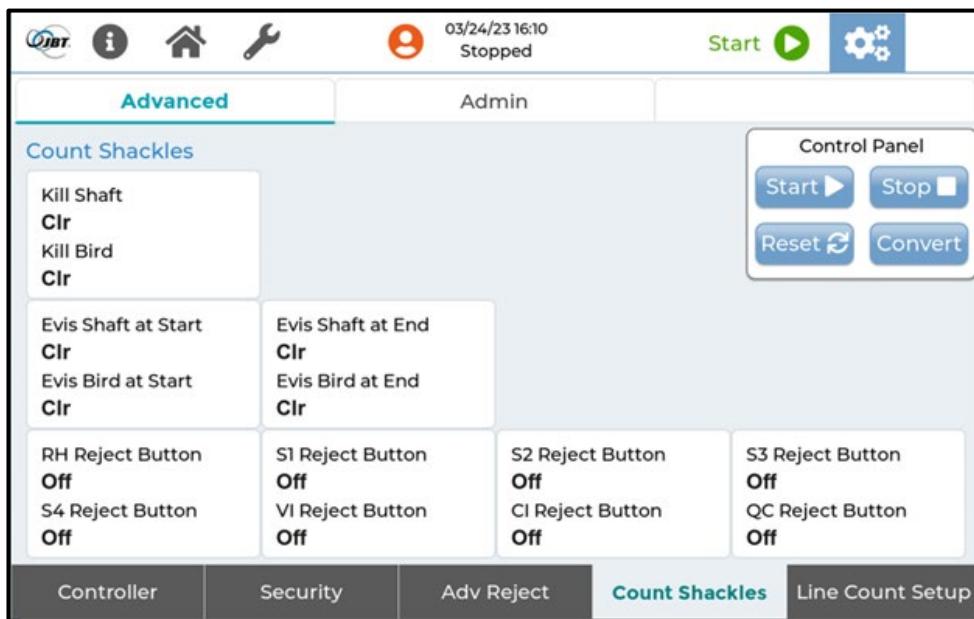
Adv Settings (Cogs) – Advanced - Count Shackles



Navigation: Adv Settings (Cogs) – Advanced (Upper Tab) – Count Shackles (Lower Tab)

Security Level: Level 3 Advanced Password or above

The **Count Shackles Test** counts the number of shackles between the photoeyes and bird reject buttons that are installed along the kill line and evisceration line. This test is normally only used during the initial installation and configuration of the **MARS Paw Tracking System** at your plant, or when shackle counts between photoeyes and buttons have changed.



Count Shackles requires hanging and tracking a single bird as it passes in front of the various photoeyes and reject buttons. This can only be executed during non-production periods.

Requirements Before Running Initial Test:

- 1) Manually count number of shackles from kill shaft photoeye to evis transfer point and enter the values on **Shackles To Evis Transfer** on **System – Shackle Count**.
- 2) Configure Min / Max times for the photoeyes and buttons on **System - Blocktimes**.
- 3) **Save** changes.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - COUNT SHACKLES

Start the Test

Touch the Start button and hang a single bird just upstream of the Kill Shaft and Kill Bird Photoeyes.

Testing Sequence

1) Bird is seen by Kill Bird Photoeye.

Kill shackles will start counting up as they pass the kill shaft photoeye.

2) Bird transfers to Evis Line and is seen by Evis At Start Photoeye.

Number of kill shackles will be displayed under Evis Bird Photoeye1 and will start counting evis shackles as they pass the Evis Shaft Photoeye1.

3) Bird travels down Evis line and is seen by Evis At End Photoeye.

When the bird is seen at each of these photoeyes, the number of evis shackles and kill shackles that have been counted will be displayed under each bird photoeye.

The number of evis shackles is displayed on the left and the number of kill shackles is displayed to the right.

4) Bird passes in front of each reject button.

Note: Someone must touch the reject button so the system can track the number of evis shackles and kill shackles which have been counted for that button.

5) After Bird has passed all photoeyes and buttons,

Touch **Stop** to prevent the shackles from continuing to count.

The screen at the top of the next page shows a sample completed test.

| Count Shackles | | | | | |
|--------------------------------|--------------|---------------------------------|------------------------|----------------|---------------------------------|
| Kill Shaft Photoeye Blocked | 437 | Evis Shaft Photoeye1 Clear | 402 | 437 | Evis Shaft Photoeye2 |
| Kill Bird Photoeye Clear | 0 | Evis Bird Photoeye1 Clear | 0 | 35 | Evis Bird Photoeye2 |
| Evis Start Photoeye Blocked | | Adjust Shaft Photoeye1 Clear | | | Adjust Shaft Photoeye2 Clear |
| | | Adjust Bird Photoeye1 Clear | 270 | 305 | Adjust Bird Photoeye2 Clear |
| Reject Button 1 Off | 292 | 327 | Reject Button 2 Off | 315 | 350 |
| Reject Button 4 Off | 367 | 402 | Reject Button 5 | | Reject Button 6 Off |
| Back | Start | Stop | Reset | Convert | |

The values displayed (left) do not include the number of evis shackles from the evis transfer point to the first set of photoeyes on the evis line.

Touch **Convert** to update the evis shackle counts to include the additional shackles. The final converted values will be shown in white with a black background as shown below.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - COUNT SHACKLES

Copy the converted values from the test to System Setup 2.

| Count Shackles | | | |
|--|------------------------------------|--------------------------------|--------------------------------|
| Kill Shaft Photoeye Blk | Evis Shaft At Start Clr 402 437 | | |
| Kill Bird Photoeye Clr | Evis Bird At Start Clr 20 35 | Shackles To Verifies At Start | |
| Evis Start Photoeye Clr | Evis Shaft At End Blk | | |
| | Evis Bird At End Blk 290 305 | Shackles To Verifies At End | |
| Reject Button R On 312 327 Reject Button | Reject Button 1 Off 335 350 | Reject Button 2 Off 355 370 | Reject Button 3 Off 375 400 |
| | Shackles To Reject Buttons | | |

The test should be repeated several times to verify consistent results. To run the test again touch **Reset** to clear values and then **Start**.

Shackles To Paw Knockoff

The Shackles To Paw Knockoff value can be difficult to count manually as the number of shackles often exceeds 500 shackles.

The screenshot shows the 'Shackle Counts' section of the software. It includes fields for 'To Evis Transfer' (20), 'To Verifies at Start' (10), 'Shackle Count From At Start' (200), and 'To Verifies at End' (200). A highlighted field 'Shackles to Paw Knockoff' contains the value 140. To the right, there's a numeric keypad with a 'Save' button above it. Below the keypad are tabs for 'Reject Settings', 'Blocktimes', 'Shackle Counts' (which is active), and 'Conveyor/Gates'.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - COUNT SHACKLES

Counting Help: Use one of the reject buttons to count by pressing the reject button when the paws reach the paw knockoff. Normally the reject button is pressed when the bird passes, however the above method is useful for counting purposes because pressing the reject button will record the number of evis and kill shackles that have been counted under the button.

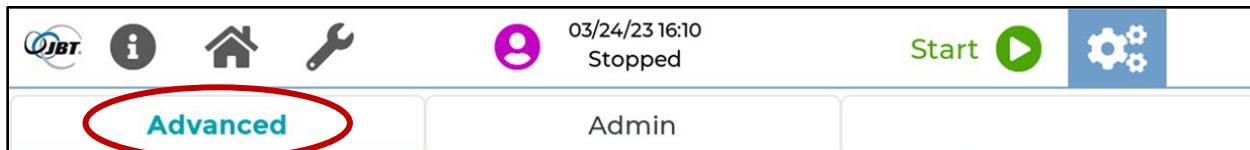
The number of kill shackles is the number on the right under the button and is the value that should be entered for **Shackles To Paw Knockoff** on System Setup 3.

After running the test a sufficient number of times to verify consistent results, and entering the resulting values System Setup 2-3, you should be ready to start verifying the correct operation of the **MARS Paw Tracking System**.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - LINE COUNT SETUP

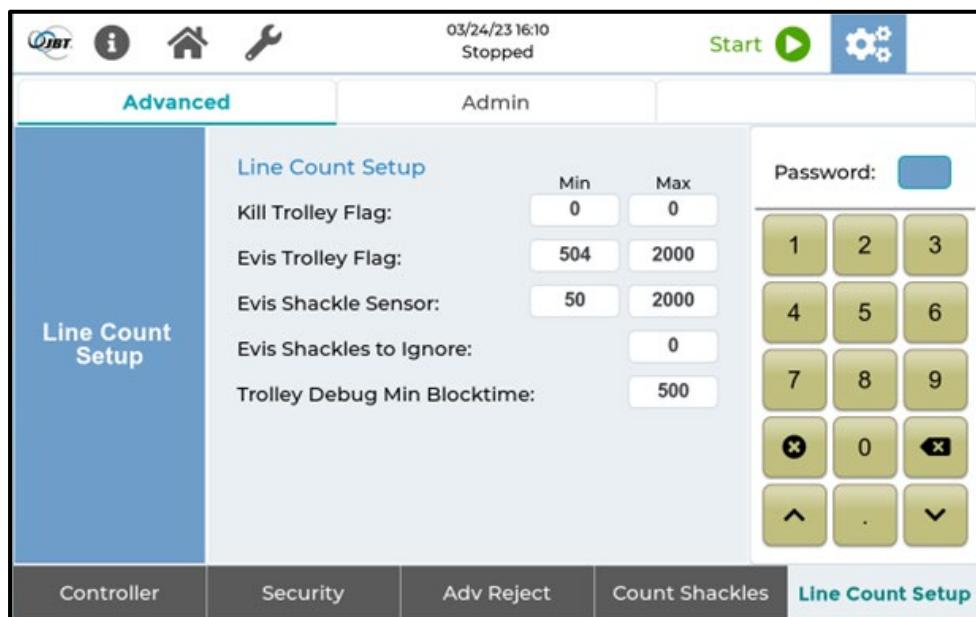
Adv Settings (Cogs) – Advanced – Line Count Setup



Navigation: Adv Settings (Cogs) – Advanced (Upper Tab) – Line Count Setup (Lower Tab)

Security Level: Level 3 Advanced Password or above

Several options are available for testing the system at various speeds. These tests are normally only used during the initial installation and configuration of the **JBT Paw Tracking System** at your plant.



Trolley Flag: Minimum and maximum time that the shaft photoeye must be blocked by the special trolley that signals that a complete revolution of the chain has occurred. This special trolley has a piece of metal welded to it so that it blocks the shaft photoeye longer than the other trolleys. The Trolley Debug Min Block Time value below along with the Trolley Debug Data (Advanced Setup Menu) can be used to determine how long the special trolley blocks the shaft photoeye.

Shackle Sensor: Minimum and maximum time that the special shackle photoeye on the Evisceration Line must be blocked to count a valid trolley with a shackle intact below it. The Hardware Test screen can be used while the Evisceration Line is running to observe typical shackle block times.

OPERATIONS AND INSTRUCTIONS

ADVANCED SETTINGS - LINE COUNT SETUP

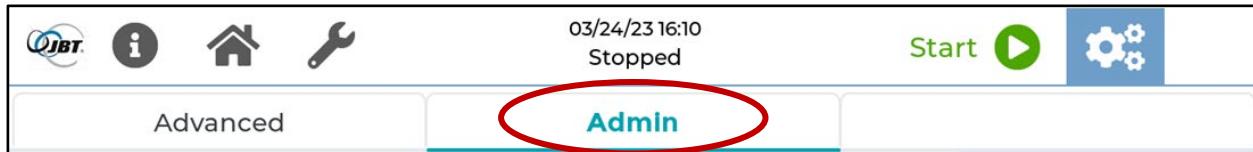
Shackles to Ignore: This value is usually set to 0 to specify that every valid block of the shackle photoeye discussed above will count toward the Shackle Count. Some plants may have chains that cause the shackle photoeye to block a second time when every shackle goes by. In this case this value would be set to 1 specifying that only every other valid block of the shackle photoeye should count toward the Shackle Count.

Trolley Debug Min Blocktime: This value should be set to slightly less than how long the special Trolley Count trolley will block the shaft photoeye. This value should also be set higher than how long a typical trolley would block. The special trolley for the Trolley Count that indicates a whole revolution of the chain has occurred will block longer than a typical trolley because of the extra metal that has been welded to it. The actual block time will be stored in memory for the last 6 trolleys that have gone by where the block time exceeded this setting. The 6 most recent trolley block times that exceeded this setting can then be accessed on the Trolley Debug Data screen from the Advanced Setup menu. The 6 values shown can then be used to set the Trolley Debug Min Block time correctly.

