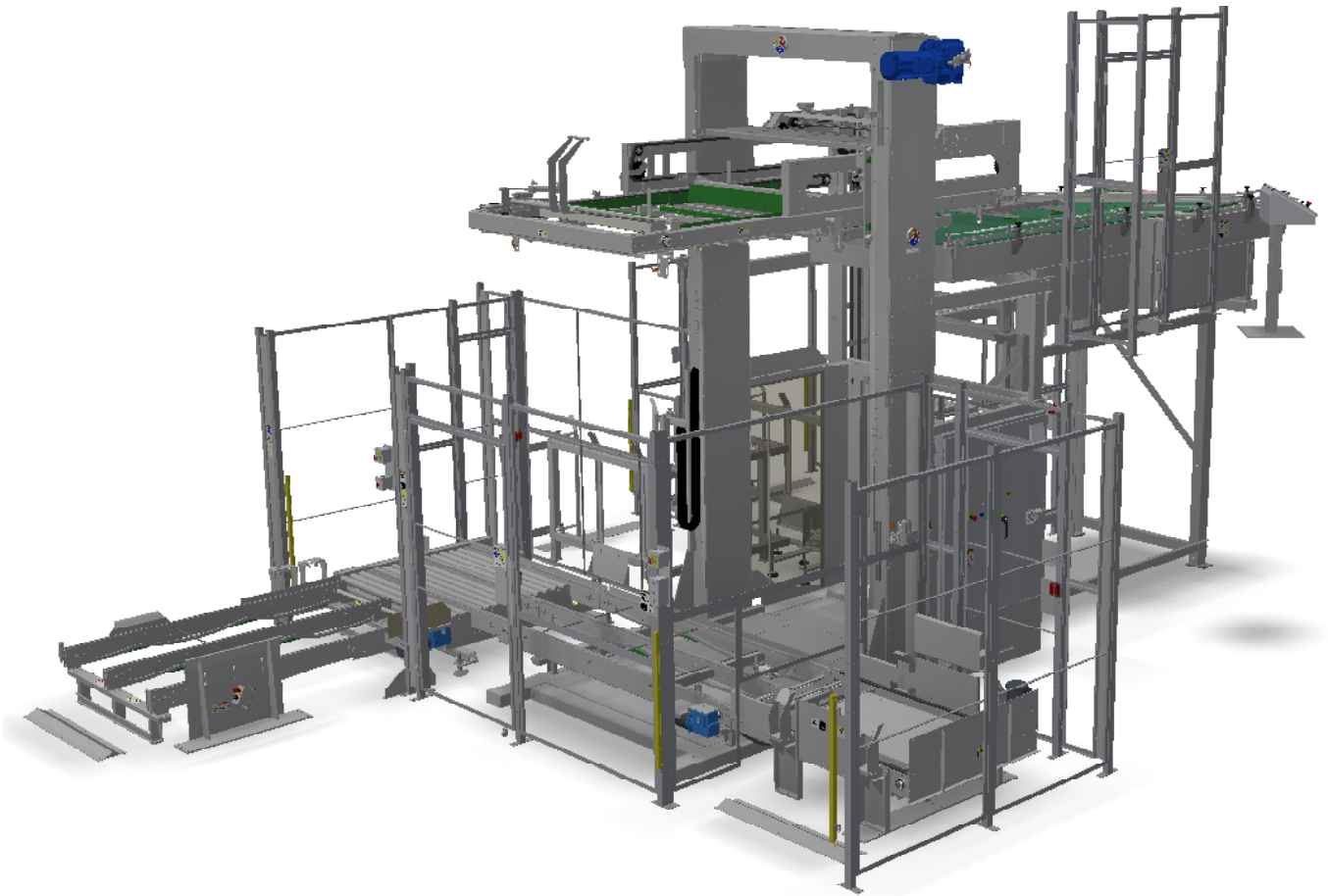


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MODEL "108"
Sweep Off Bulk Depalletizer

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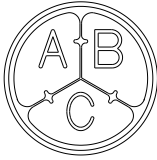


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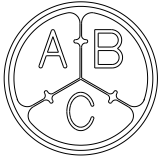
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MODEL "108"
Sweep Off Bulk Depalletizer

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SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

Index

Symbols

3 Position Tier Head Rotation Assembly.....	158
6FT Pallet Infeed Conveyor Assembly.....	139, 140
6FT Pallet Infeed Conveyor Parts List.....	141
90° Pallet Staging Conveyor Assembly.....	142, 143
90° Pallet Staging Conveyor Parts List.....	144

A

Air Inlet.....	17
Air Preparation Unit.....	17
Air Supply Parts List.....	172
Alternate Lubricant List.....	71

B

Base Frame Assembly.....	92, 93
Base Frame Assembly Parts List.....	94
Bottle Conveyor Installation.....	55, 56
Bottle Discharge Conveyor Assembly.....	123, 124, 125
Bottle Discharge Conveyor Assembly Parts List.....	126, 127
Bottle Discharge Conveyor Installation.....	55, 56, 57
Bottle Discharge Conveyor Rails Assembly.....	128
Bottle Discharge Conveyor Rails Assembly Parts Lis.....	129

C

Column Extension Installation.....	53
Column Middle Section Assembly & Parts List.....	98
Controls.....	25

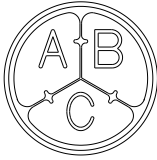
D

De-Energizing The Machine.....	23
Depalletizing Conveyor Assembly.....	130, 131
Depalletizing Conveyor Assembly Parts List.....	132, 133
Drive Status Screen.....	36

E

Electrical Component Functions.....	81, 82
Electrical Safety Precautions.....	23
Elevator Frame Assembly & Parts List.....	99
Elevator Hook-Up.....	52

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

Elevator Hook-Up Details.....54
Emergency Stop Button.....15
Encoder Settings Screen.....39
Energizing The Machine.....23, 24
Ethernet Device Block Status Screen.....34

F

Fault Screen.....44, 46
Final Inspection.....65, 67
Floor Anchoring.....65, 67
Floor Plan.....14

G

General Maintenance Instructions.....68
General Safety Precautions.....22
Guarding Assembly.....120, 121
Guarding Assembly Parts List.....122
Guarding Installation.....64, 65

H

High Level Discharge.....53

I

Illegal Hand Function Screen.....45
In/Out Status Screen.....33
Infeed & Staging Conveyor Installation.....61, 62
Installation Instructions.....48
Installation Safety Precautions.....23

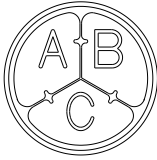
L

Light Curtain.....18
List of Required Tools.....48
Lock-out/Tag-out Procedures.....24
Lower Elevator Frame Assembly.....107, 108
Lower Elevator Frame Parts List.....109, 110
Lower Main Frame Placement.....50
Lower Tier Centering Unit 56x44 Assembly.....117

M

Machine Modify Screen.....38
Machine Options Screen.....32
Machine Overview.....25

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

Machine Placement.....	49
Main Electrical Disconnect Switch.....	16
Main Screen.....	27
Main Section Speed Settings Screen.....	37
Maintenance Guidelines.....	70
Maintenance Overview.....	68
Manual Hand Function Screen.....	28, 29
Monitor Screen.....	31
Muting Eye Reflector Assembly & Parts List.....	168
Muting Eyes Assembly & Parts List.....	168

P

Pallet Leaning Detection Assembly & Parts List.....	167
Pallet Stacker Assembly.....	134, 135, 136
Pallet Stacker Assembly & Parts List.....	137, 138
Pallet Stacker Installation.....	63
Pedestal Assembly & Parts List.....	171
Pre-Operating Procedures.....	66
Pressurized System Safety Precautions.....	23
Product Guide Assembly.....	112
Product Guides Parts List.....	113
Product Selection Screen.....	41, 42, 43
Proximity Sensor & Photoeye Location	
Base Frame Assembly.....	74
Elevator Assembly.....	75
Guarding Assembly.....	80
Pallet Conveyor Assembly	
Pallet Stacker Assembly.....	78, 79
Tier Sheet Remover/Bottle Discharge Conveyor	
Row End Transfer Assembly.....	76, 77
Pusher Bar Assembly & Parts List (15C10065).....	114

R

Recommended Lubricant List.....	71
Reload Master Settings Screen.....	40
Rotary Base Frame Assembly.....	160, 161
Rotary Base Frame Assembly Parts List.....	162
Rotary Pick Up Assembly.....	151
Rotary Pick Up Assembly Parts List.....	152
Rotating Mast Assembly.....	163
Rotating Mast Assembly Parts List.....	164
Row End Transfer Operation.....	73

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

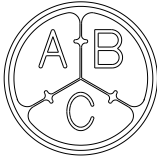
S

Safety Devices.....	15
Safety Label Location.....	9, 10, 11
Safety Labels.....	12, 13
Safety Light Curtain (Infeed) Operation.....	19
Safety Light Curtain (Pallet Stacker) Operation.....	20
Safety Light Curtain (Tier Sheet/Top Frame Bin) O.....	21
Safety Precautions.....	8
Sanitation Process.....	69
Sequence of Depalletizer Operations.....	72
Service Offer.....	173
Start Up Screen.....	26
Stop Bar Assembly & Parts List.....	101
Support Bar Assembly (15B13527) & Parts List.....	105
Support Bar Chain Assembly.....	106
Support Bar Encoder Assembly & Parts List.....	100
Sweep Bar Chain Assembly.....	115
Swing Arm Assembly.....	155, 156
Swing Arm Assembly Parts List.....	157

T

Technical Reference Drawings and Parts Lists.....	91
Tie Brackets Assembly & Parts List.....	169
Tier Sheet Arm I/O Assembly.....	159
Tier Sheet Bin Assembly.....	165
Tier Sheet Bin Assembly Parts List.....	166
Tier Sheet Finger Gripper Assembly & Parts List.....	118
Tier Sheet Gripper Assembly (15C13524) & Parts Lis.....	111
Tier Sheet Remover Gripper Head Assembly.....	153
Tier Sheet Remover Gripper Head Assembly Parts Lis.....	154
TIER SHEET REMOVER SCREEN.....	47
Tier Sheet/Top Frame Remover Installation.....	58, 59
Touch Screens.....	26
Transfer Chain Conveyor Assembly.....	148, 149
Transfer Chain Conveyor Assembly Parts List.....	150
Transfer Roller Conveyor Assembly.....	145, 146
Transfer Roller Conveyor Assembly Parts List.....	147
Transfer Table Top View Assembly & Parts List.....	116
Troubleshooting Overview.....	83
Troubleshooting Procedure.....	84, 85, 86, 87, 88, 89, 90

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

U

Upper Elevator Frame Assembly.....102, 103
Upper Elevator Frame Assembly Parts List.....104
Upper Elevator Valve Assembly & Parts List.....119
Upper Frame / Elevator Installation.....51
Upper Frame Assembly.....95, 96
Upper Frame Assembly Parts List.....97
Upper Guarding Assembly & Parts List.....170
Upper Tower Frame Installation.....51

V

Valve Bank Status Screen.....35

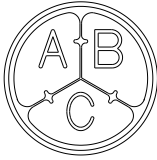
W

Working on De-Energized Circuits.....24
Working on Energized Circuits.....24

Z

Zero Machine Screen.....30

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

SAFETY PRECAUTIONS

This section reviews some of the basic safety precautions and instructions you should become familiar with before operating or performing maintenance or troubleshooting with your packaging machine. In addition, be sure to review your facility, shop, or departmental safety manual(s) before performing any task(s) with the packaging machine.