OPERATIONS AND INSTRUCTIONS

ADMIN SCREENS - GENERAL

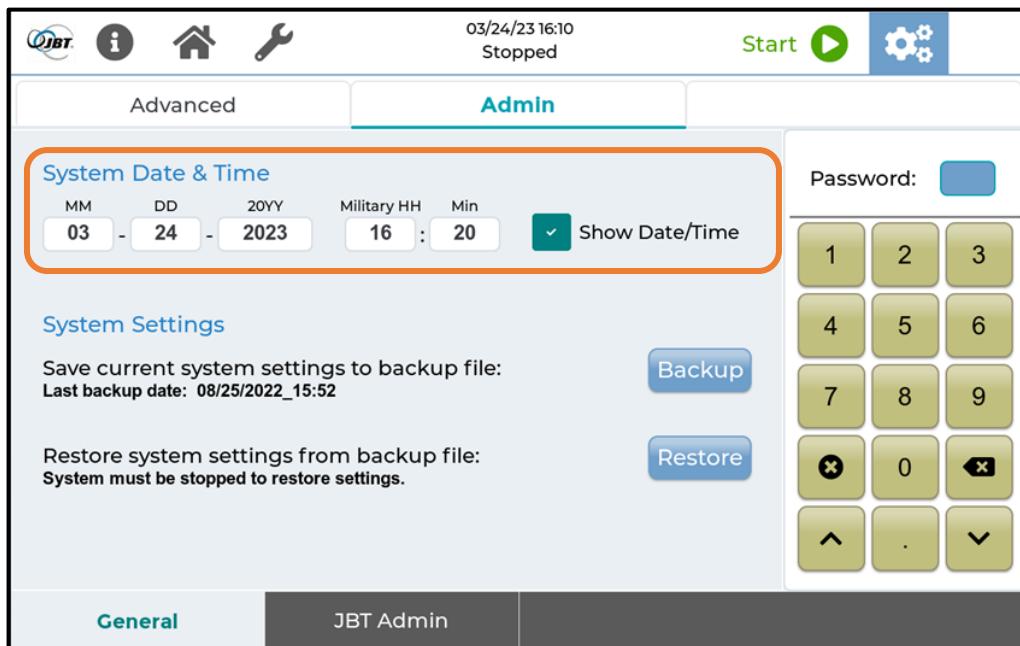
Adv Settings - Admin - General



Navigation: Adv Settings (Cogs) – Admin (Upper Tab) – General (Lower Tab)

Security Level: Level 3 Advanced Password or above

The General Admin screen contains settings and tools that are unrelated to your system's configuration or operation.



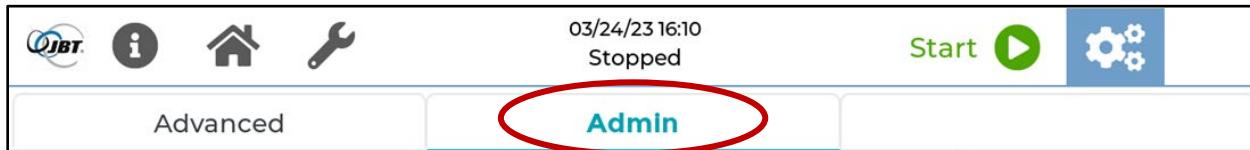
System Date & Time: The JBT controller has a battery-backed up clock for maintaining the correct Date and Time when the controller is not connected to the internet. Enter the correct Date and Time after logging in with your password. Then press the Save button.

Exit to Operating System: Stop the system and exit the JBT software to the Operating System.

OPERATIONS AND INSTRUCTIONS

ADMIN SCREENS - JBT ADVANCED ADMIN

Adv Settings - Admin – JBT Adv Admin



Navigation: Adv Settings (Cogs) – Admin (Upper Tab) – JBT Adv Admin (Lower Tab)

Security Level: JBT Super User (JBTC Use Only)

The JBT Admin screen contains settings and tools that are used exclusively by a JBT Technician during installation.

The diagram illustrates the transition between two screens. On the left, the 'Admin' screen is shown with a numeric keypad and a note: 'JBTC Use Only Enter JBT Admin Password'. An orange arrow points from this screen to the right, where the 'JBT Advanced Admin' screen is displayed. This screen also features a numeric keypad. A callout box on the left side of the 'JBT Advanced Admin' screen contains the text: 'JBTC Admin Screen contains configuration settings that can be easily changed for testing purposes or for changes that arise during installation.' At the bottom of the 'JBT Advanced Admin' screen, there are checkboxes for 'Use Reject All Gate' and 'Use Reject All Light', a button to 'Stop the System and Exit to Operating System', and an 'Exit' button. The tabs at the bottom are 'General' and 'JBTC Admin'.

JBT Admin is logged in and passwords are disabled.

Touch icon to logout as JBT Admin.

JBTC Admin Screen contains configuration settings that can be easily changed for testing purposes or for changes that arise during installation.

Use Reject All Gate Use Reject All Light

Stop the System and Exit to Operating System: Exit

General JBT Admin

SANITATION

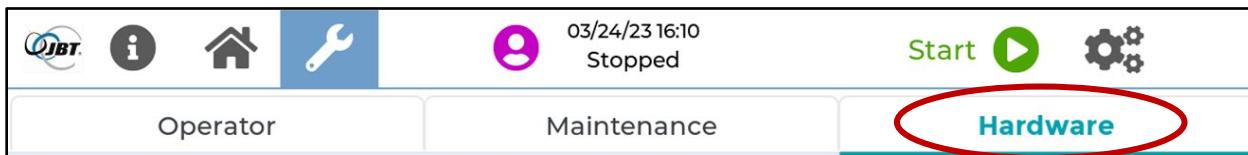
SANITATION PROCEDURES

There are no sanitation procedures for this manual.

MAINTENANCE AND TROUBLESHOOTING

HARDWARE TEST INPUTS

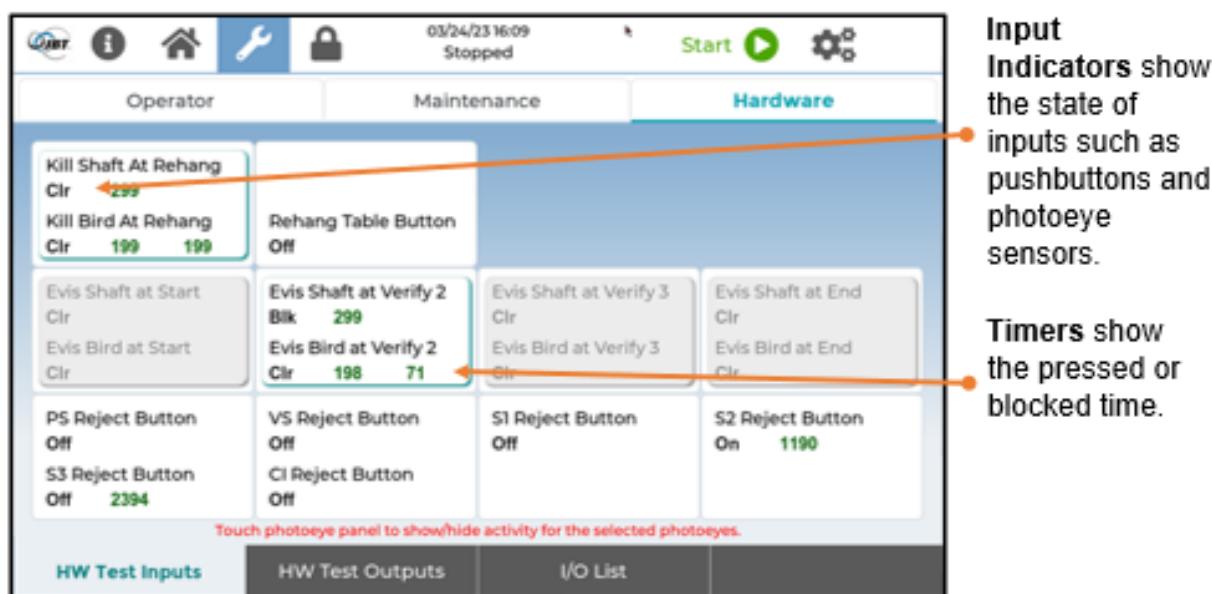
Tools (Wrench) – Hardware - HW Test Inputs



Navigation: Tools (Wrench) – Hardware (Upper Tab) – HW Test Inputs (Lower Tab)

Security Level: Level 2 System passcode or above

Your Hardware Test screen will reflect the inputs and outputs for your system.



Verify Inputs

The input buttons are shown as small circles which reflect the current state of the input.

Pushbutton States: off on

Photoeye Sensors: Clr Blk

Product Photoeye Block Times

- The value on the left is the total amount of time the photoeye was blocked by product (a bird)
- The value on the right is the amount of time the product photoeye was blocked while the corresponding shaft photoeye was also blocked.

🛠 Settings: The min and max block times are configured in System - Blocktimes

MAINTENANCE AND TROUBLESHOOTING

HARDWARE TEST INPUTS

Tools (Wrench) – Hardware - HW Test Inputs



Navigation: Tools (Wrench) – Hardware (Upper Tab) – HW Test Inputs (Lower Tab)

Use the output buttons to test the signal used to control hardware such as gates and external lights. The output buttons also reflect the state of the output while the system is running. Touch the appropriate button to verify the correct response.

See Settings (Cogs) – Advanced (Upper Tab)- I/O List (Lower Tab) for I/O assignments.



Status Message

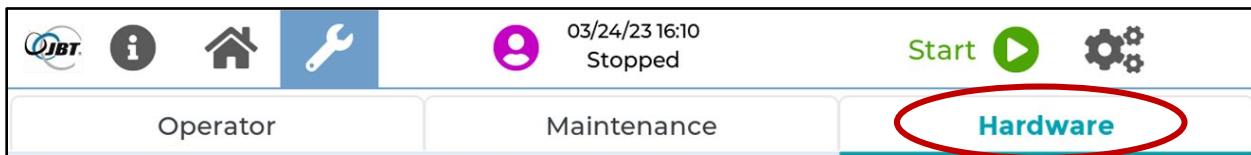
Output Buttons
test functionality
of Outputs such
as gates, lights, etc.

| Status Message | Desc/Required Action |
|---|---|
| Output Buttons Disabled (System Running) | Testing outputs is not allowed while the system is running. Stop the system to test outputs. |
| Login to Enable Output Buttons | The system is stopped but a password is required before testing the output buttons. Touch Login button. |
| Output Buttons Enabled | Login was successful. Ready to test Output buttons. |

MAINTENANCE AND TROUBLESHOOTING

HARDWARE I/O LIST

Tools (Wrench) – Hardware - I/O List



Navigation: Tools (Wrench) – Hardware (Upper Tab) – I/O List (Lower Tab)

The I/O (Inputs/Outputs) screen provides a convenient list of the inputs and outputs configured for your plant's installation. Testing these inputs/outputs is performed on Hardware Test.

| Operator | | Maintenance | Hardware |
|-----------------------|----|--------------------|---------------------------|
| Inputs | | Inputs | Outputs |
| Kill Shaft At Rehang: | 1 | Reject Button S4: | 11 Paw Gate: |
| Kill Bird At Rehang: | 2 | Reject Button VI: | 12 Bird Missing Gate: |
| Evis At Start Shaft: | 3 | Reject Button CI: | 13 No Bird Kill Light: |
| Evis At Start Bird: | 4 | Reject Button QC: | 14 No Bird Evis Verify 1: |
| Evis Verify 4 Shaft: | 5 | Reject All Button: | 15 No Bird Evis Verify 4: |
| Evis Verify 4 Bird: | 6 | | |
| Reject Button RH: | 7 | | |
| Reject Button S1: | 8 | | |
| Reject Button S2: | 9 | | |
| Reject Button S3: | 10 | | |

Your I/O list will be customized for your plant's configuration.

MAINTENANCE AND TROUBLESHOOTING

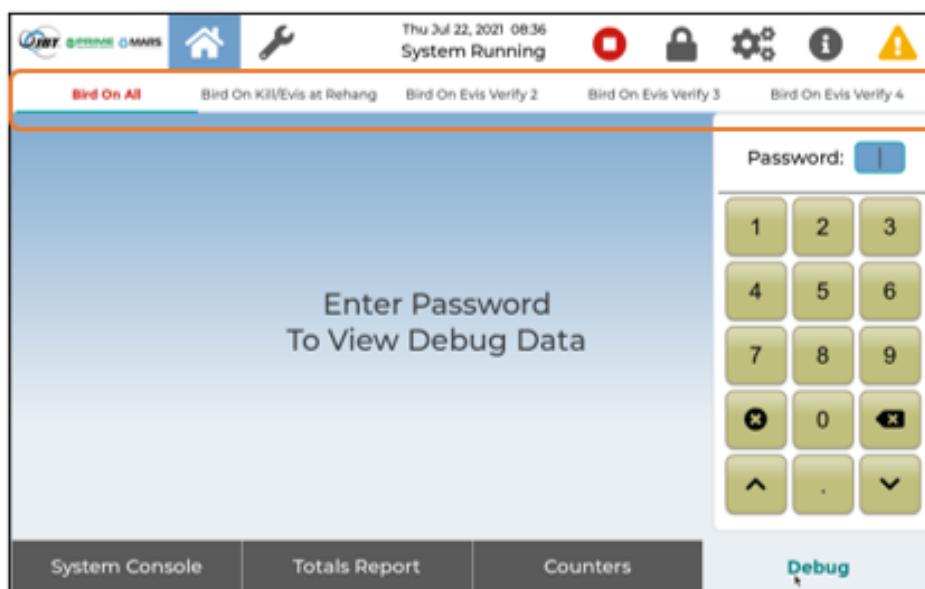
DEBUG TOOLS

System Console – Debug Tools



Navigation: System Console (Home) – Debug (Lower Tab)

Security Level: Level 1 Expert Password



Shackle Data is available for the following locations on the line.

- Bird On All (Locations)
- Bird On Kill/Evis at Rehang Shackle Data
- Bird On Evis Verify 2 (if configured)
- Bird On Evis Verify 3 (if configured)
- Bird On Evis At End

Note: Tabs will only be available for verify brackets configured for your system.

MAINTENANCE AND TROUBLESHOOTING

DEBUG TOOLS

Each Debug Screen uses character codes to show the system status of a bird at that shackle. Red character codes indicate that the paws are being rejected. Black character codes mean the paws are not being rejected.

| Bird Code | Bird Location | Reject Status | |
|--|---------------|---------------|---|
| k | | | Bird was present on Kill Shackle, this code is only used on the All Shackle data report |
| | 1 | | Bird was present on Evis Verify At Start Shackle |
| | 2 | | Bird was present on Evis Verify 2 Shackle |
| | 3 | | Bird was present on Evis Verify 3 Shackle |
| | 4 | | Bird was present on Evis Verify At End Shackle |
| | o | | No Bird on Shackle |
| | u | | No Bird on Shackle and Shackle Used to Reconcile Empty Shackle |
| | g | | Good, Paws Not Being Rejected |
| | b | | Paws Being Rejected Because of Bird Reject Button Press |
| | e | | Paws Being Rejected Because Evis Line Behind or Stopped |
| | m | | Paws Being Rejected Because Bird Missing |
| | a | | Paws Being Rejected Because Reject All Turned On |
| Special Codes used when Evis is running faster than Picking and Evis has extra empty shackles. | xxx | | Extra Evis Shackle Without Bird |
| | xbx | | Extra Evis Shackle With Bird |
| | yyy | | Extra Evis Shackle Without Bird and Shackle Used to Reconcile Empty Shackle |
| | yby | | Extra Evis Shackle With Bird and Shackle Used to Reconcile Empty Shackle |
| | | | |

MAINTENANCE AND TROUBLESHOOTING

DEBUG TOOLS

Bird on All Shackle Data

The **All Shackle** Data shows how each verify bracket saw the shackle/bird. If your system is configured to use all four verify brackets, the code for each shackle would be six characters long. (example: k1234q)

Bird on Kill/Evis at Rehang

DJB Prime Mars

Thu Jul 22, 2021 14:47
System Running

Bird On All Bird On Kill/Evis at Rehang Bird On Evis Verify At End

Bird on Kill/Evis at Rehang Shackle Data

| | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| k1g |
| k1g |
| k1g | k1g | k1m | k1m | k1m | kom | kom | kom | kom | kom | kom |
| kom | kom | kom | kom | k1m | k1m | k1m | k1m | k1g | k1g | |
| k1g | k1g | k1g | o1 |
| k1g | k1g | k1g | k1 |

k1m
k = bird present at kill line photoeye
1 = bird present on evis verify 1
m = bird missing.

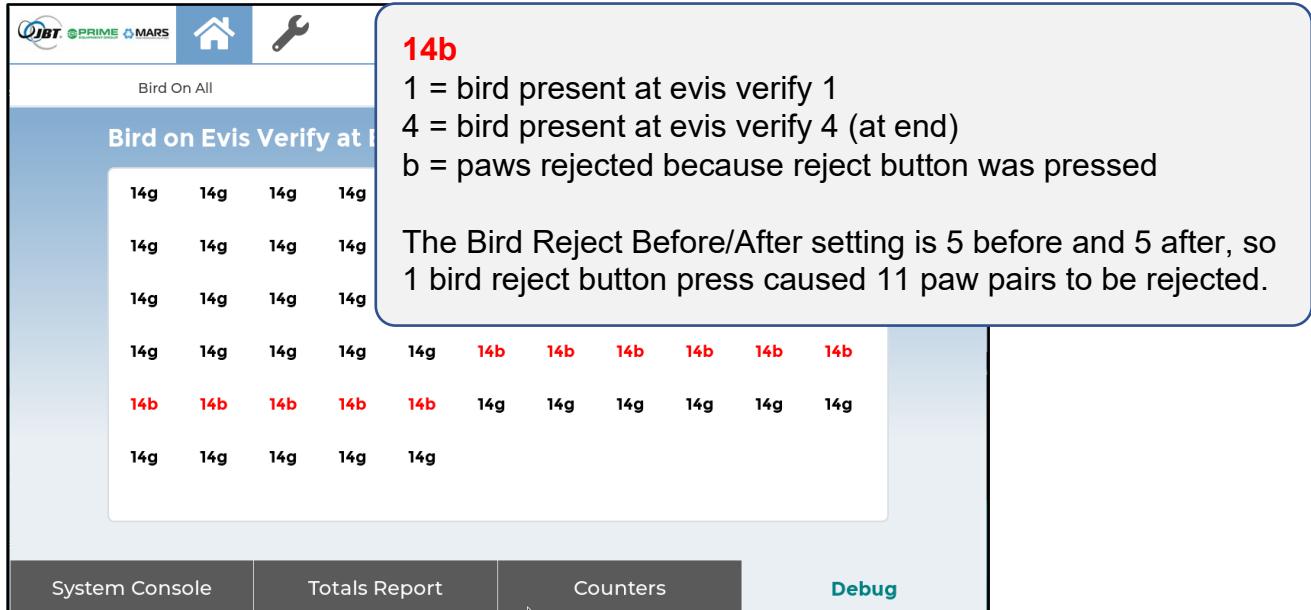
If a bird is missing the search shackles setting (Settings -> System) is set to look forward and backward 5 pairs for a match.

System Console Total

MAINTENANCE AND TROUBLESHOOTING

DEBUG TOOLS

Bird on Evis Verify at End



The screenshot shows a software interface with a header containing the JBT PRIME MARS logo, a home icon, and a wrench icon. Below the header, there are two tabs: "Bird On All" and "Bird on Evis Verify at End". The "Bird on Evis Verify at End" tab is active, displaying a grid of paw pairs. The grid consists of 6 rows and 11 columns. The first 10 columns represent the "Bird Reject Before/After setting" (5 before and 5 after), while the last column represents the "reject button press". The grid contains the following data:

| Row | Col 1 | Col 2 | Col 3 | Col 4 | Col 5 | Col 6 | Col 7 | Col 8 | Col 9 | Col 10 | Col 11 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| 1 | 14g | 14g | 14g | 14g | | | | | | | |
| 2 | 14g | 14g | 14g | 14g | | | | | | | |
| 3 | 14g | 14g | 14g | 14g | | | | | | | |
| 4 | 14g | 14g | 14g | 14g | 14g | 14b | 14b | 14b | 14b | 14b | |
| 5 | 14b | 14b | 14b | 14b | 14b | 14g | 14g | 14g | 14g | 14g | |
| 6 | 14g | 14g | 14g | 14g | 14g | | | | | | |

A callout box highlights the value "14b" in red and provides the following definitions:

- 1 = bird present at evis verify 1
- 4 = bird present at evis verify 4 (at end)
- b = paws rejected because reject button was pressed

The callout box also states: "The Bird Reject Before/After setting is 5 before and 5 after, so 1 bird reject button press caused 11 paw pairs to be rejected."

At the bottom of the interface, there are four tabs: "System Console", "Totals Report", "Counters", and "Debug". The "Debug" tab is highlighted in green.

No Bird Lights

Some locations install **No Bird Lights** near the Kill and Evis Line photoeyes. These lights help verify that the photoeyes are seeing birds properly as they travel past the photoeyes.

Correct Functionality

- If a bird is not seen by the photoeyes, the No Bird Light will turn on for half a second.
- If no birds are detected on multiple shackles in a row, the No Bird Light will stay on until a shackle with a bird is detected.
- The No Bird Light should never be on when a loaded shackle passes by the sensors.

Troubleshooting

The No Bird Light comes on when a bird is on a shackle.

Possible Causes:

- Sensor may be dirty.
- Sensor may not be aligned properly.
- Sensor has failed completely.
- Birds are swinging too much as they pass the sensors.

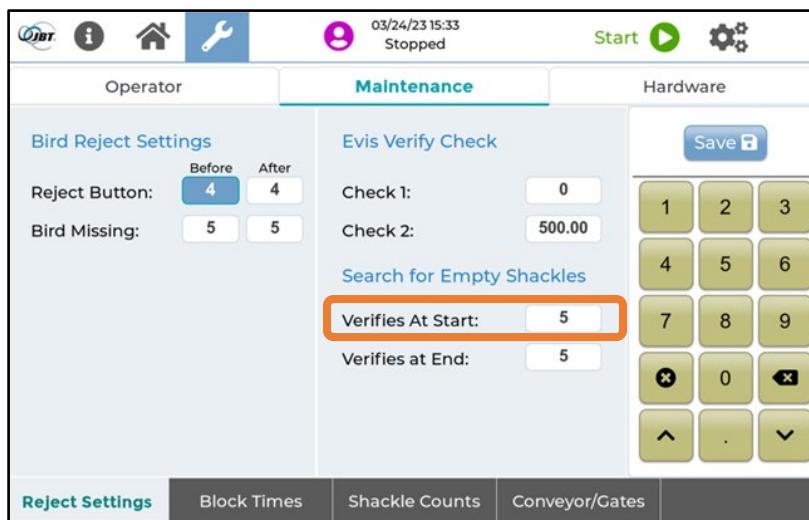
Note: This would normally only occur if the sensors are mounted too close to a point on the line where the birds make a sharp turn or when they are exiting another piece of equipment.

MAINTENANCE AND TROUBLESHOOTING

TEST BIRD MISSING PAW REJECTION

Test Bird Missing After Rehang Paw Rejections

How to test and verify paws are being rejected properly when a bird is present on the kill line shackle just before the rehang mechanism but is not seen on the evis line shackle just after the rehang (the bird fell off).



Missing Rehang Search Shackles: The number of shackles to search forward and backward for an empty shackle on the Kill Line when a bird is not seen at the set of Evis Photoeyes at the start of the Evis Line. If a shackle without a bird on the Kill Line is not found, then paws will be rejected since a bird must have fallen off in the Rehang mechanism.

Testing During Production

1. Go to the 1st debug screen named **Bird On Kill and Evis Shackle Data** (This debug screen is also discussed in the Section on Troubleshooting.)

MAINTENANCE AND TROUBLESHOOTING

TEST BIRD MISSING PAW REJECTION

2. Check the data for a red KO.

KO means a bird was found missing and the paws have been tagged for rejection when they reach the paw reject gate.

There may also be red KE shackles on both sides of the red KO value if the bird missing before and bird missing after values as specified on the System Setup 4 are greater than 0.

3. Watch the kill line right before the rehang and the evis line right after the rehang.

Watch the Kill Line for:

- No empty shackles on the kill line
- AND an evis shackle without a bird

If both occurred, a bird must have fallen off in the rehang or possibly the evis line is running faster than the kill line resulting in empty shackles being pushed onto the evis line.

If the lines are running at the same speed and an empty evis shackle is seen, most likely a bird fell off in the rehang and paws should have been tagged for rejection. Immediately go to the **Bird On Kill and Evis Shackle Data** debug screen.

Check the data for a red KO

KO means the system detected a missing bird and flagged the paws for rejection.

There may also be red KE shackles on both sides the red KO value if the bird missing before and bird missing after values are greater than 0.

If you do not see a red KO verify that the first value to the right of Search Shackles on System Setup 4 is not set to 500, which disables paw rejection when birds are missing.

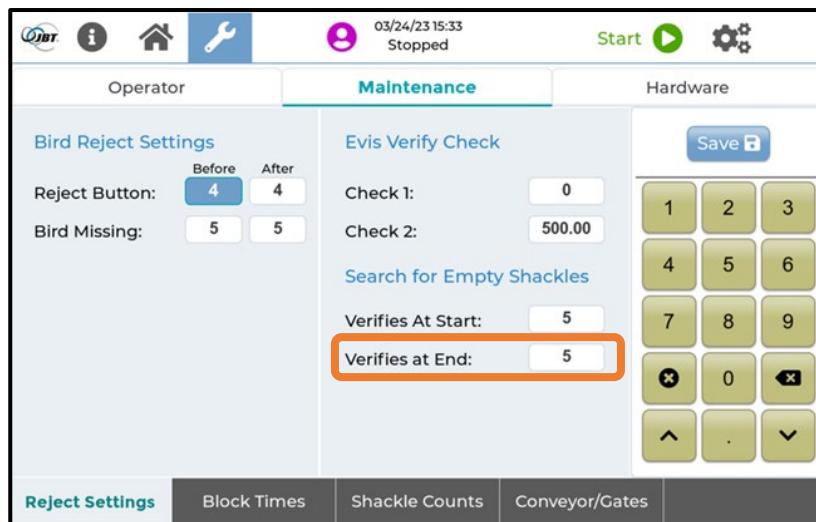
4. If using No Bird Lights, verify the evis line sensors are working properly by removing the piece of black tape from the evis line bird sensors and verifying that the No Bird Light comes on and stays on until putting the tape back over the photoeyes.

MAINTENANCE AND TROUBLESHOOTING

TEST BIRD MISSING PAW REJECTION

Test Bird Missing on Evis Line Paw Rejections

How to test and verify paws are being rejected properly when a bird is seen by the Evis At Start Photoeyes, but is not seen by the Evis At End Photoeyes.



Missing Evis Search Shackles: The number of shackles to search forward and backward for an empty shackle on the Evis Line when a bird is not seen at the Evis At End Photoeyes. If a shackle without a bird on the Evis Line is not found, then paws will be rejected since a bird must have fallen off the Evis line between the Evis Photoeyes At Start and the Evis Photoeyes At End.