Many dangers exist around mechanical equipment. There are electrical dangers, pneumatic dangers, and personal safety dangers. Accordingly, anyone who operates or performs any type of repair or maintenance with the packaging machine must be knowledgeable regarding safety instructions and must be able to recognize and correct dangerous or unsafe situations.

A-B-C Packaging Machine Corporation wants you to remember that safety always comes first. Safety labels have been provided on your packaging machine to help remind you of some of the areas to be especially cautious of when working with or around your packaging machine. Throughout this technical manual and your machine the following safety symbols have been added to emphasize safety precautions as necessary.



This symbol is used to indicate that a hazardous situation is present that has some probability of death or serious injury.

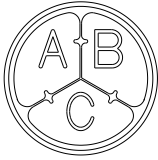


This symbol is used to indicate that a hazardous situation is present that may result in a minor or moderate injury.

In addition, there are safety labels present on items that have been purchased, be aware of them during operation, maintenance, or troubleshooting. Be sure all safety labels are unobstructed, visible, and legible at all times.

This section will cover various aspects of safety precautions for using packaging machinery. These aspects include safety devices, general safety precautions, installation safety precautions, pressurized system safety precautions, electrical safety precautions, and lock-out / tag-out safety precautions.

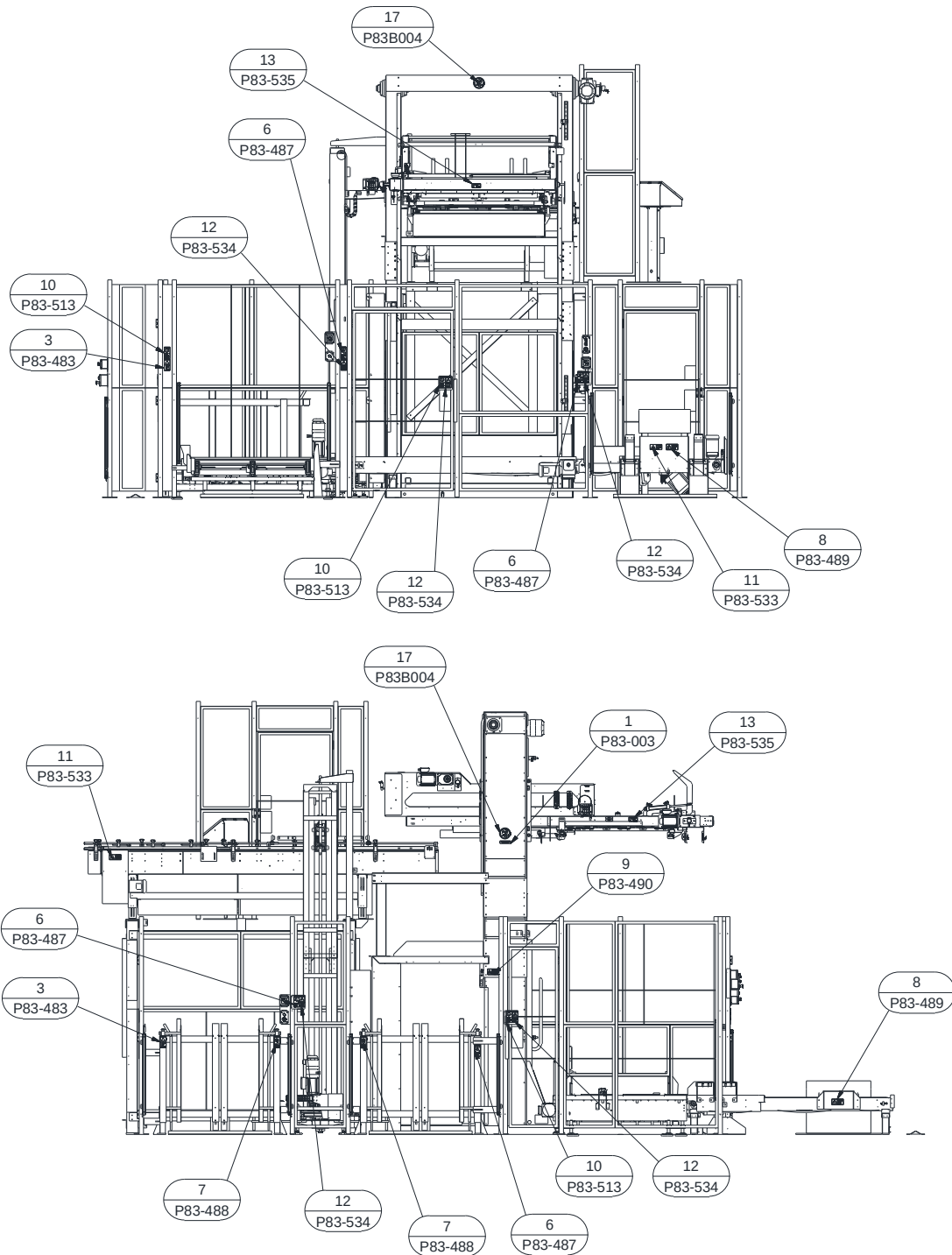
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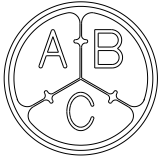
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SAFETY LABEL LOCATION

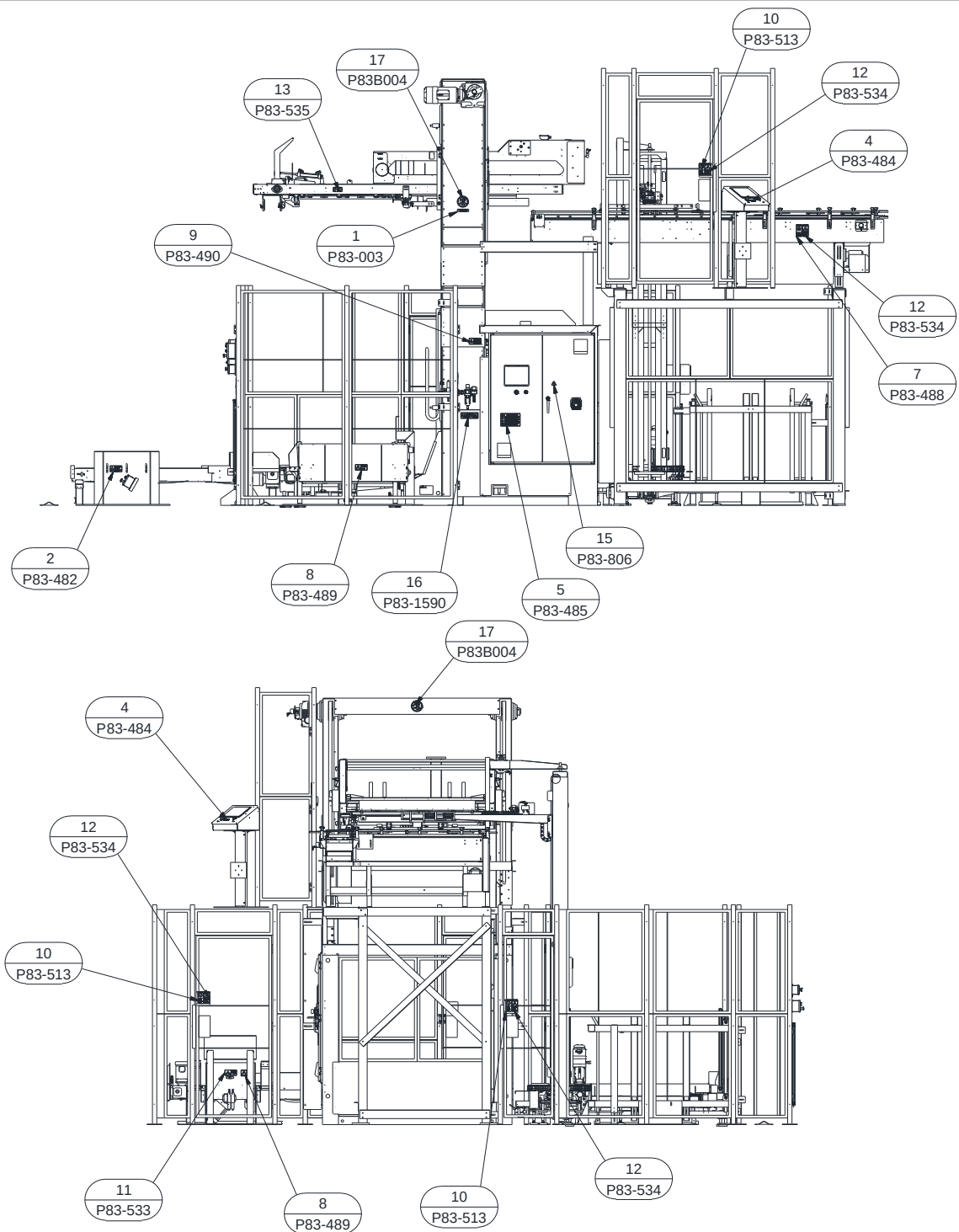
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TECHNICAL MANUAL

MODEL "108"

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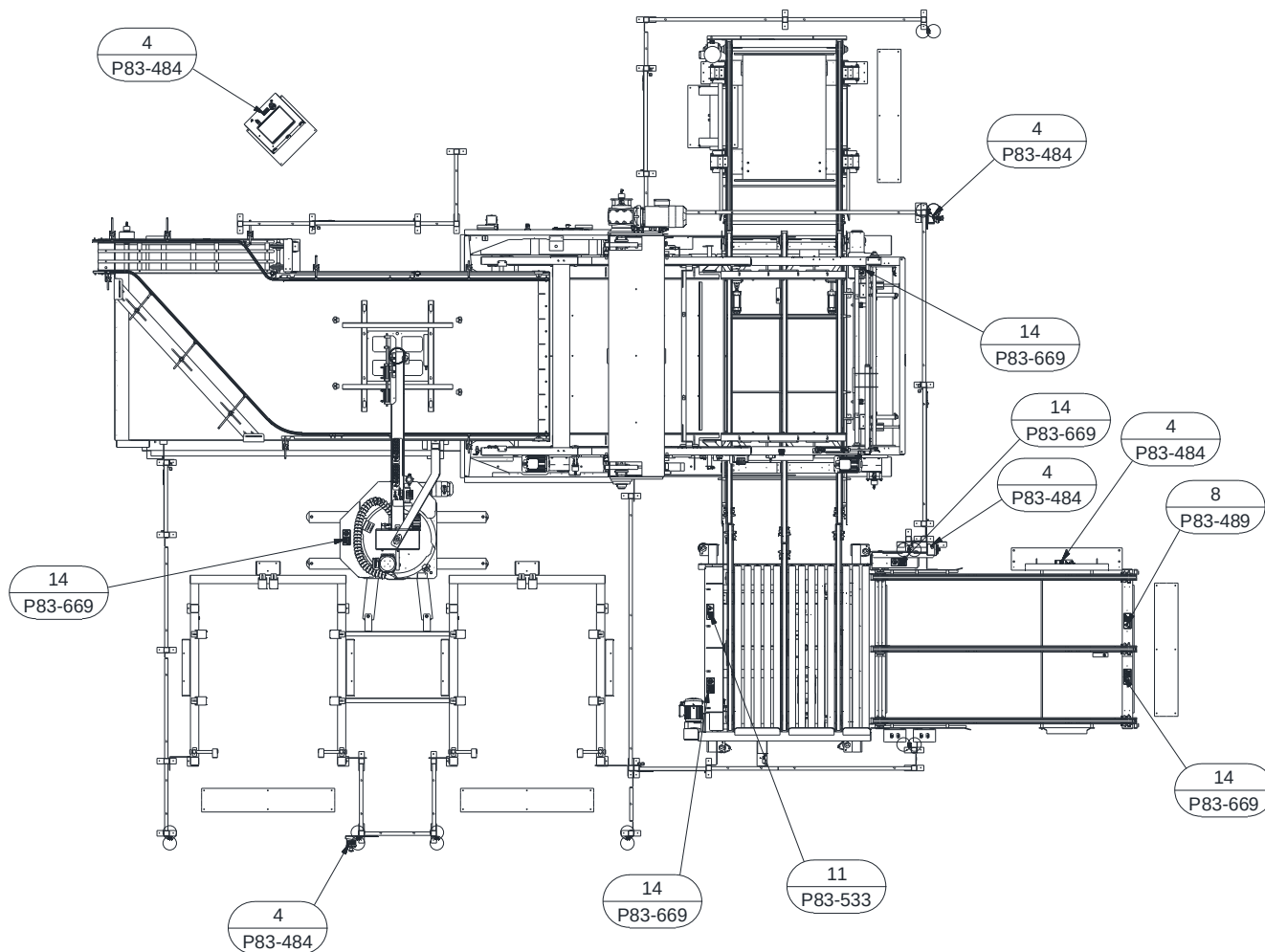
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TECHNICAL MANUAL

MODEL "108"

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SAFETY LABEL LOCATION

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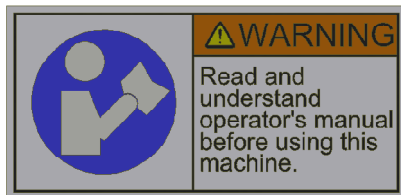
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SAFETY LABELS

The following safety labels have been placed around your packaging machine to help remind you of some of the areas to be especially cautious of when working with or around your packaging machine. Please provide the P83-xxx number when reordering safety labels.



P83-482



P83-484



P83-483



P83-485



P83-487



P83-489



P83-488



P83-490

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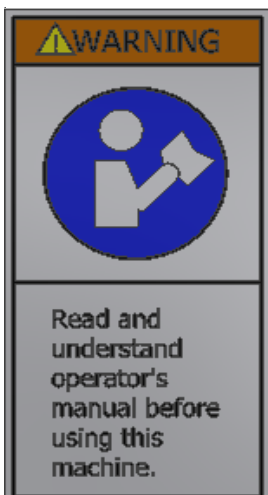


TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

SAFETY LABELS



P83-513



P83-533



P83-535



P83-534



P83-669

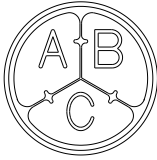


P83-806



P83-1590

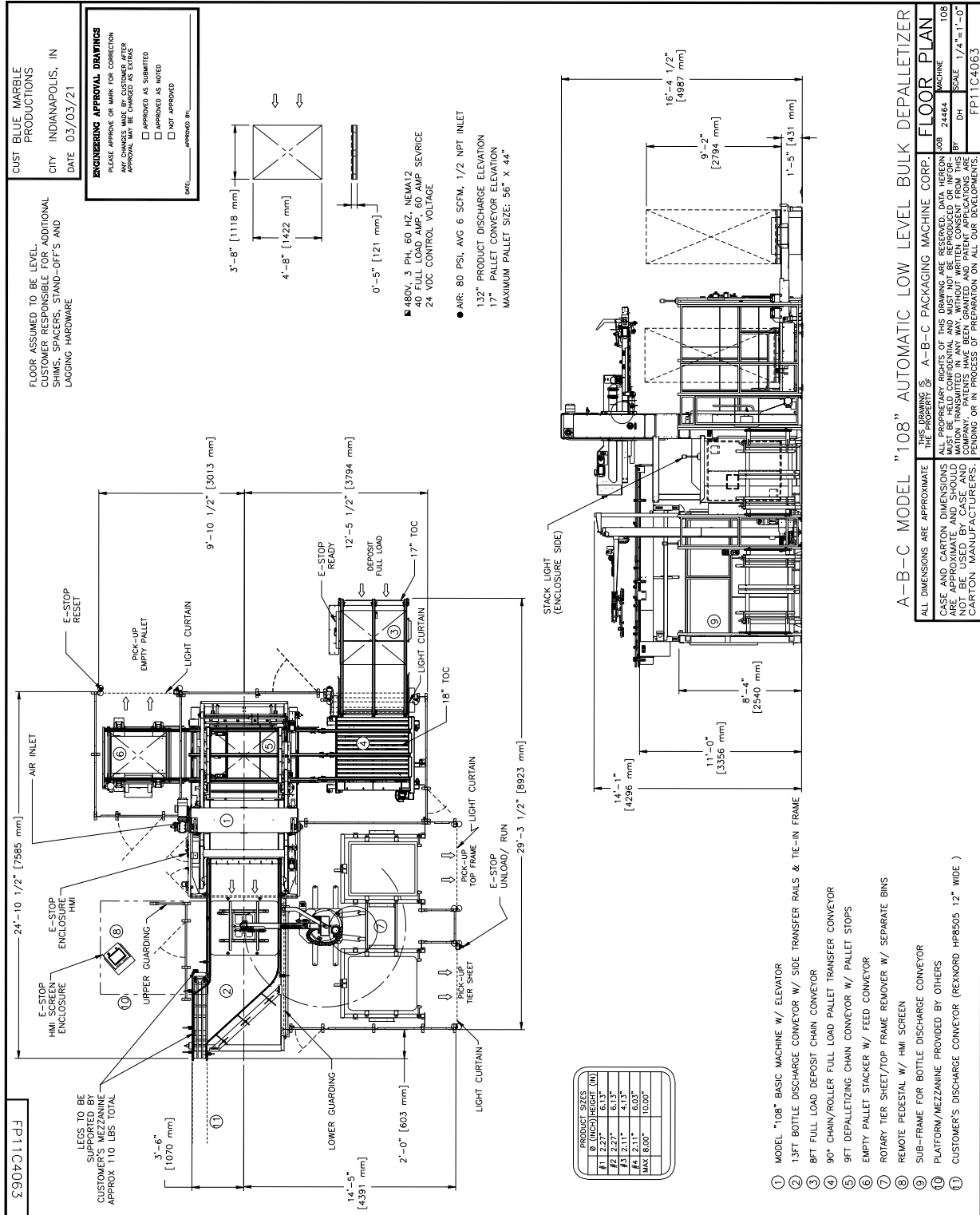
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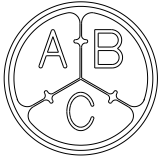
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FLOOR PLAN

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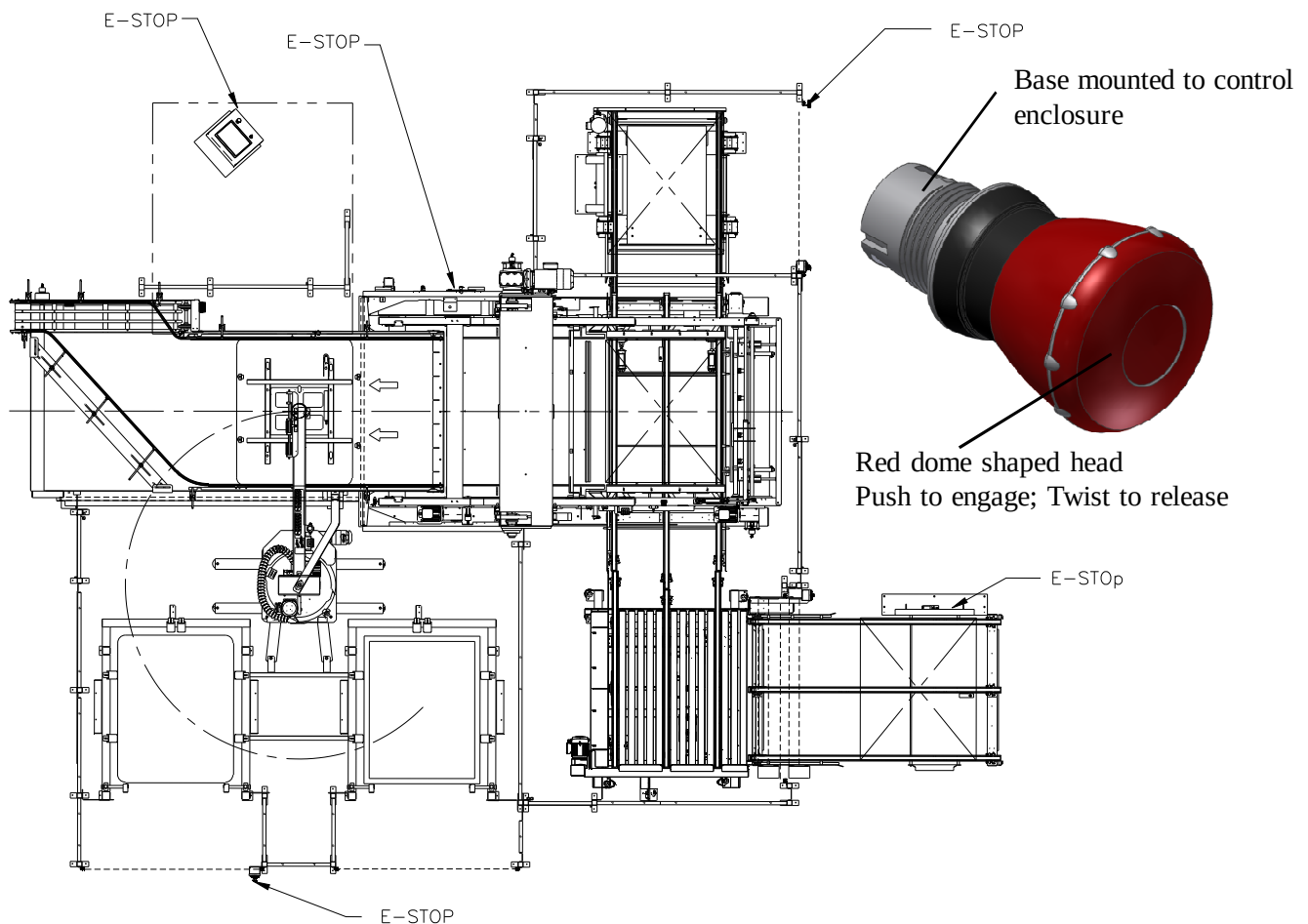
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SAFETY DEVICES

- The safety devices on the packaging machine are used to protect personnel and equipment. The safety devices, therefore, must be maintained in good working order and must be operative at all times.
- Under no circumstances should any of the safety devices be altered or removed from the machine. These safety devices include, but are not limited to: safety labels, magnetic reed switches, safety guards, or stop buttons.