Testing During Production

Go to the 2th debug screen named **Bird On Evis and Adjust Before Shackle Data.**
(Discussed in the Section on Troubleshooting.)

MAINTENANCE AND TROUBLESHOOTING

TEST BIRD MISSING PAW REJECTION

1. Check the data for a red EO.

EO means a bird was found missing and the paws have been tagged for rejection when they reach the paw reject gate.

There may also be red EA shackles on both sides of the red EO value if the bird missing before and bird missing after values as specified on the System Setup 4 are greater than 0.

2. Watch the evis line at the sensors right after the rehang and at the sensors shortly before the first USDA button.

Watch the Evis line for:

- No empty shackles at the sensors after the rehang or along the evis line
- AND an evis shackle without a bird at the sensors before the Evis At End Photoeyes.

If both occurred, a bird must have fallen off along the evis line and paws should have been tagged for rejection. Immediately go to the **Bird On Evis and Adjust Before Shackle Data** debug screen.

Check the data for a red EO

EO means a bird was found missing and the paws have been tagged for rejection when they reach the paw reject gate.

There may also be red EA shackles on both sides of the red EO value if the bird missing before and bird missing after values as specified on the System Setup 4 are greater than 0.

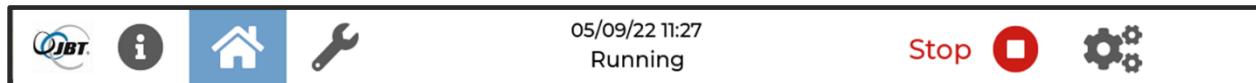
If you do not see a red EO verify that second value to the right of Search Shackles on System Setup 4 is not set to 500 which disables paw rejection when birds are missing.

3. If using **No Bird Lights**, verify the evis line sensors are working properly by removing the piece of black tape from the evis line bird sensors and verifying that the No Bird Light comes on and stays on until putting the tape back over the photoeyes.

MAINTENANCE AND TROUBLESHOOTING

INFO AND ABOUT/TROUBLESHOOTING

Info and About



Company, Contact, and Software Version Information



Contact Info

Phone: 1 - 866 – JBT – 4YOU
1 - 866 – 528 - 4968
Email: CustomerCare@jbtc.com

Contact a JBT Service Technician

If you have a question about your **JBT System** or require service after trying to troubleshoot the issue, please contact us using the contact information provided on your system's Info screen.

Troubleshooting

The **Hardware Test** screen is a good place to start when experiencing problems with the correct operation of your **JBT System**.

If all the external hardware appears to be functioning properly on the **Hardware Test** screen, then diagnosing the problem may require assistance from a JBT service technician.

ASSEMBLY DRAWINGS

The following pages include the Bill of Materials and Assembly Drawings for SN4390.

**Prime Equipment Group™**

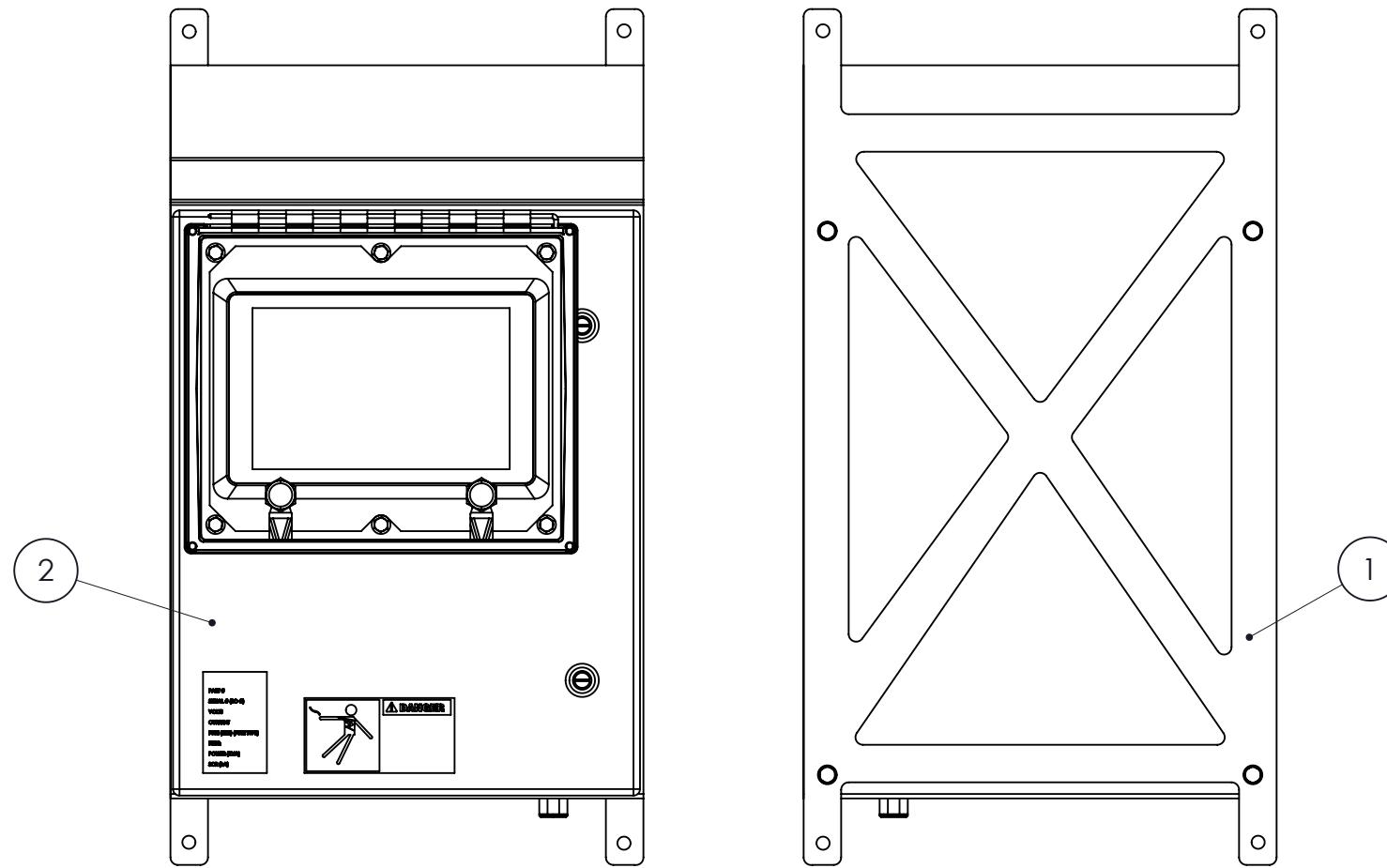
2001 Courtright Road, Suite D
Columbus, OH 43232
P: (614) 253-8590 F: (614) 253-6966
www.jbtc.com

Bill of Materials, Single Level

February 28, 2025

Item No:**SN4390****JBT CONTROLLER PAW RECOVERY SYSTEM**

| <u>Item No.</u> | <u>Description</u> | <u>Quantity Per</u> | <u>UOM</u> |
|------------------------|------------------------------|----------------------------|-------------------|
| 85083 | KIT, BRACKET, JBT CONTROLLER | 1 | EA |
| MPAWRS-10001 | PAW RECOVERY SYST, JBT | 1 | EA |



| | | | |
|----------|------|--------------|------------------------------|
| 2 | 1 | MPAWSR-10001 | PAW RECOVERY SYST, JBT |
| 1 | 1 | 85083 | KIT, BRACKET, JBT CONTROLLER |
| ITEM NO. | QTY. | PART NUMBER | DESCRIPTION |

| A | - | - | NEW SN |
|----------|-------|----|--------|
| Revision | ECN # | By | Date |

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THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES

X.X ± 0.1 FRACT ±1/16
X.XX ± 0.01 ANGLE ±0.25°
X.XXX ± 0.005
SURFACE FINISH 250 MICROINCH.
BREAK ALL SHARP EDGES 0.015.
CONCENTRICITY 0.01 TIR.
WELD BEAD 1/8" TYP

LOCATIONS

Columbus, OH, USA (614) 253-8590
Gainsville, GA, USA (770) 532-4766
Chapeco SC Brazil 55 (49) 3328-3322

Material: SEE BOM/DETAILS
SEE BOM/DETAILS

Finish: SEE BOM/DETAILS

Heat Treat: SEE BOM/DETAILS

Designed By: martist 02/27/2025

Detailed By: martist 02/27/2025

Approved By: mironeg 02/27/2025



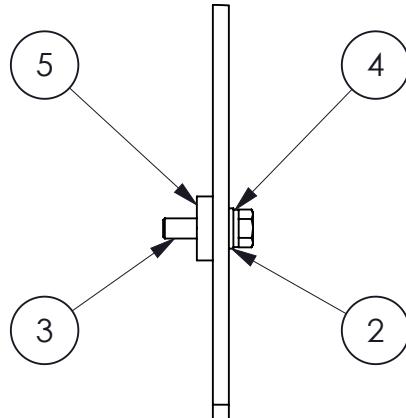
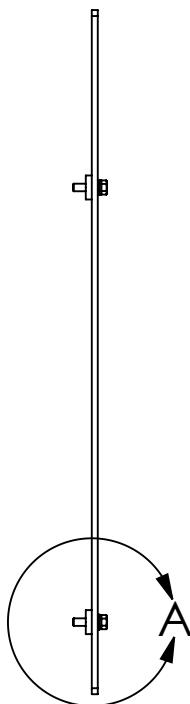
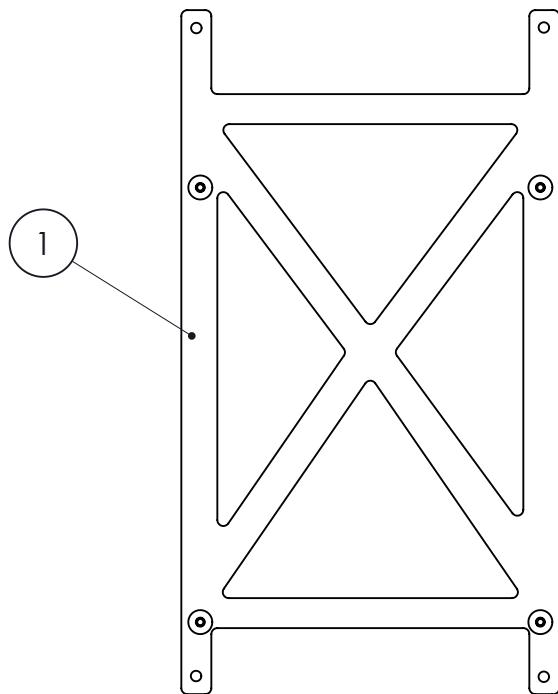
PRIME EQUIPMENT GROUP

JBT CONTROLLER PAW
RECOVERY SYSTEM

| Size | Part Number | Rev. |
|------|-------------|------|
| A | SN4390 | A |

SHEET 1 OF 1

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DETAIL A
SCALE 1 : 3

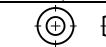
| QTY. | ITEM NO. | PART NUMBER | DESCRIPTION |
|------|----------|-------------------|------------------------------|
| 4 | 5 | SPACER13SRS100555 | SPCR,0.25X1.00ODX0.38ID,DLRN |
| 4 | 4 | MLWSS080 | LW,M8 A-2,SS |
| 4 | 3 | MHTBS080C030 | SCR,TAP,HEXHD,M8-1.25X30,SS |
| 4 | 2 | MFWUS080 | FLW,M8,SS |
| 1 | 1 | 85082 | BRACKET, MTG, JBT CONTROLLER |

| A Revision | - ECN # | - By | - Date | NEW |
|------------|---------|------|--------|-----------------------|
| | | | | Description of Change |

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THIRD ANGLE PROJECTION



UNLESS OTHERWISE SPECIFIED:
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TOLERANCES

X.X ± 0.1 FRACT. ± 1/16
X.XX ± 0.01 ANGLE ± 0.25°
X.XXX ± 0.005

SURFACE FINISH 250 MICROINCH.
BREAK ALL SHARP EDGES 0.015.
CONCENTRICITY 0.01 TIR.
WELD BEAD 1/8" TYP

LOCATIONS

Columbus, OH, USA (614) 253-8590
Gainesville, GA, USA (770) 532-4766
Chapeco SC Brazil 55 (49) 3328-3322