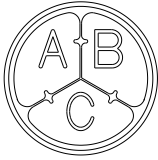
EMERGENCY STOP BUTTON

- Three Emergency Stop Buttons are located at various locations around the depalletizer. One at the empty pallet stacker, one at the main enclosure and one at the product infeed conveyor. See drawing for exact locations.



- The Emergency Stop Button is mounted to a control enclosure by itself or in a group with other push buttons. The Emergency Stop Button has a 1 5/8" dia. red disc shaped head. In case of an emergency hitting or pressing the disc shaped head of the Emergency Stop Button will stop all machine operations. Pulling out the disc shaped head will reset the fault.

SERIAL NUMBER **24464**



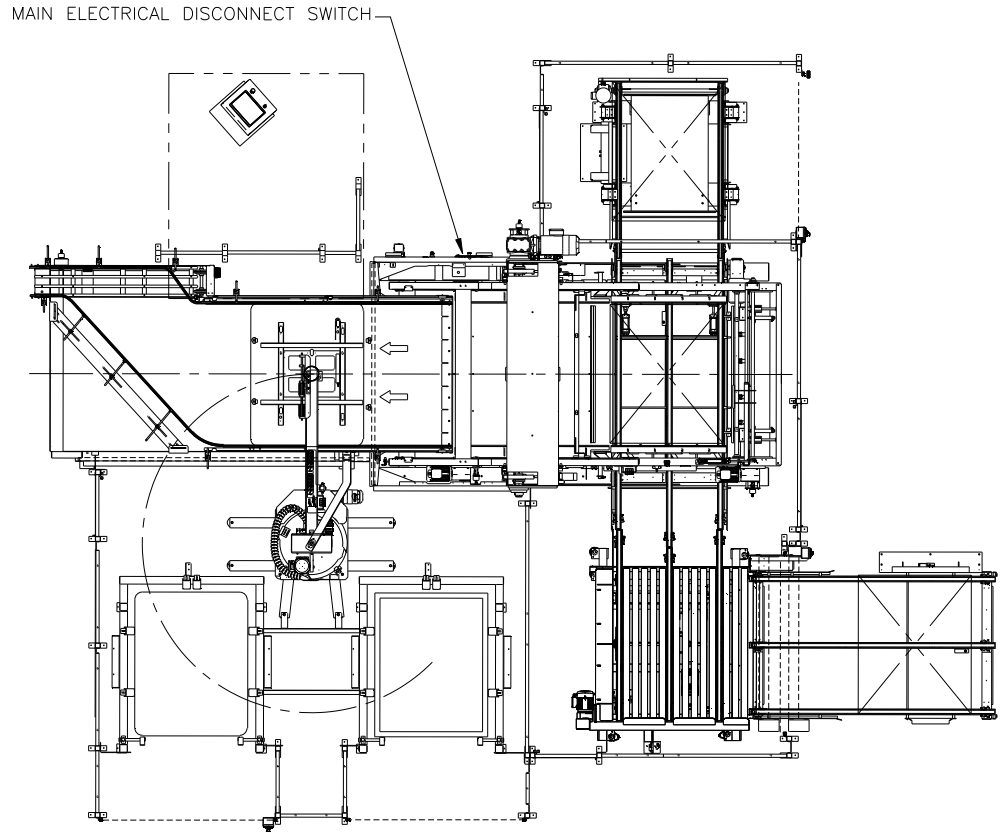
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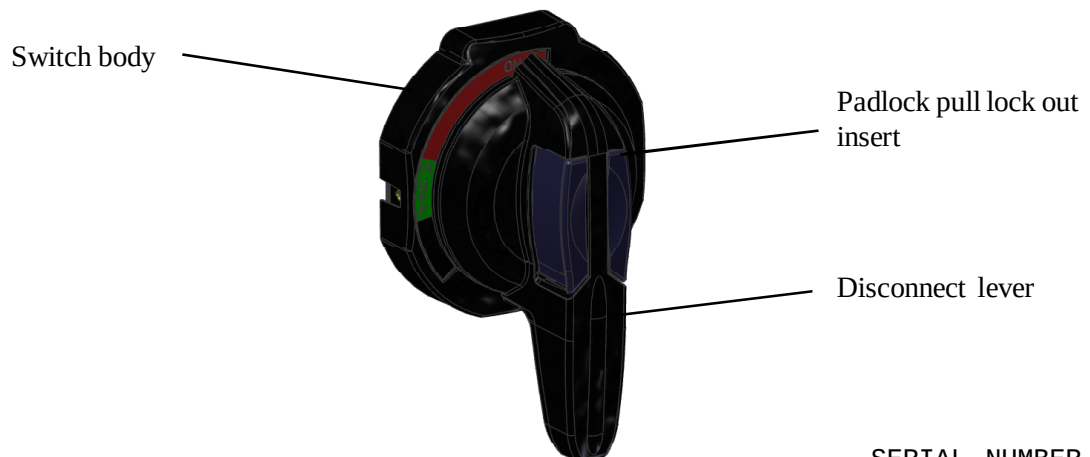
Sweep Off Bulk Depalletizer

MAIN ELECTRICAL DISCONNECT SWITCH

- The Main Electrical Shutoff Switch is located at the main enclosure of the depalletizer. See drawing for exact location.



- The Main Electrical Shutoff Switch is a lever type handle bolted to the upper right hand side of the main enclosure. The lever has a pointed end that corresponds with the green "off" and red "on" label on the switch's body. The drawing shows the lever in "ON" position. To disconnect power to the machine, turn the lever to the "OFF" position. To lock out the Main Electrical Shutoff Switch push lock out insert down and place a padlock in the handle.



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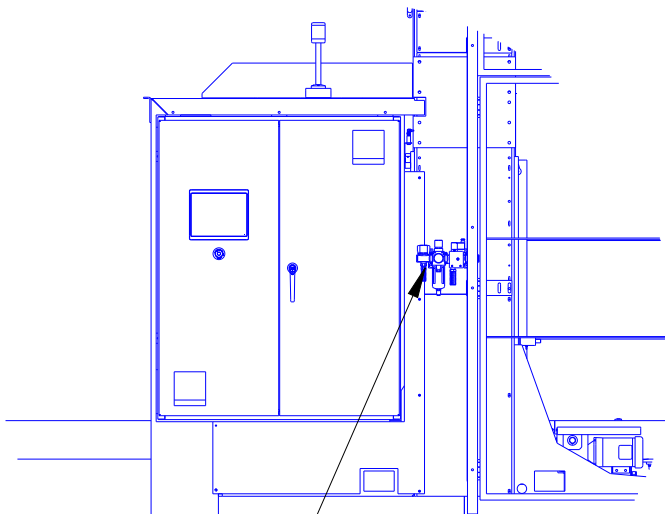
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MODEL "108"

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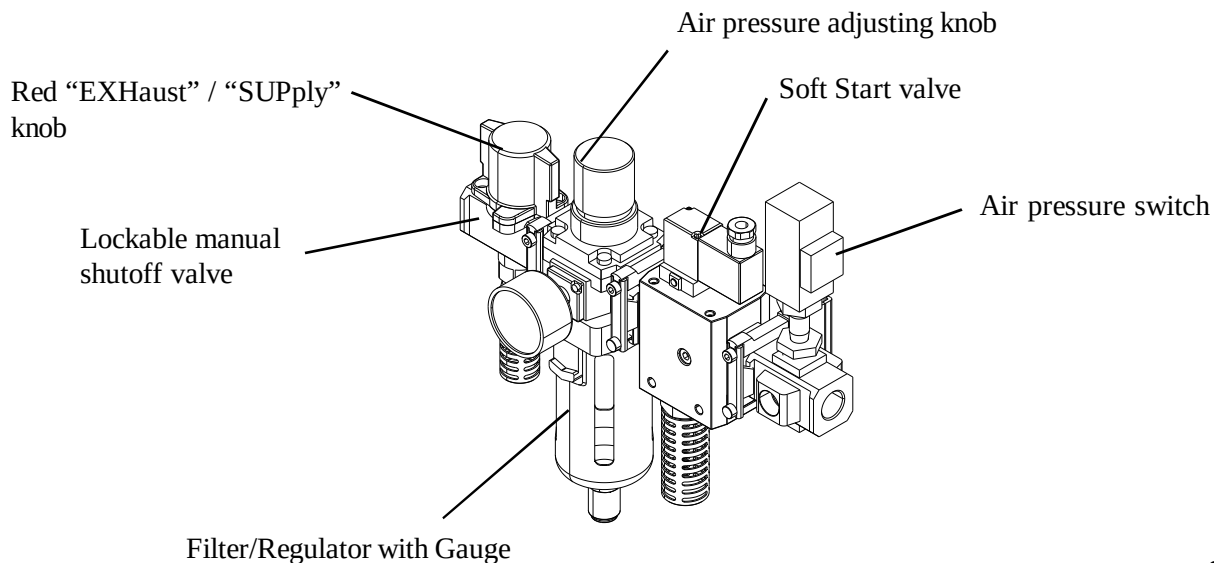
AIR INLET - AIR PREPARATION UNIT

- The Air Preparation Unit consists out of the air inlet connector, the manual lockable shutoff valve, the filter/regulator combination, the soft start valve and the pressure switch. It is located next to the main electrical enclosure. See drawing for exact location.

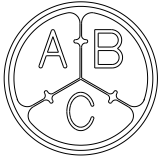


AIR PREPARATION UNIT

- To let air flow into the system turn "red" winged knob at the manual shutoff valve to the "sup" (supply) position. The air pressure can be adjusted by pulling and turning the black knob on top of the filter/regulator combination