Material: SEE BOM/DETAILS

Finish: SEE BOM/DETAILS

Heat Treat: SEE BOM/DETAILS

Designed By: martist 02/19/2025

Detailed By: martist 02/19/2025

Approved By: mironeg 02/20/2025

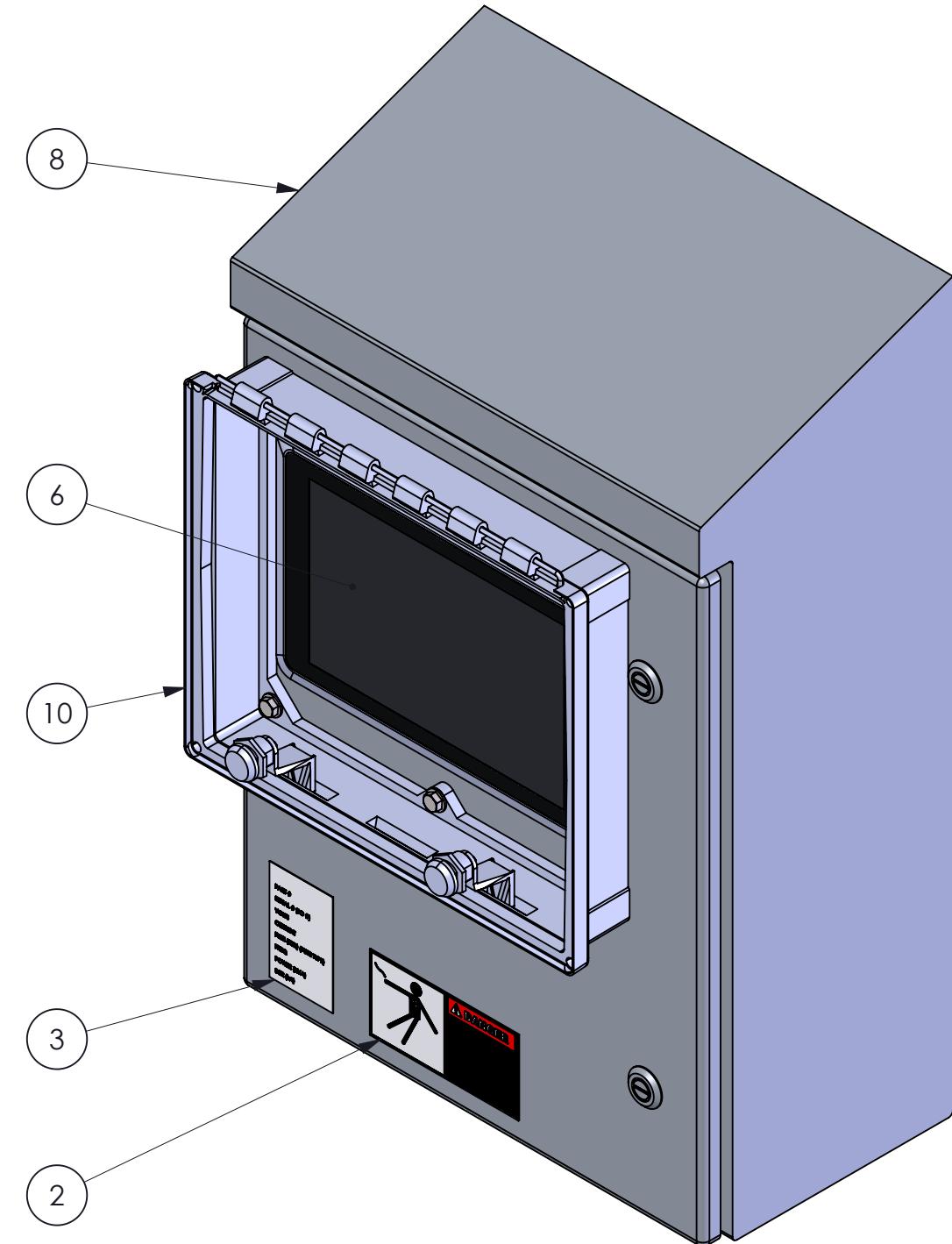


PRIME EQUIPMENT GROUP

KIT, BRACKET, JBT CONTROLLER

| Size | Part Number | Rev. |
|--------------|-------------|------|
| A | 85083 | A |
| SHEET 1 OF 1 | | |

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NOT SHOWN: 7

| ITEM NO. | QTY. | PART NUMBER | DESCRIPTION |
|----------|------|---------------------|---|
| 16 | 4 | MRS1043 | CBL, OUTPUT WIRES W/CONNECTOR |
| 15 | 1 | MRS1042 | CBL,POWER WIRE w/CONNECTOR |
| 14 | 6 | HCSS025C0100 | SCR,CAP,HEXHD,1/4-20X1,SS |
| 13 | 12 | FWUS025 | FLW,1/4,SS |
| 12 | 6 | ESNS025C | LKNT,INSR,NYL,1/4-20,SS |
| 11 | 1 | EA120-100001 | MARS/JBT CNTRL PANEL ASM, BASIC |
| 10 | 1 | 81636 | CVR,HMI,12X10,MOD,PLASTIC |
| 9 | 4 | 81250 | CBL, INPUT WIRE W/CONNECTOR JBT CONTROLLER |
| 8 | 1 | 81102 | MACH, ENCL, 20X16X08, SLPTOP, JBT SYS (CAT) |
| 7 | 1 | 80787 | CBL, HDMI, 3FT |
| 6 | 1 | 80742 | DISPLAY, 10", PNL MT, ALUM BEZEL, IP65 |
| 5 | 1 | 80001 | BOARD, CNTRL, JBT |
| 4 | 1 | 79453-16-CP220-1004 | RASPBERRY PI COMPUTE MODULE 3+ / 16GB |
| 3 | 1 | 28814 | PLT,LEGND,PVC,0,5MM THCK,US-EMLP 85,6X54 |
| 2 | 1 | 19883 | SAFETY STICKER,WARN,VOLTAGE,HORIZONTAL |
| 1 | 1 | 10526 | CORD GRIP, 0.20-0.35, 1/2NPT, 1HOLE, STR |

NOTE:
ALL DIMENSIONS ARE IN INCHES, MILLIMETERS ARE SPECIFIED AS A REFERENCE.

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C - martist 08/07/2024 REMOVED RELAYS

Revision ECN # By Date Description of Change

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THIRD ANGLE PROJECTION

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TOLERANCES

X.X ± 0.1 FRACT ±1/16

X.XX ± 0.01 ANGLE ±0.25°

X.XXX ± 0.005

SURFACE FINISH 250 MICROINCH.

BREAK ALL SHARP EDGES 0.015.

CONCENTRICITY 0.01 TIR.

WELD BEAD 1/8" TYP

LOCATIONS

Columbus, OH, USA

(614) 253-8590

Gainsville, GA, USA

(770) 532-4766

Chapeco SC Brazil

55 (49) 3328-3322



PRIME EQUIPMENT GROUP

PAW RECOVERY SYST, JBT

Size

Part Number

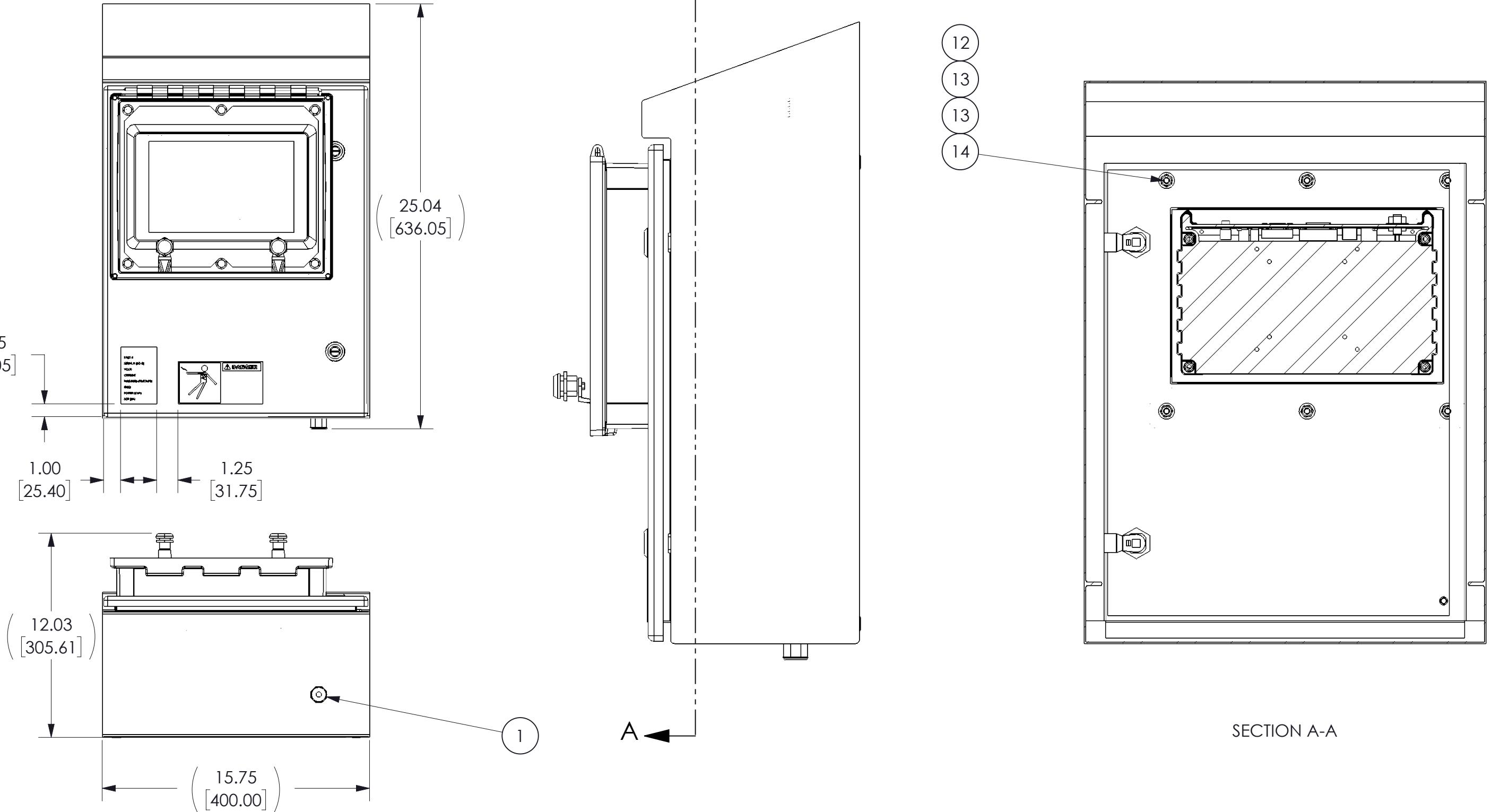
B

MPAWRS-10001

Rev.

C

SHEET 1 OF 3



SECTION A-A

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TOLERANCES
X.X ± 0.1 FRACT ±1/16
X.XX ± 0.01 ANGLE ±0.25°
X.XXX ± 0.005

SURFACE FINISH 250 MICROINCH.
BREAK ALL SHARP EDGES 0.015.
CONCENTRICITY 0.01 TIR.
WELD BEAD 1/8" TYP

LOCATIONS

Columbus, OH. USA (614) 253-8590
Gainsville, GA. USA (770) 532-4766
Chapeco SC Brazil 55 (49) 3328-3322

JBT PRIME EQUIPMENT GROUP

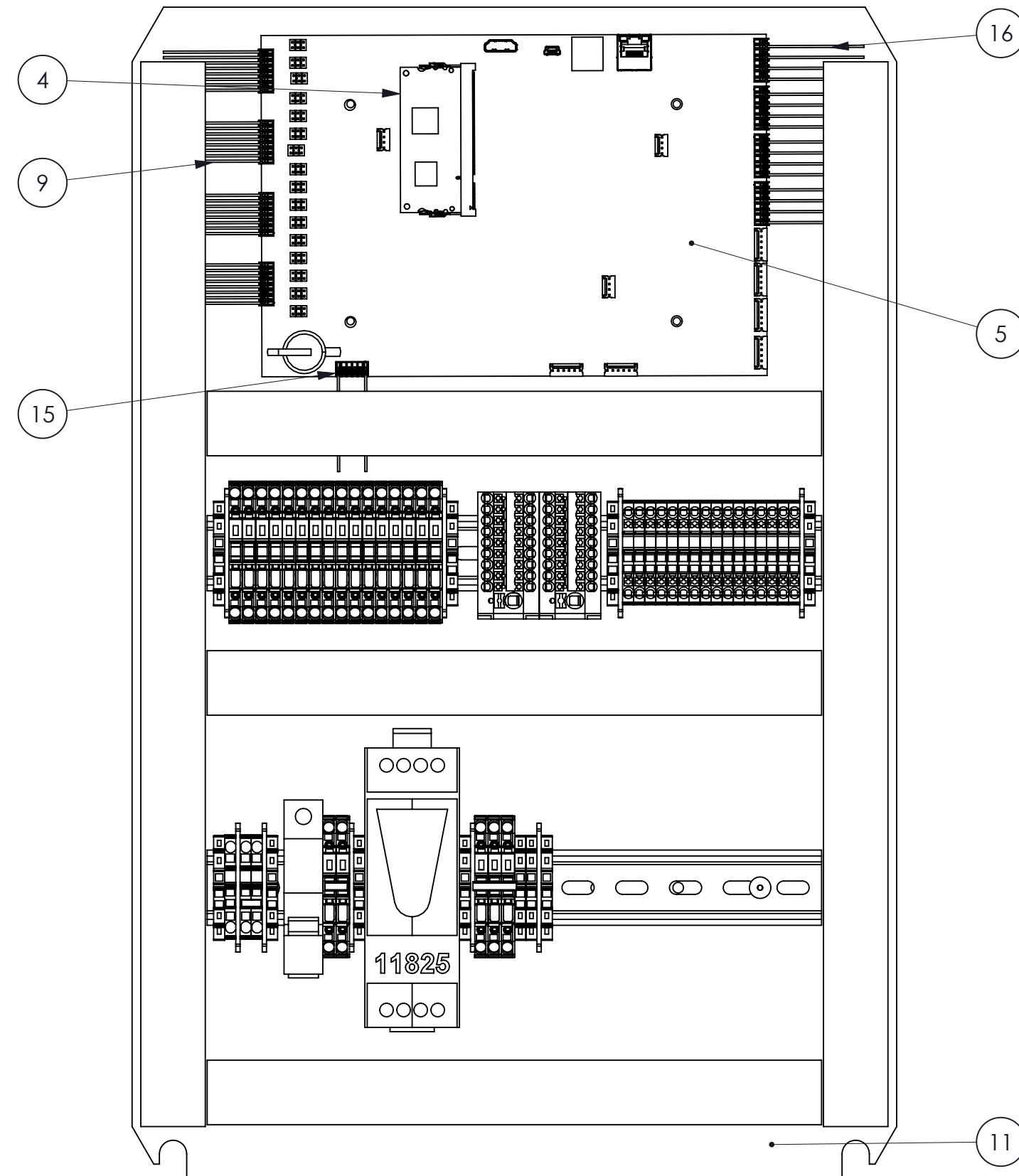
PAW RECOVERY SYST, JBT

Size Part Number Rev.

B MPAWRS-10001 **C**

Approved By: BrasilE 12/14/2023

SHEET 2 OF 3



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TOLERANCES
X.X ± 0.1 FRACT ±1/16
X.XX ± 0.01 ANGLE ±0.25°
X.XXX ± 0.005

SURFACE FINISH 250 MICROINCH.
BREAK ALL SHARP EDGES 0.015.
CONCENTRICITY 0.01 TIR.
WELD BEAD 1/8" TYP

LOCATIONS

Columbus, OH, USA (614) 253-8590
Gainsville, GA, USA (770) 532-4766
Chapeco SC Brazil 55 (49) 3328-3322

Material: SEE BOM/DETAILS

Finish: SEE BOM/DETAILS

Heat Treat: SEE BOM/DETAILS

Designed By: loganca 08/25/2023

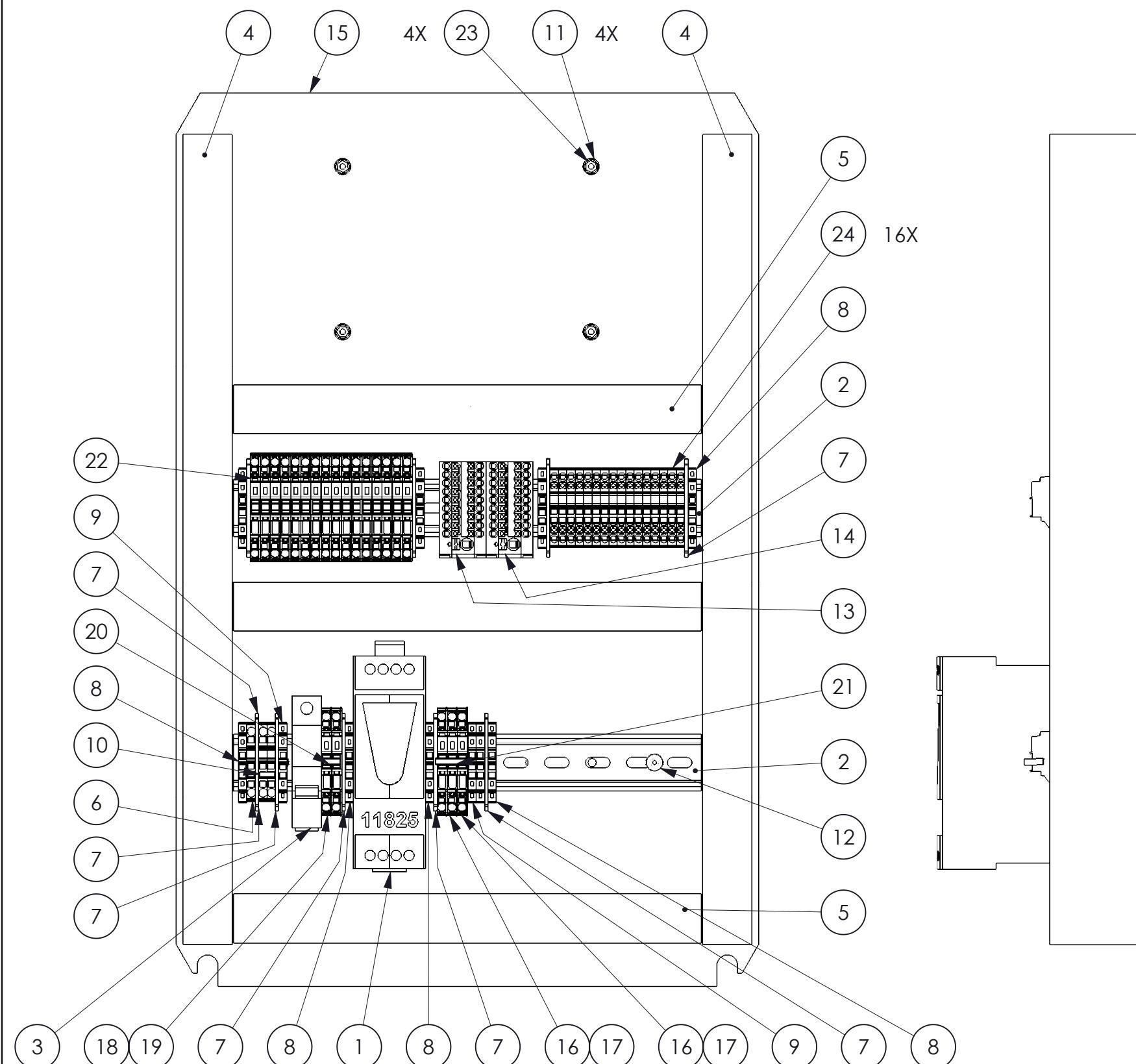
Detailed By: loganca 08/25/2023

Approved By: BrasilE 12/14/2023

JBT PRIME EQUIPMENT GROUP

PAW RECOVERY SYST, JBT

Size Part Number Rev.
B MPAWRS-10001 **C**
SHEET 3 OF 3



| ITEM NO. | QTY. | PART NUMBER | DESCRIPTION | LENGTH |
|----------|------|-------------|---|--------|
| 24 | 16 | MRS1223 | TERMINAL,26-12AWG,YEL,5.2MM | |
| 23 | 4 | MRS1021 | Control Panel Long Stand-Offs | |
| 22 | 16 | 84016 | FUSE, 315mA, MINI | |
| 21 | 1 | 82850 | JUMPER, 3P, 6.2MM TERM, GRA | |
| 20 | 1 | 82849 | JUMPER, 2P, GRAY | |
| 19 | 2 | 80044 | TERM, HLDR, FUSE, MINI, 120V | |
| 18 | 2 | 80038 | FUSE, 5A, MINI | |
| 17 | 3 | 80037 | FUSE, 2A, MINI | |
| 16 | 19 | 80036 | TERM, HLDR, FUSE, MINI, 24V | |
| 15 | 1 | 79926 | PNL, BACK, 16X20, SS, MARS 16 I/O | |
| 14 | 1 | 69567 | TERMINAL, DISTR, 19PTS, BK | |
| 13 | 1 | 69566 | TERMINAL, DISTR, 19PTS, RED | |
| 12 | 25 | 59210 | RIVET, POP, 3/16, AL | |
| 11 | 4 | 59209 | RIVET, NUT, 8-32, AL | |
| 10 | 1 | 27503 | JUMPER, BUS, 2P, F/5.2MM TERM, RED | |
| 9 | 3 | 27501 | TERMINAL, GND, 26-12AWG, GRN/YEL, 5.2MM | |
| 8 | 8 | 27500 | END CLAMP, TERM, GRAY, 5.15MM | |
| 7 | 9 | 27499 | PART PLT, TERM, 2MM, GREY, F/27498 | |
| 6 | 3 | 27498 | TERMINAL, 26-12AWG, GREY, 5.2MM | |
| 5 | 3 | 17413 | WIRE DUCT, 30X60MM, NAR SLOT, GRAY | 11.25 |
| 4 | 2 | 17413 | WIRE DUCT, 30X60MM, NAR SLOT, GRAY | 19.5 |
| 3 | 1 | 12974 | CIRCUIT BREAKER, 1P, 5A | |
| 2 | 2 | 11874 | DIN RAIL, STEEL, 35MM X 15MM | 11.25 |
| 1 | 1 | 11825 | POWER SUPPLY, 24VDC, 3A, 100-500V | |

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I - martist 06/24/2024 UPDATED BOM

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THIRD ANGLE PROJECTION

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TOLERANCES

X.X ± 0.1 FRACT ±1/16

X.XX ± 0.01 ANGLE ±0.25°

X.XXX ± 0.005

SURFACE FINISH 250 MICROINCH.

BREAK ALL SHARP EDGES 0.015.

CONCENTRICITY 0.01 TIR.

WELD BEAD 1/8" TYP

LOCATIONS

Columbus, OH, USA (614) 253-8590

Gainsville, GA, USA (770) 532-4766

Chapeco SC Brazil 55 (49) 3328-3322



PRIME EQUIPMENT GROUP

MARS/JBT CNTRL PANEL ASM,
BASIC

Size Part Number

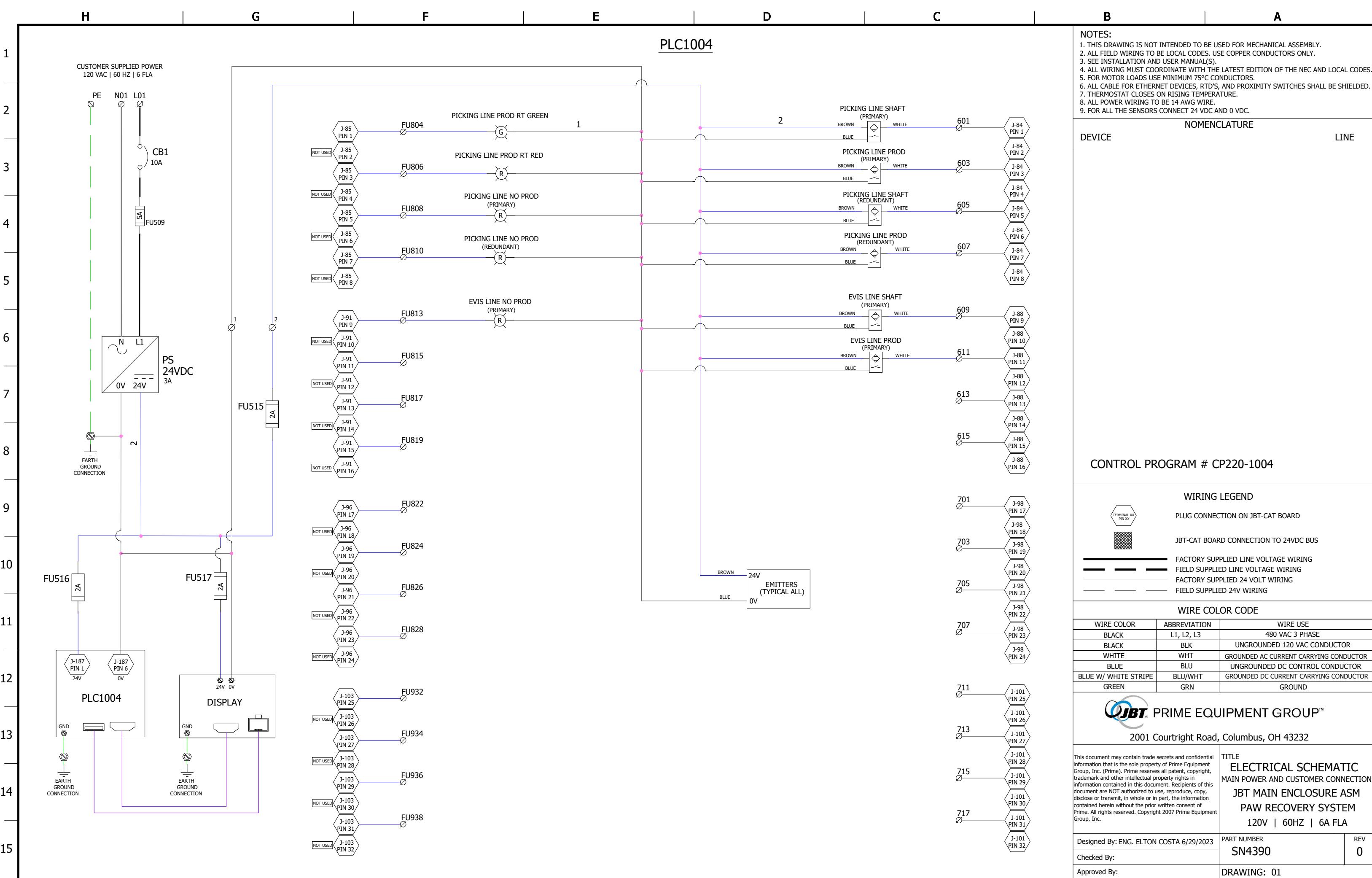
B EA120-100001

Rev. I

SHEET 1 OF 1

CONTROLS AND ELECTRICAL SCHEMATICS

| PART NO. | DESCRIPTION |
|--------------|------------------------|
| MPAWRS-10001 | PAW RECOVERY SYST, JBT |
| | |



SPARE PARTS LIST

To order spares call 866.528.4968
Email: parts.prime@JBTC.com

Refer to serial number: SN4390

Refer to model number: JBT Paw Tracking System

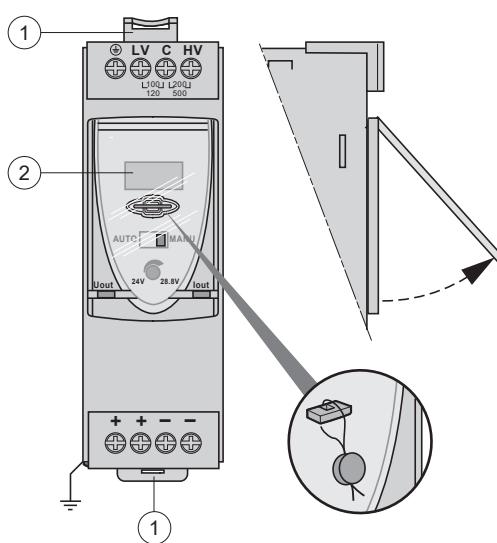
Although many parts may seem similar between 2 machines, due to wear and adjustments they become machine specific. You will cause damage to your machine if you swap parts with other machines.