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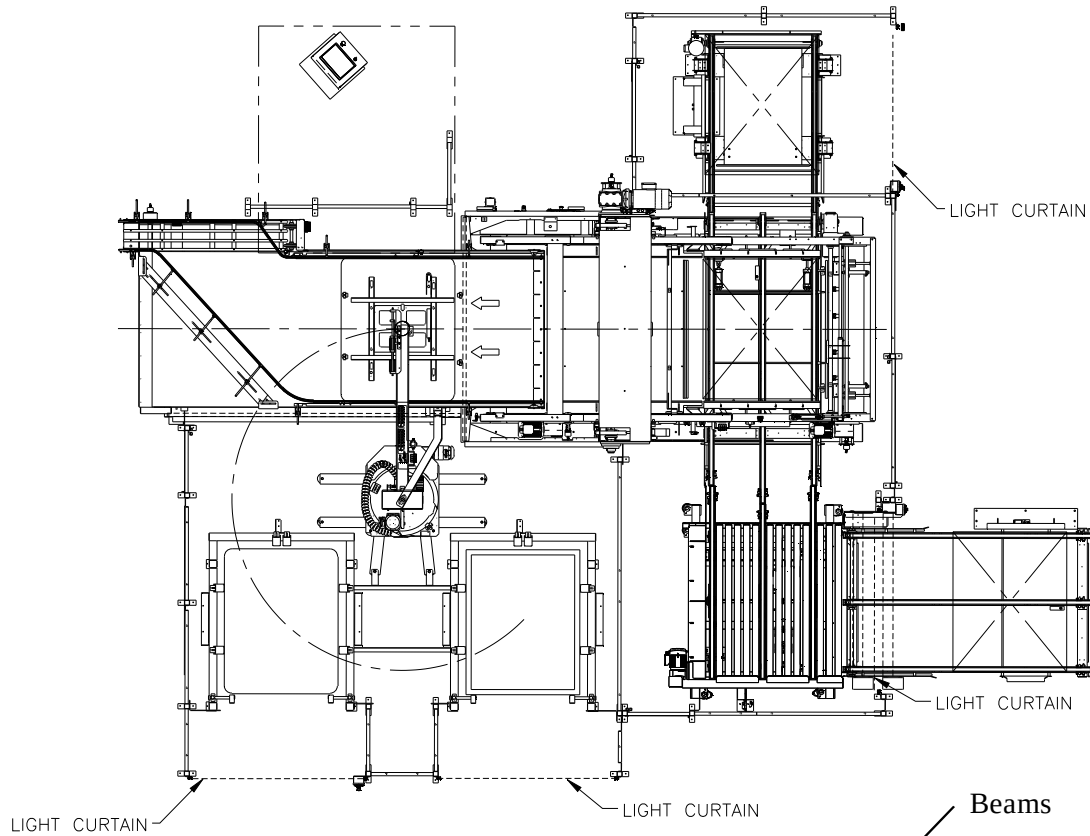
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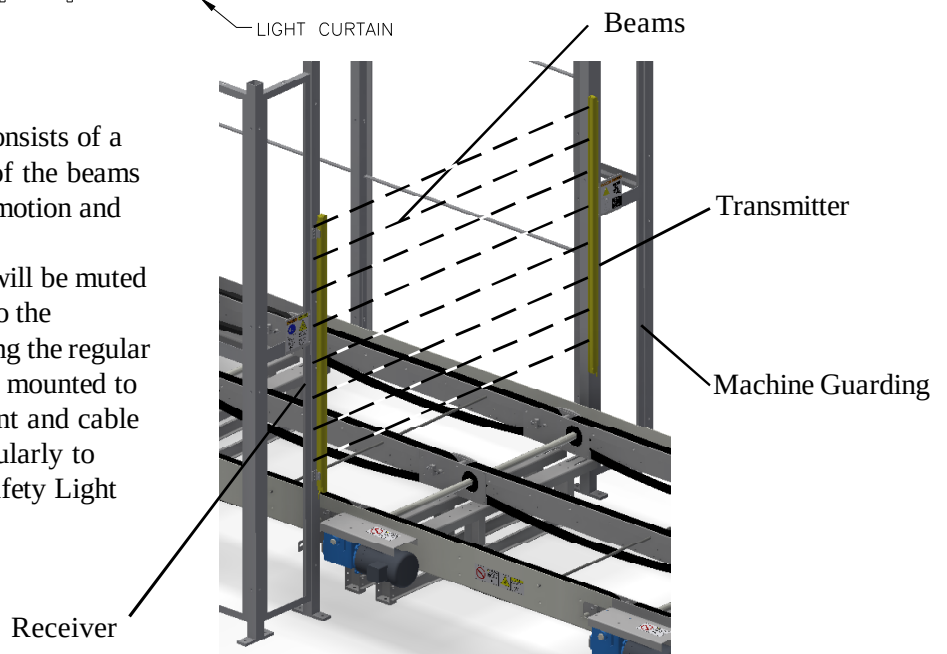
SAFETY LIGHT CURTAIN

- The Safety Light Curtain consists of a transmitter and a receiver. It is located at the discharge side of the palletizer. See drawing for exact location.

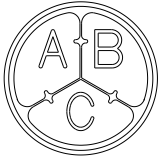


- The Safety Light Curtain consists of a series of a series of beams. If one of the beams is interrupted the machine stops all motion and defaults into a safe state.

At times the Light Curtain will be muted to allow full pallet loads to move into the depalletizing area without interrupting the regular machine cycle. The Light Curtain is mounted to the machine's guard posts. Alignment and cable connections need to be checked regularly to ensure the proper function of the Safety Light Curtain.



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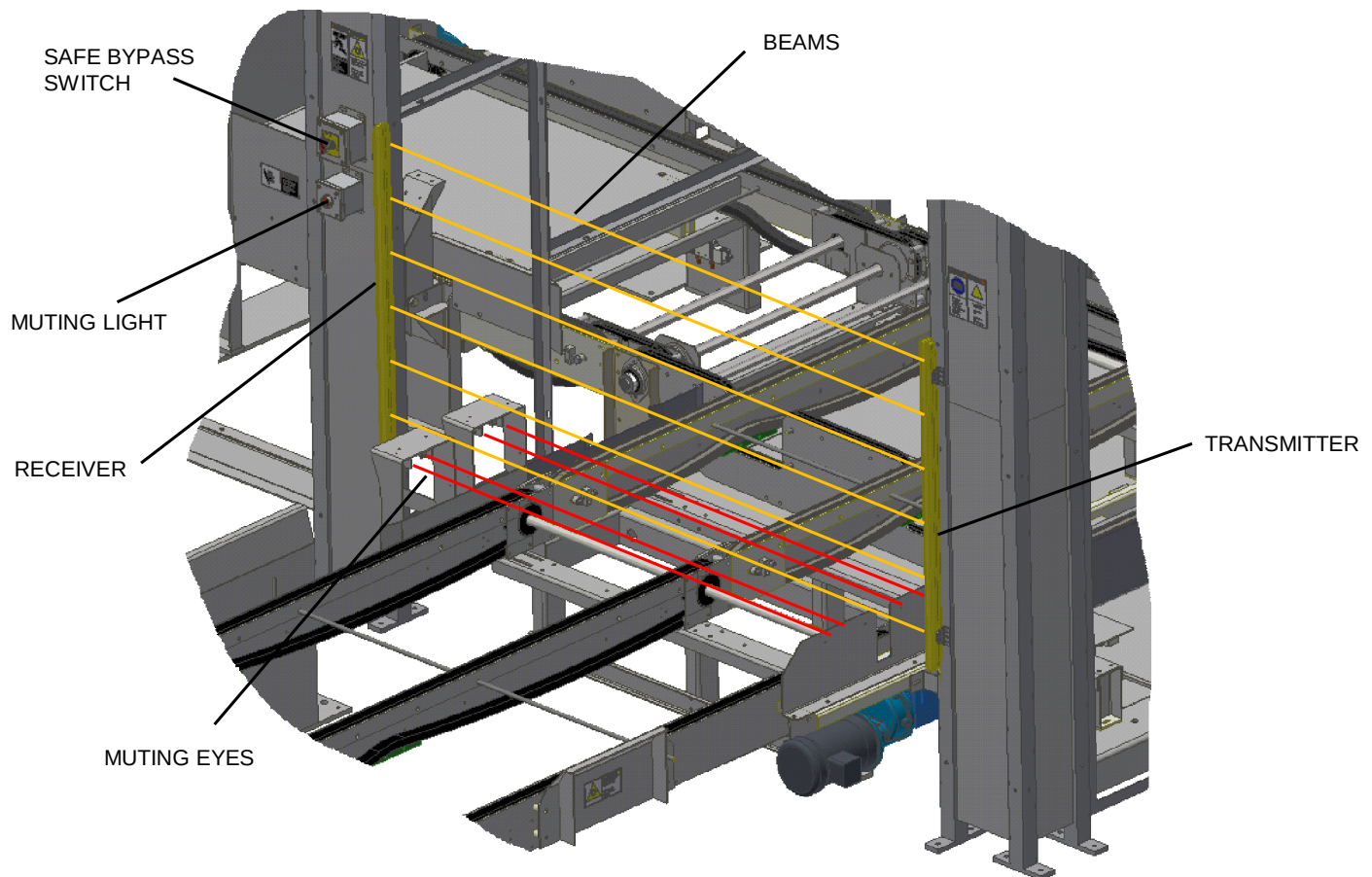
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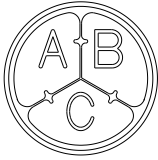
Sweep Off Bulk Depalletizer

SAFETY LIGHT CURTAIN (INFEED) OPERATION

- During normal operation the Safety Light Curtain stays operational. Any foreign object or person breaking the light curtain's beam(s) will e-stop the machine immediately. Muting Photoeyes located before and after the Safety Light Curtain allow a new full load to enter the depalletizing station without creating an e-stop fault. The muting photoeyes must be blocked in the correct order to mute the Safety Light Curtain. A Muting Light will indicate that the light curtain is temporary disabled. Once the full load clears the last of the Muting Photoeyes, the Safety Light Curtain is being re-enabled and the Muting Light will switch off.
- A Safe Bypass Switch allows to manually remove a load that is blocking the light curtain due to an e-stop failure. The safe bypass key must be inserted and the Safe Bypass Switch set to ON. At this point the hand function keys on the HMI screen will allow the operator to move the load out of the Safety Light Curtain zone. Once the load is clear, turning the Safe Bypass Switch back to OFF, will switch back to the automatic operation of the Safety Light Curtain function.



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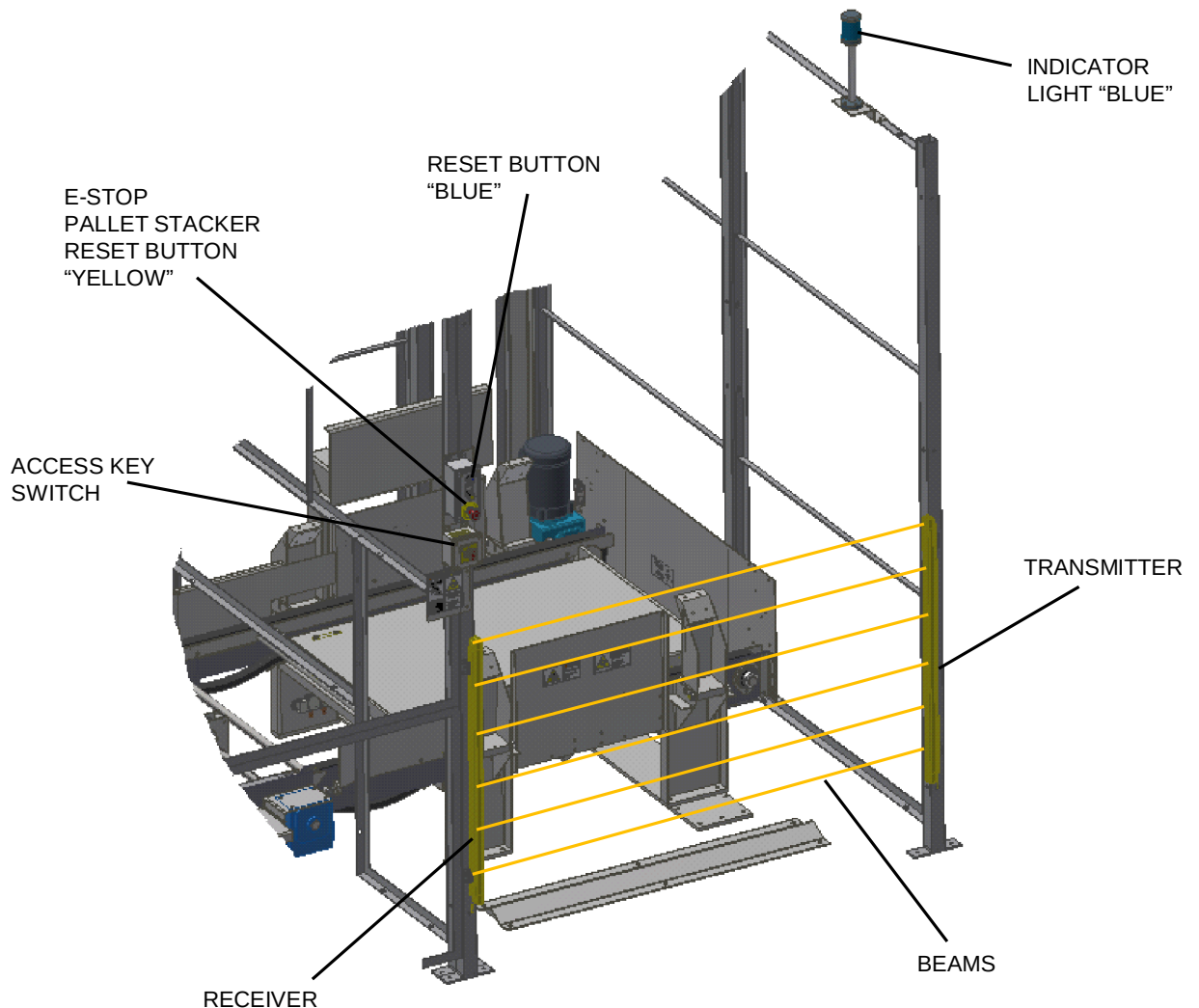
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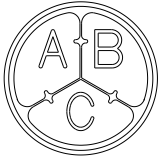
SAFETY LIGHT CURTAIN (PALLET STACKER) OPERATION

- During normal operation the Safety Light Curtain stays operational. Any foreign object or person breaking the light curtain's beam(s) will e-stop the machine immediately.
- An Access Key Switch allows to temporarily disable the Safety Light Curtain. Turning the Key to the OFF position and removing the key will disable the Safety Light Curtain and seize all electrical and pneumatic motions. It is best to access when the "BLUE" indicator light is on (no pallet in transition, pallet stacker not cycling).

Once the stack of empty pallet has been removed, re-inserting the key into the Access Key Switch and turning the key to the ON position will allow the Safety Light Curtain to be re-enabled. Before the pallet stacker is fully functional the "BLUE" Reset Button must be pressed to re-enable the electrical and pneumatical functions.
- The "YELLOW" reset button, allows to reset the pallet stacker count to zero.



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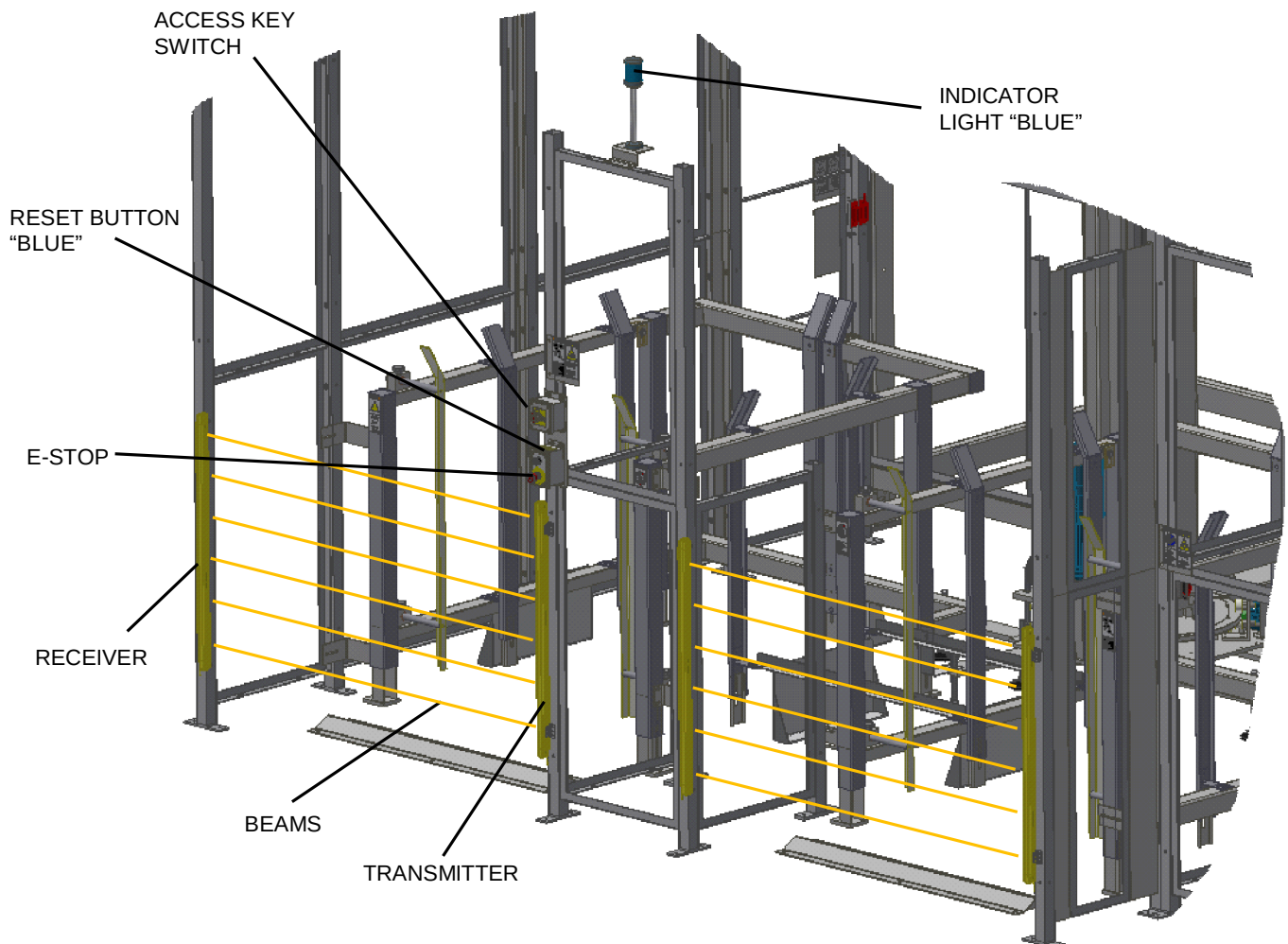
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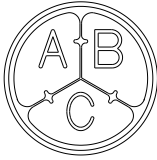
Sweep Off Bulk Depalletizer

SAFETY LIGHT CURTAIN (TIER SHEET/TOP FRAME BIN) OPERATION

- During normal operation the Safety Light Curtain stays operational. Any foreign object or person breaking the light curtain's beam(s) will e-stop the machine immediately.
- An Access Key Switch allows to temporarily disable the Safety Light Curtain. Turning the Key to the OFF position and removing the key will disable the Safety Light Curtain and seize all electrical and pneumatic motions. It is best to access when the "BLUE" indicator light is on (tier sheet remover head is above bottle discharge conveyor, not cycling).
Once the stack of empty tier sheets and/or top frames have been removed, re-inserting the key into the Access Key Switch and turning the key to the ON position will allow the Safety Light Curtain to be re-enabled.
Before the pallet stacker is fully functional the "BLUE" Reset Button must be pressed to re-enable the electrical and pneumatical functions.



SERIAL NUMBER **24464**



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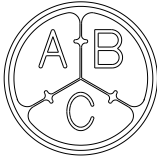
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Sweep Off Bulk Depalletizer

GENERAL SAFETY PRECAUTIONS

- Under no circumstances should anyone be allowed to operate, troubleshoot, or maintain the equipment while under the influence of any type of drug or alcohol.
- Only trained, fully qualified personnel should operate, troubleshoot, or maintain the packaging machine and its related components.
- Do not perform any maintenance or troubleshooting procedure on the packaging machine unless another person, who is certified with first aid and cardiopulmonary resuscitation (CPR) training, is present.
- Operators and maintenance personnel should wear safety glasses when working with or near the packaging machine.
- Safety shoes should be worn by operators and maintenance personnel.
- Operators and maintenance personnel should secure long hair.
- Operators and maintenance personnel should remove any jewelry, watches, rings, etc., when operating, maintaining, or troubleshooting the equipment.
- Operators and maintenance personnel should not wear neckwear, such as neckties, or bandanna's.
- Operators and maintenance personnel should not wear loose-fitting, torn, or ragged clothing.
- Operators and maintenance personnel should avoid wearing oil-soaked clothing or carrying waste flammable material in the pockets (i.e., lighters).
- Do not use flammable or toxic cleaning fluids such as gasoline, benzene, or ether.
- Keep all objects, such as hands, clothing, tools, etc., away from moving parts during operation of the packaging machine.
- Never operate the packaging machine with a known problem, such as an air hose leak, or exposed wire.
- Never make any adjustments while the machine is energized.
- Whenever any maintenance or troubleshooting is performed the electrical power should be disconnected at the facility junction box and should be tagged-out. In addition, the packaging facility air supply should be disconnected and tagged out with the packaging machine air supply relieved and tagged-out.
- Always use a protective rubber floor mat and rubber sheeting when performing maintenance and troubleshooting on your packaging machine.
- Do not operate or perform maintenance on the packaging machine if standing water is present underneath or near the machine.
- If applicable, be sure to read the hot melt manual thoroughly before operating the hot melt unit.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

DE-ENERGIZING THE MACHINE

- Follow the lock-out/tag-out procedures of your company.
- Ensure the disconnect switch (DISC) on the electrical enclosure is in the "off" position and that any push-pull stop buttons are pushed "in."
- Ensure the facility air supply is "off".
- Disconnect the facility's air supply line and relieve the machine air supply (the intake regulator gauge should read 0 p.s.i.).
- De-energize the facility's electrical circuit from the facility's junction box.
- Place a lock-out tag on the switch at the facility junction box.
- Place a lock-out tag on the disconnect switch (DISC) on the machine.
- The machine is now de-energized and ready for maintenance or repairs.

PRESSURIZED SYSTEM SAFETY PRECAUTIONS

- Pressure gauges must be checked periodically to ensure proper readings. Replace if damaged or readings are incorrect.
- Personnel should take precautions not to damage or strike any of the flexible air lines or fittings when performing maintenance or troubleshooting procedures.
- Other than the system quick-disconnect fitting, if applicable, no fitting should be loosened or tightened while the system is pressurized.
- Pressurized systems must be regularly checked and maintained to avoid any unsafe or hazardous conditions.

ELECTRICAL SAFETY PRECAUTIONS

- Maintenance personnel should use an adequate amount of rubber floor matting and rubber sheeting when work is being performed with the electrical system, for their safety and protection.
- Electrical systems must be regularly checked and maintained to avoid any unsafe or hazardous situations.

INSTALLATION SAFETY PRECAUTIONS

- For the safety of the operating, maintenance, and troubleshooting personnel the packaging machine and its related equipment must be electrically grounded.
- Wiring used in the electrical supply line must be appropriately sized and insulated to accommodate the packaging machine power and temperature requirements.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

ENERGIZING THE MACHINE

- Connect the facility's air supply line to the air intake on the machine.
- Ensure the disconnect switch (DISC) on the electrical enclosure is in the "off" position and that any push-pull stop buttons are pushed "in."
- Turn the circuit breaker or switch "on" at the facility electrical junction box, remove any tag, and turn the machines disconnect switch (DISC) "on." The fault indicator light (L1) should be lit.
- Turn the air "on" to the machine. Be certain the machine regulator is locked at in-between 80 to 85 p.s.i. (gauge).
- Remove all applicable tags.
- Account for all tools, parts, and materials.
- Your machine is ready for operation.