| PART NO. | DESCRIPTION | QTY. |
|---------------------|--|------|
| 11825 | PWRSPLY,100-550VAC,24VDC* | 1 |
| 12974 | CIRCUIT BREAKER, 1P, 5A | 1 |
| 79453-16-CP220-1004 | RASPBERRY PI COMPUTE MODULE 3+ / 16GB | 1 |
| 80001 | BOARD, CNTRL, JBT | 1 |
| 80036 | TERMINAL, HLDR, FUSE, MINI, 24V | 5 |
| 80037 | FUSE, 2A, MINI | 10 |
| 80038 | FUSE, 5A, MINI | 5 |
| 80742 | DISPLAY, 10", PNL MT, ALUM BEZEL, IP65 | 1 |
| 80787 | CBL, HDMI, 3FT | 1 |
| 81250 | CBL, INPUT WIRE W/CONNECTOR JBT CONTROLLER | 4 |
| 81636 | CVR, HMI, 12X10, MOD, PLASTIC | 1 |
| 84016 | FUSE, 315mA, MINI | 16 |
| MRS1042 | CBL, POWER WIRE W/CONNECTOR | 1 |
| MRS1043 | CBL, OUTPUT WIRES W/CONNECTOR | 4 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

TECHNICAL PARTS INFORMATION

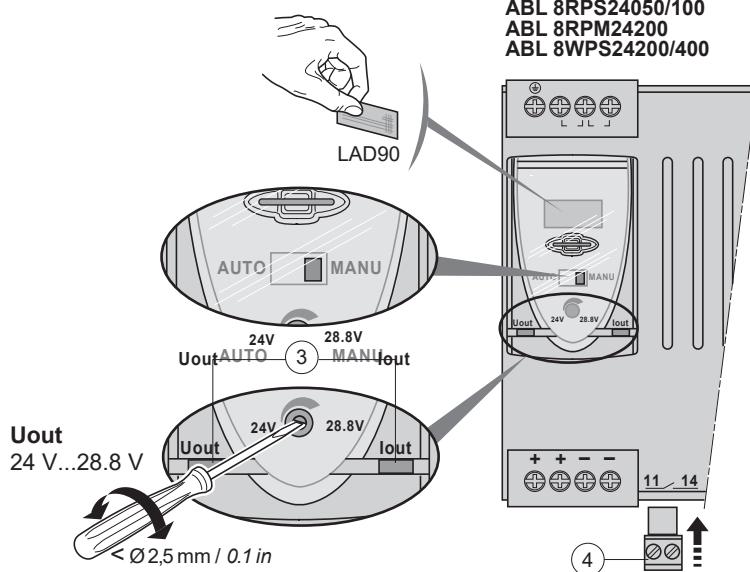
| PART NO. | DESCRIPTION |
|----------|------------------------------------|
| 11825 | POWER SUPPLY, 24VDC, 03A, 100-500V |
| | |

ABL 8RPS24030



- (1) - 35 mm DIN rail mounting clip.
 - (2) - Snap-on label.
 - (3) - Voltage and output current status LED **Uout - Iout**.
 - (4) - Diagnostic Output (Normally Open dry contact 11-14)
- (1) - Ressort de clipsage sur profilé 35 mm.
(2) - Repère encliquetable.
(3) - LED d'état de la tension et du courant de sortie **Uout - Iout**.
(4) - Sortie diagnostic (contact sec Normalement Ouvert 11-14).

- (1) - Klemmfeder auf 35mm-Schiene.
 - (2) - Etikettenhalter.
 - (3) - Status-LED Ausgangsspannung und -strom **Uout - Iout**.
 - (4) - Diagnoseausgang (Schließer Trockenkontakt 11-14).
- (1) - Resorte de clipsado en perfil de 35 mm.
(2) - Marcador con enganche.
(3) - LED de estado da tensão y de la corriente. de salida **Uout - Iout**.
(4) - Diagnóstico de salida (contacto seco Normalmente Aberto 11-14).



- (1) - Molla di aggancio su profilato 35 mm.
 - (2) - Contrassegno agganciabile.
 - (3) - LED di stato della tensione e della corrente. di uscita **Uout - Iout**.
 - (4) - Uscita diagnostica (contatto a secco Normalmente Aperto 11-14).
- (1) - Mola de engate no perfilado de 35 mm.
(2) - Marca de engatar.
(3) - LED de estado da tensão e da corrente. de saída **Uout - Iout**.
(4) - Resultado de Diagnóstico (contacto seco Normalmente Aberto 11-14).

| U In | I out | ABL | U In | I out | ABL |
|-----------------------|--------------|------------|-------------------------------------|--------------------|------------|
| 1 Ph ~ 100...120 V | 3 A | 8RPS24030 | L N 1 Ph ~ 200...500 V | 3 A 5 A 10 A | 8RPS24030 |
| | 5 A | 8RPS24050 | | | 8RPS24050 |
| | 10 A | 8RPS24100 | | | 8RPS24100 |
| 1 Ph ~ 100...120 V | 20 A | 8RPM24200 | L N 1 Ph ~ 200...240 V | 20 A | 8RPM24200 |
| 2 Ph ~ 200...500 V | 3 A | 8RPS24030 | L 1 L 2 3 Ph ~ 380...500 V | 20 A | 8WPS24200 |
| | 5 A | 8RPS24050 | | 40 A | 8WPS24400 |
| | 10 A | 8RPS24100 | | | |

| | | | | | | | |
|-------------------------------------|-------------------------------------|----------------------|-----------------|-----------|---------------------|-----------|-------------------|
| mm <i>in</i> | 10 0.39 | 17 0.67 | ABL | 8RPS24030 | 8RPS24050 | 8RPM24200 | 8WPS24200 / 24400 |
| Ø ≤ 4 mm ² Ø ≤ 12 AWG | Ø > 4 mm ² Ø > 12 AWG | | | | | | |
| mm ² /AWG | | 1...4 / 16...12 | | | | | |
| --- | | mm ² /AWG | 1...4 / 16...12 | | 4...10 / 12...6 | | |
| --- | | mm/in | | 4 / 0.16 | | | |
| 11...14 | | mm ² /AWG | | | 0.2...2.5 / 24...14 | | |

| | | | | |
|-------------------------------------|-------------------------------------|-----|------|---|
| Ø ≤ 4 mm ² Ø ≤ 12 AWG | Ø > 4 mm ² Ø > 12 AWG | Nm | 0.6 | 2 |
| Ø 5,5 mm / 0.22 in | lb-in | 5.4 | 17.7 | |

⚠ DANGER / DANGER / GEFAHR / PELIGRO / PERICOLO / PERIGO**HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH**

Disconnect all power before servicing equipment.

Failure to follow these instructions will result in death or serious injury.

RIESGO DE ELECTROCUCIÓN, EXPLOSIÓN O ARCO ELÉCTRICO

Desconecte toda alimentación antes de realizar el servicio.

Si no se siguen estas instrucciones provocará lesiones graves o incluso la muerte.

RISQUE D'ELECTROCUTION, D'EXPLOSION OU D'ARC ELECTRIQUE

Coupez l'alimentation avant de travailler sur cet appareil.

Le non-respect de ces instructions provoquera la mort ou des blessures graves.

RISCHIO DI SCOSA ELETTRICA, DI ESPLOSIONE O DI OFTALMIA DA FLASH

Scollegare l'apparecchio dalla presa di corrente prima di qualsiasi intervento.

Il mancato rispetto di queste istruzioni provocherà morte o gravi infortuni.

STROMSCHLAG-, EXPLOSIONS- ODER LICHTBOGENGEFAHR

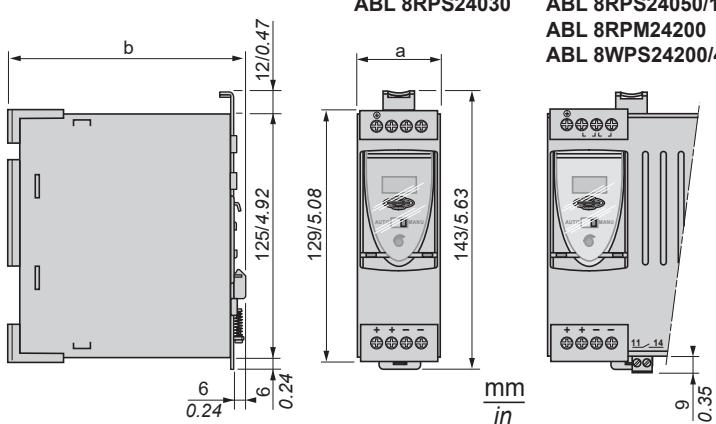
Vor dem Arbeiten an dem Gerät dessen Stromversorgung abschalten.

Die Nichtbeachtung dieser Anweisungen führt zu Tod oder schwerer Körperverletzung.

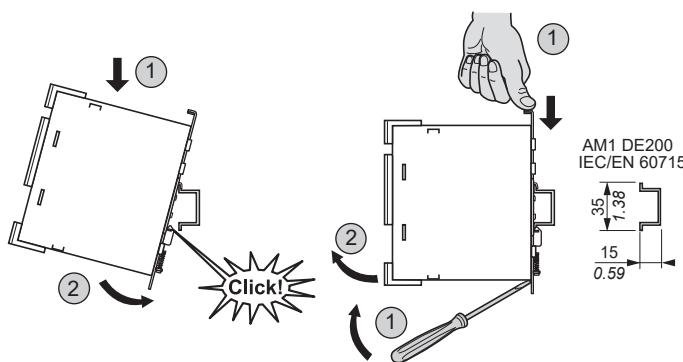
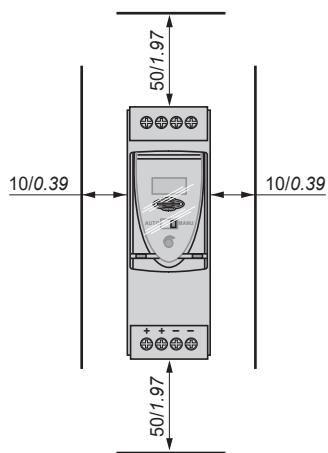
RISCO DE CHOQUE ELÉCTRICO, EXPLOSÃO OU FAÍSCA

Desligue a alimentação antes de trabalhar neste aparelho.

A não observância destas instruções resultará em morte, ou ferimentos graves.



| ABL | a (mm/in) | b (mm/in) |
|-----------|-----------|-----------|
| 8RPS24030 | 45/1.77 | 125/4.92 |
| 8RPS24050 | 56/2.24 | 125/4.92 |
| 8RPS24100 | 86/3.39 | 145/5.71 |
| 8RPM24200 | 146/5.75 | 145/5.71 |
| 8WPS24200 | 96/3.78 | 160/6.30 |
| 8WPS24400 | 166/6.54 | 160/6.30 |

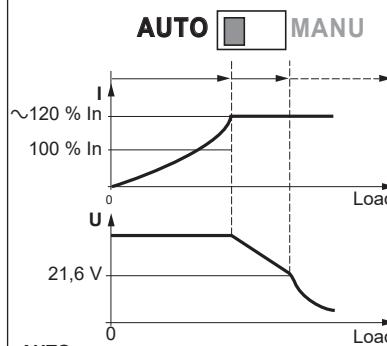


| U out | | 11 / 14 |
|-------|--|---------|
| | $21.6 \text{ V} \leq U_{\text{out}}$ | — |
| | $7 \text{ V} \leq U_{\text{out}} < 21.6 \text{ V}$ | — / — |
| | $U_{\text{out}} < 7 \text{ V}$ | — / — |

OFF
 Green / Vert / Grün / Verde / Verde / Verde
 Orange / Orange / Orange / Naranja / Arancione / Laranja
 Red / Rouge / Rot / Rojo / Rosso / Vermelho

| I out | |
|-------|--|
| | $I_{\text{out}} \leq I_{\text{n}}$ |
| | $I_{\text{out}} > I_{\text{n}}$ |
| | Power deactivated after detection of overcurrent, overvoltage or overtemperature. (1) 0 V / 0 A |

(1) Alimentation arrêtée suite à une détection de surintensité, de surtension ou de surchauffe.
 Nach der Erkennung von Überstrom, Überspannung oder Übertemperatur wurde die Stromversorgung abgeschaltet.
 Alimentación desactivada tras detectar sobrecorriente, sobretensión o sobrecaleamiento.
 Alimentazione disattivata dopo il rilevamento di condizioni di sovracorriente, sovratensione o di surriscaldamento.
 Alimentação desactivada após a detecção de corrente, tensão ou temperatura excessivas.