WORKING ON ENERGIZED CIRCUITS

- Maintenance personnel should avoid working on energized circuits.
- Always have a safety observer present when working with energized circuits. The safety observer should be qualified in rendering first aid for electrical shock and should be instructed on how to de-energize the circuit, if necessary.
- Maintenance personnel must use tools that are insulated when working with an energized circuit.

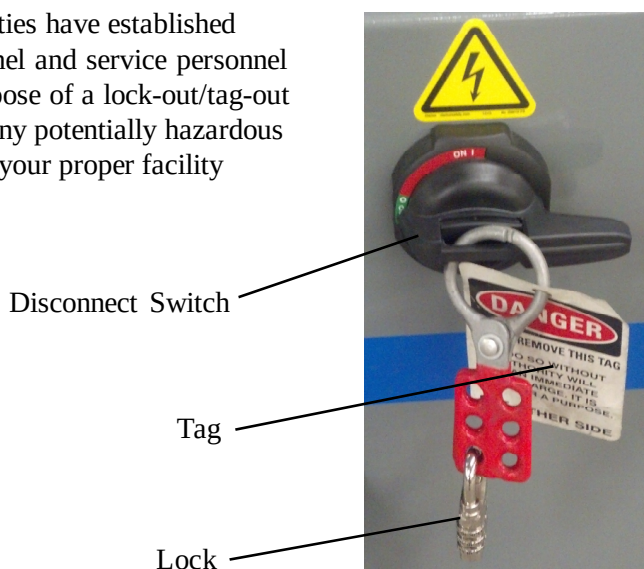
WORKING ON DE-ENERGIZED CIRCUITS

- Safety devices, such as interlocks, overload relays, and fuses should never be altered or disconnected except for replacement.
- Fuses should only be replaced after the machine has been de-energized.

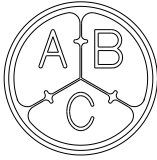
LOCK-OUT/TAG-OUT PROCEDURES

Many companies, corporations, and government entities have established lock-out/tag-out procedures for maintenance personnel and service personnel to protect them while servicing machinery. The purpose of a lock-out/tag-out procedure is to ensure the machine is isolated from any potentially hazardous facility supply lines. Check with your supervisor for your proper facility lock-out/tag-out procedures.

See example of a Lock-out/Tag-out on the right.



SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

MACHINE OVERVIEW

The Model 108, "Sweep-Off Bulk Depalletizer", is designed to efficiently unpack and present empty containers for production lines which utilize palletized empty container stock. The following sequence description assumes that your Model 108 is equipped with a full pallet infeed conveyor, a tier sheet remover, and an empty pallet stacker.

A full pallet is first placed at the load end of the pallet infeed conveyor. An operator removes the film wrap and bands which bind the load to the pallet. When the packing material has been removed, the operator presses the pallet ready button. The pallet infeed conveyor indexes the full pallet into the depalletizing station. When positioned properly, the elevator table moves down, over the pallet, until the table is level with the bottom of the upper most pallet layer. The elevator transfer table extends to engage the pallet stack. At the same time, fixtures for the layer side guides and lower tier centering are extend into the pallet stack. A combination of sweep and support bars is used to sweep the top pallet layer, with tier sheet, onto the elevator table. The elevator table retracts and the elevator is vertically repositioned to the level of the bottle discharge conveyor. The pallet layer is swept from the elevator table onto the bottle discharge conveyor. Once on the bottle discharge conveyor, the off-loaded tier of containers is positioned to have the top frame and or tier sheet removed.

Vacuum suction cups are being used to remove the tier sheet and or top frame. The tier sheet remover shuttles the tier sheet to a collection bin where the tier sheets and top frames are accumulated. The off-loaded tier of containers is now free to be discharged.

The elevator table returns to the next pallet layer and the cycle continues until the pallet is empty. At that time, the pallet is discharged to an empty pallet stacker for temporary storage.

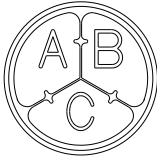
CONTROLS

The disconnect switch (DISC) allows the operator to run the main power "on" or "off". The power must be turned "off" to access the electrical enclosure.

The emergency stop button stops the machine cycle.

The touch screen control panel controls all other operations (through PLC programming).

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

TOUCH SCREENS

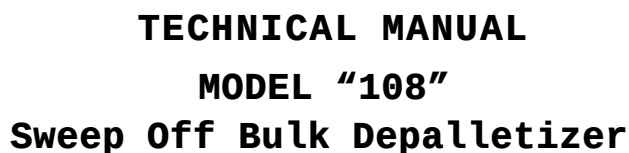


START UP SCREEN

Screen appears when machine is powered up.

Button	Function
GO TO MAIN MENU button	Displays the main menu screen
LOG IN button	Allows User to log in to make changes to protected settings
LOG OUT button	Exits out of the protected settings screens
CURRENT USER display	Shows name of current logged in User, only when logged in
GO TO CONFIGURE MODE button	Only available through LOGIN, allows access to factory settings
RESET PASSWORD button	Allows User to reset or change the password, only available through LOGIN

SERIAL NUMBER **24464**



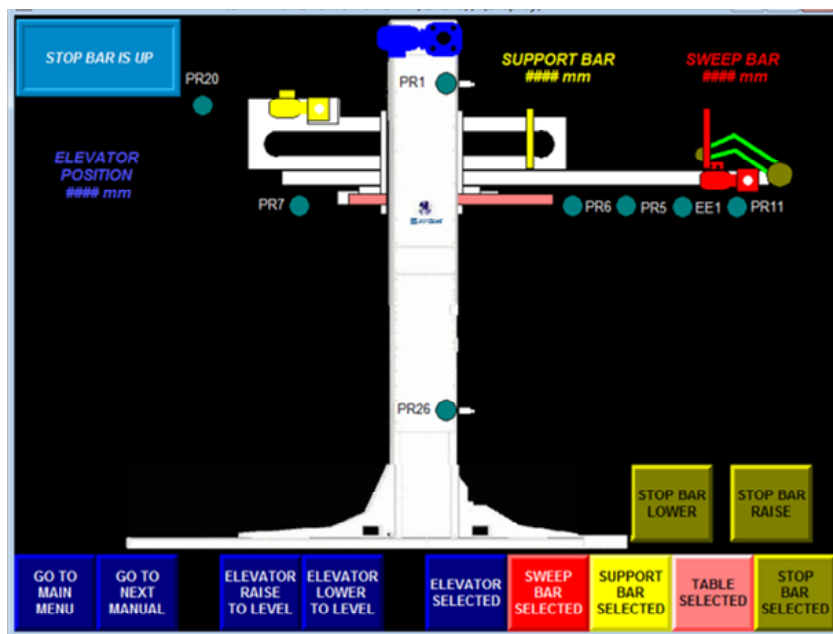
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



MANUAL HAND FUNCTIONS SCREEN

Button	Function
GRAPHICAL DISPLAY	Shows the machine and animates motions, positions and sensor statuses
STOP BAR UP display	Displays the action of the manual function
GO TO MAIN MENU button	displays the Main Menu screen
GO TO NEXT MANUAL button	Displays further manual function screens
ELEVATOR RAISE TO LEVEL button	Only visible when elevator is below bottle discharge conveyor. Raises elevator to the level of the bottle discharge conveyor.
ELEVATOR LOWER TO LEVEL button	Only visible when elevator is above bottle discharge conveyor. Lowers elevator to the level of the bottle discharge conveyor.
MANUAL FUNCTION buttons	Selectable buttons, once selected (STOP BAR SELECTED) the action buttons will be available (STOP BAR LOWER, STOP BAR RAISE)
PR#/EE# icon display	Displays the status of the proximity / photo sensors BLUE = Sensor not made RED = Sensor made BLUE/WHITE flashing = no connection or faulty sensor BLUE/GREEN blinking = wrong sensor connected

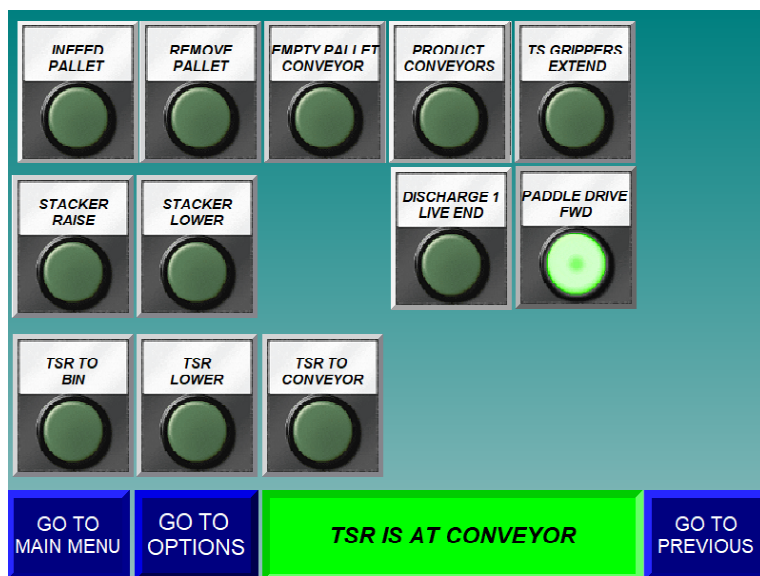
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



MANUAL HAND FUNCTIONS SCREEN

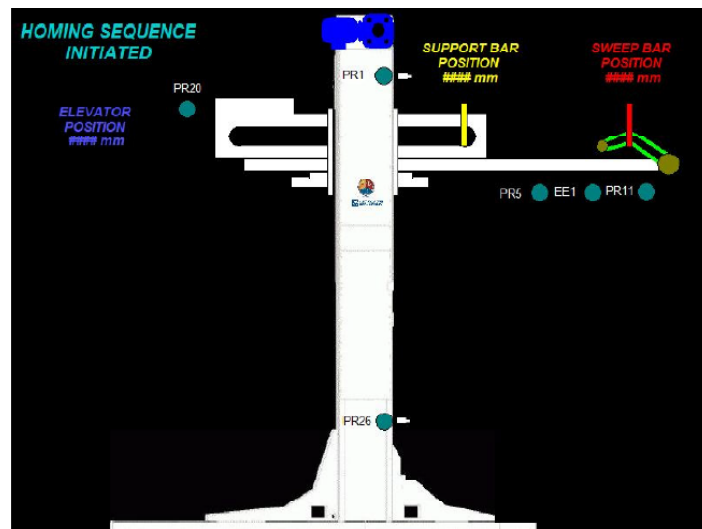
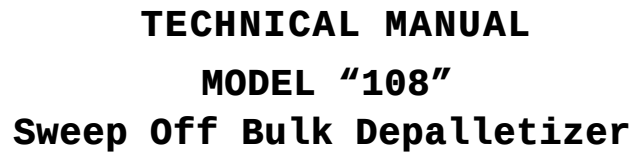
Gives access to additional manual functions of the machine. Pressing a button will execute the specific function. Only active buttons will be shown.