Constant current mode. Return to rated power supply operation once the source of overcurrent has been corrected.

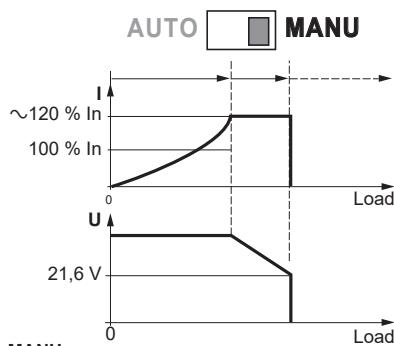
AUTO
 Mode courant constant. Retour au fonctionnement normal dès que l'origine de la surintensité a été corrigée.

AUTO
 Konstantstrom-Modus. Rückkehr zum Nennbetrieb der Stromversorgung, sobald die Ursache des Überstroms behoben wurde.

AUTO
 Modalidad de corriente constante. Vuelva al funcionamiento con fuente de alimentación nominal una vez corregido el origen de la sobrecorriente.

AUTO
 Modalità di corrente costante. Ritornare al funzionamento con valori di alimentazione nominali una volta risolto il problema di sovraccorrente.

AUTO
 Modo de corrente constante. Voltar para o funcionamento com a alimentação de corrente nominal assim que a alimentação de corrente excessiva tiver sido corrigida.



Error retention. Following deactivation, remove power to the primary circuit and reapply power to the product again.

MANU
 Mémorisation de surintensité. A la suite de l'arrêt de l'alimentation, couper l'alimentation au primaire et remettre le produit sous tension.

MANU
 Fehler Speicherung. Nach der Deaktivierung die Stromversorgung am Primärkreis abschalten und dem Produkt erneut Strom zuführen.

MANU
 Error retenido. Tras completarse la desactivación, desconecte la alimentación del circuito primario y, a continuación, vuelva a aplicarla al producto.

MANU
 Ritzenzione errore. Dopo la disattivazione, rimuovere l'alimentazione al circuito principale, e rimettere di nuovo sotto tensione il prodotto.

MANU
 Retenção de erro. Após a desactivação, remover a corrente para o circuito principal e voltar a aplicar corrente no produto.

2 ABL 8●P max output //

SELV / TBTS

Outputs connected in parallel

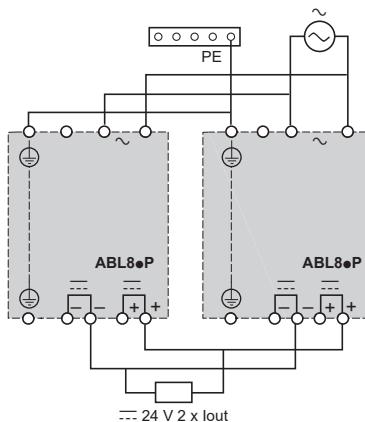
Raccordement des sorties en parallèles

Anschluss der parallelgeschalteten Ausgänge

Conección de las salidas en paralelo

Collegamento delle uscite in parallelo

Ligaçāo das saídas em paralelas



SELV / TBTS :

SELV: Safety Extra Low Voltage

TBTS: Très Basse Tension Sécurisée

Sicherheitskleinspannung

Muy baja tensión asegurada

Tensione di sicurezza molto bassa

Muito baixa tensão segura

2 ABL 8●P max output

SELV / TBTS

Series connection of the power supplies

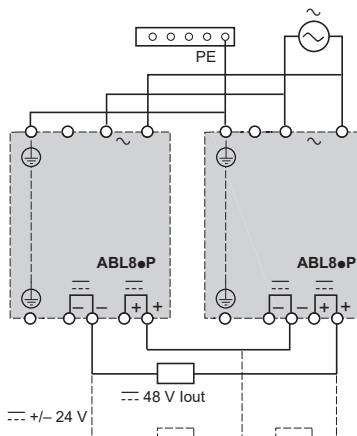
Raccordement des alimentations en "série"

Anschluss der reihengeschalteten Stromversorgungen

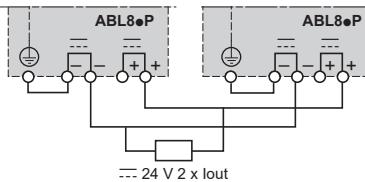
conexión de las alimentaciones en "serie"

Collegamento delle alimentazioni in "serie"

Conexāo das alimentações em "série"



PELV / TBTP



PELV / TBTP :

PELV: Protection Extra Low Voltage

TBTP: Très Basse Tension Protection

Schutzkleinspannung

Muy baja tensión protección

Tensione di protezione molto bassa

Muito baixa tensão protecção

Paralleling:

- Use maximum of 2 power supplies of the same reference.

Parallelschaltung:

- max. 2 Stromversorgungen und nur bei gleichen Modellen.

Mise en parallèle:

- Utilisez 2 alimentations maximum et de même référence.

Puesta en paralelo:

- 2 alimentaciones como máximo, con la misma referencia.

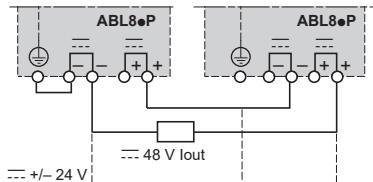
Messa in parallelo:

- 2 alimentazioni al massimo e delle stesse caratteristiche.

Ligaçāo em paralelo:

- 2 alimentações no máximo e da mesma referência.

PELV / TBTP



WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO

RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- Allow the product sufficient time to cool before touching.
- Follow proper mounting instructions including torque values and the crimping lengths on wire terminations.
- Do not allow liquids or foreign objects to enter this product.

Failure to follow this instruction can result in death, serious injury, or equipment damage.

RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER

- Laisser le produit refroidir avant de le toucher.
- Respecter les consignes de montage, et notamment les couples de serrage et les longueurs de sertissage sur les terminaisons de câble.
- Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit.

Le non-respect de cette directive peut entraîner la mort, des lésions corporelles graves ou des dommages matériels.

RIESGO DE DAÑOS MATERIALES Y DE SOBRECALENTAMIENTO DE LA UNIDAD

- Espere el tiempo necesario hasta que se enfrie el producto antes de tocarlo.
- Respetar las instrucciones de montaje, y en particular los pares de apretado y las longitudes de engaste en las terminaciones de los cables.
- No dejar que penetren líquidos o cuerpos extraños en el producto.

Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales o incluso la muerte.

RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO

- Attendere il raffreddamento del prodotto prima di toccarlo.
- Seguire le istruzioni di montaggio corrette che comprendono i valori di coppia e le lunghezze di crimpatura sulle terminazioni dei cavi.
- Non far entrare liquidi o oggetti estranei in questo apparecchio.

La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.

GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG

- Lassen Sie das Produkt lange genug abkühlen, bevor Sie es berühren.
- Beachten Sie die Montageanweisungen, insbesondere die Anziehdrehmomente und die Crimplängen an den Kabelenden.
- Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein.

Die Nichtbeachtung dieser Anweisung kann den Tod, Körperverletzung oder Materialschäden zur Folge haben.

RISCO DE DANO MATERIAL E DE AQUECIMENTO

- Dar tempo suficiente para o produto arrefecer antes de lhe tocar.
- Siga devidamente as instruções de montagem, incluindo as forças de aperto e os comprimentos de enrolamento nos terminais de cabos.
- Não permita a entrada de líquidos e de objectos estranhos no produto.

A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

Environment characteristics

Installation in a pollution degree 2 environment.

Maximum surrounding air temperature 50 °C (122 °F).

Minimum temperature rating of the conductor wires connected to the terminals :

75 °C (167 °F).

Caractéristiques d'environnement

Installation dans un environnement au niveau de pollution 2.

Température ambiante maximale 50 °C (122 °F).

Température nominale minimale des fils conducteurs raccordés aux bornes :

75 °C (167 °F).

Umgebungskenndaten

Installation in einer Umgebung mit Verschmutzungsgrad 2.

Maximale Umgebungstemperatur 50 °C (122 °F).

Die minimale Temperaturbemessung der Leitungsdrähte, die an die Klemmen angeschlossen sind, beträgt : 75 °C (167 °F).

Características ambientales

Instalación en un ambiente de contaminación grado 2.

Temperatura ambiente máxima 50 °C (122 °F).

Temperatura nominal minimal de los hilos conductores conectados a los terminales : 75 °C (167 °F).

Caratteristiche ambientali

Installazione in un ambiente con grado d'inquinamento II.

Massima temperatura ambiente circostante consentita 50 °C (122 °F).

Temperatura minima di esercizio dei conduttori collegati ai morsetti : 75 °C (167 °F).

Características ambientais

Instalação num ambiente de poluição nível 2.

Temperatura ambiental máxima 50 °C (122 °F).

Temperatura nominal mínima dos fios condutores conectados aos terminais : 75 °C (167 °F).

"Power supply modules, ABL8 series, UL certified Schneider Electric (E164867)"

Modules d'alimentation, série ABL8, certification UL Schneider Electric (E164867)

Versorgungsmodul, Baureihe ABL8, UL-zertifiziert, Schneider Electric (E164867)

"Módulos de alimentación, serie ABL8, con certificación UL de Schneider Electric (E164867)"

Moduli di alimentazione, serie ABL8, certificazione UL Schneider Electric (E164867)

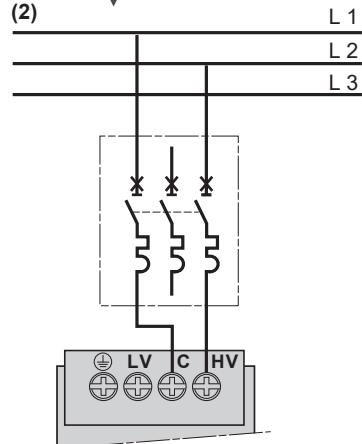
Módulos de alimentação, série ABL8, certificação UL da Schneider Electric (E164867)

Módulos de alimentação, série ABL8, certificação UL da Schneider Electric (E164867)

Selection of the protections on the power supply primary circuit**Choix des protections au primaire des alimentations****Wahl der Schutzart am Primärkreis der Versorgungen****Selección de las protecciones en el circuito primario de las alimentaciones****Scelta delle protezioni al primario delle alimentazioni****Seleção das proteções no circuito primário das alimentações****To be ordered separately / A commander séparément / Separat zu bestellen****Pedir por separado / Da comandare separatamente / Encomendar separadamente**

| | | ~ 115 V | | | | ~ 230 V | | | | ~ 400 V | | | |
|------------|---------|-------------------------------|------------------|------------------------|-------------------------|-------------------------------|-----------------|------------------------|-------------------------|-------------------------------|----------------------|------------------------|-------------------------|
| | | Outside of USA & Canada (IEC) | | For USA and Canada (1) | | Outside of USA & Canada (IEC) | | For USA and Canada (1) | | Outside of USA & Canada (IEC) | | For USA and Canada (1) | |
| ABL | | | gG/gL | | Class CC rejection type | | gG/gL | | Class CC rejection type | | gG/gL | | Class CC rejection type |
| 8RPS24030 | GB2/GV2 | GB2 CD07 | 2 A (8 x 32) | — | 2 A (8 x 32) | GB2 CD07 | 2 A (8 x 32) | — | 2 A (8 x 32) | GV2 RT06 (2) | 2 A (10,3 x 38,1) | 2 A (10,3 x 38,1) | |
| | C60N | 2 A C curve | 24443 | | 2 A C curve | 24443 | | | | — | — | — | |
| 8RPS24050 | GB2/GV2 | GB2 CD08 | 4 A (8 x 32) | — | 4 A (8 x 32) | GB2 CD07 | 2 A (8 x 32) | — | 2 A (8 x 32) | GV2 RT06 (2) | 2 A (10,3 x 38,1) | 2 A (10,3 x 38,1) | |
| | C60N | 3 A C curve | 24444 | | 2 A C curve | 24443 | | | | — | — | — | |
| 8RPS24100 | GB2/GV2 | GB2 CD12 | 6 A (8 x 32) | — | 6 A (8 x 32) | GB2 CD08 | 4 A (8 x 32) | — | 4 A (8 x 32) | GV2 RT07 (2) | 4 A (10,3 x 38,1) | 4 A (10,3 x 38,1) | |
| | C60N | 6 A C curve | 24447 | | 3 A C curve | 24444 | | | | — | — | — | |
| 8RPM24200 | GB2/GV2 | GB2 CD16 | 10 A (8 x 32) | — | 10 A (8 x 32) | GB2 CD12 | 6 A (8 x 32) | — | 6 A (8 x 32) | | | | |
| | C60N | 10 A C curve | 24449 | | 6 A C curve | 24447 | | | | — | — | — | |
| 8WPS 24200 | GB2/GV2 | | | | | | | | | GV2 ME06 | 2 A (10,3 x 38,1) | 2 A (10,3 x 38,1) | |
| | C60N | | | | | | | | | — | — | — | |
| 8WPS 24400 | GB2/GV2 | | | | | | | | | GV2 ME07 | 4 A (10,3 x 38,1) | 4 A (10,3 x 38,1) | |
| | C60N | | | | | | | | | — | — | — | |

(1) Conformance with UL508 and CSA 22.2 n°14





PRIME EQUIPMENT GROUP

REVISION PAGE