The GO TO MAIN MENU button returns the main menu screen.

The GO TO OPTIONS button opens the machine option screen.

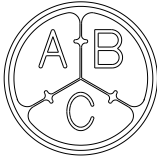
The MANUAL SCREEN 1 button opens the first manual options screen.

SERIAL NUMBER **24464**



Pressing the ZERO MACHINE button until the indicator bar turns green will start the homing sequence. An animated screen will pop-up to show the progress of the homing sequence. The support bar, sweep bar and elevator will move to their home positions and all timers will be reset.

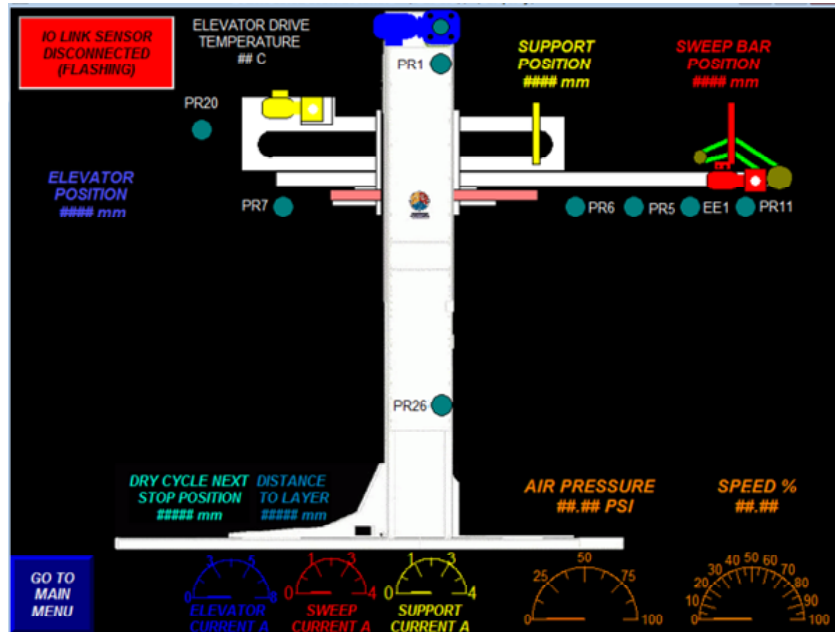
Print date: 10/08/2021 DH



TECHNICAL MANUAL

MODEL "108"

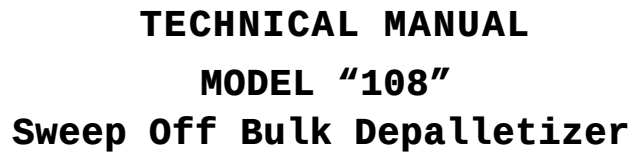
Sweep Off Bulk Depalletizer



MONITOR SCREEN

Button	Function
GRAPHICAL DISPLAY	Shows the machine and animates motions, positions and sensor statuses
SWEEP BAR POSITION display	Shows the actual location of the sweep bar
SUPPORT POSITION display	Shows the actual location of the support bar
ELEVATOR POSITION display	Shows the actual location of the elevator
ELEVATOR DRIVE TEMPERATURE display	Shows the actual temperature of the elevator drive
MULTI FUCTION display	Displays various information on the actual state of the machine (Air Pressure, Speed, Amperage of Drives and Positions)
PR#/EE# icon display	Displays the status of the proximity / photo sensors BLUE = Sensor not made RED = Sensor made BLUE/WHITE flashing = no connection or faulty sensor BLUE/GREEN blinking = wrong sensor connected
GO TO MAIN MENU button	Displays the Main Menu screen

SERIAL NUMBER **24464**



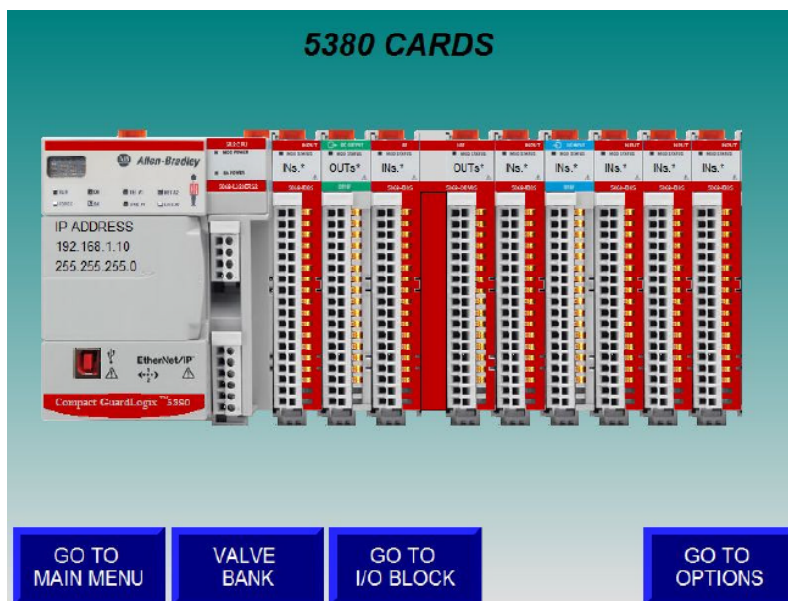
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TECHNICAL MANUAL

MODEL "108"

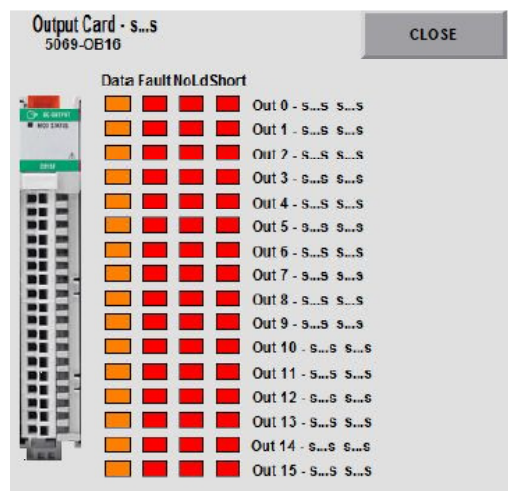
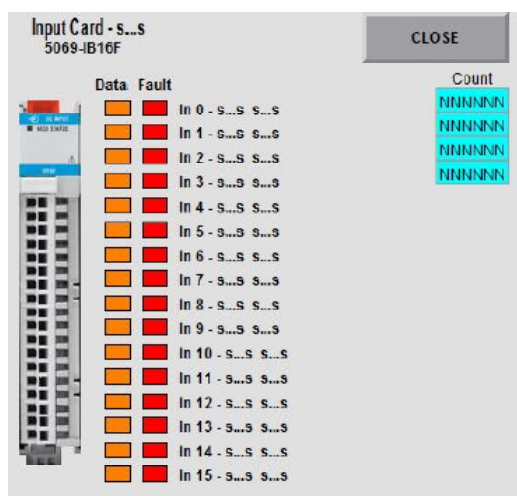
Sweep Off Bulk Depalletizer



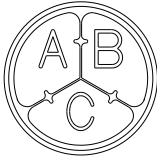
IN/OUT STATUS SCREEN

Highlighted means Input/Output is ON. Touch the card for more detailed information.

MENU button displays a menu of available function screens. GO TO MORE button displays the Ethernet Device In/Output screens. (CLOSE) button closes the pop-up window.



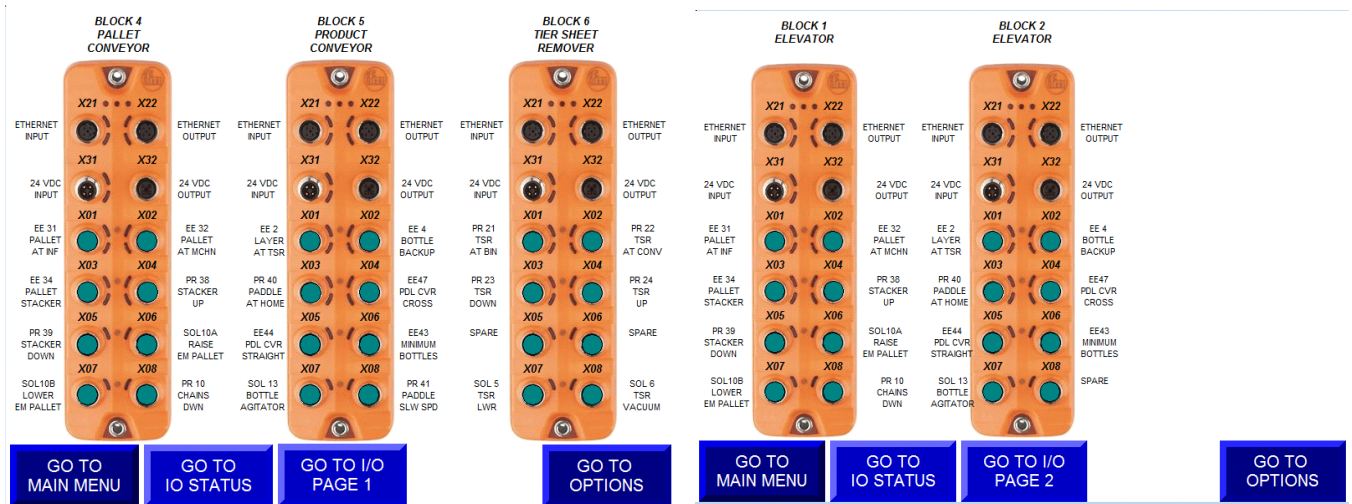
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TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

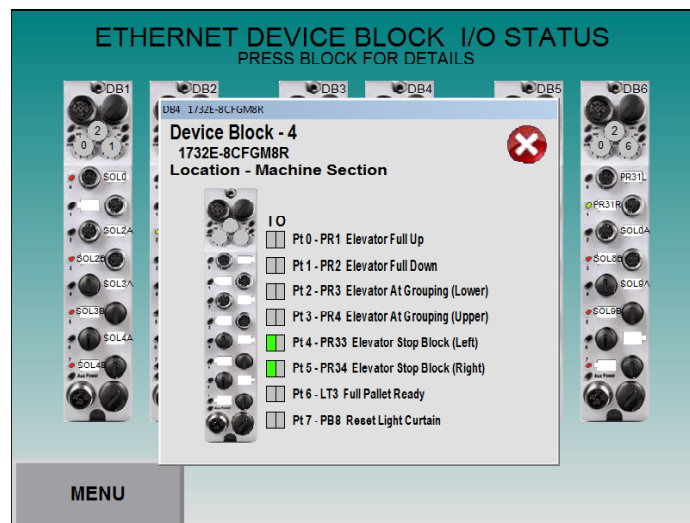


ETHERNET DEVICE BLOCK STATUS SCREEN

Highlighted “green” means Input is ON. Highlighted “red” means Output is ON.

Touch the card for more detailed information.

MENU button displays a menu of available function screens. (X) closes the pop-up window.



SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



VALVE BANK STATUS SCREEN

Displays the status of the individual valves on the valve bank.

 means valve or connection is bad/interrupted

 means valve or connection is good

To get a live status update, use the PRESS TO CHECK button.

CLOSE button returns to the previous screen.

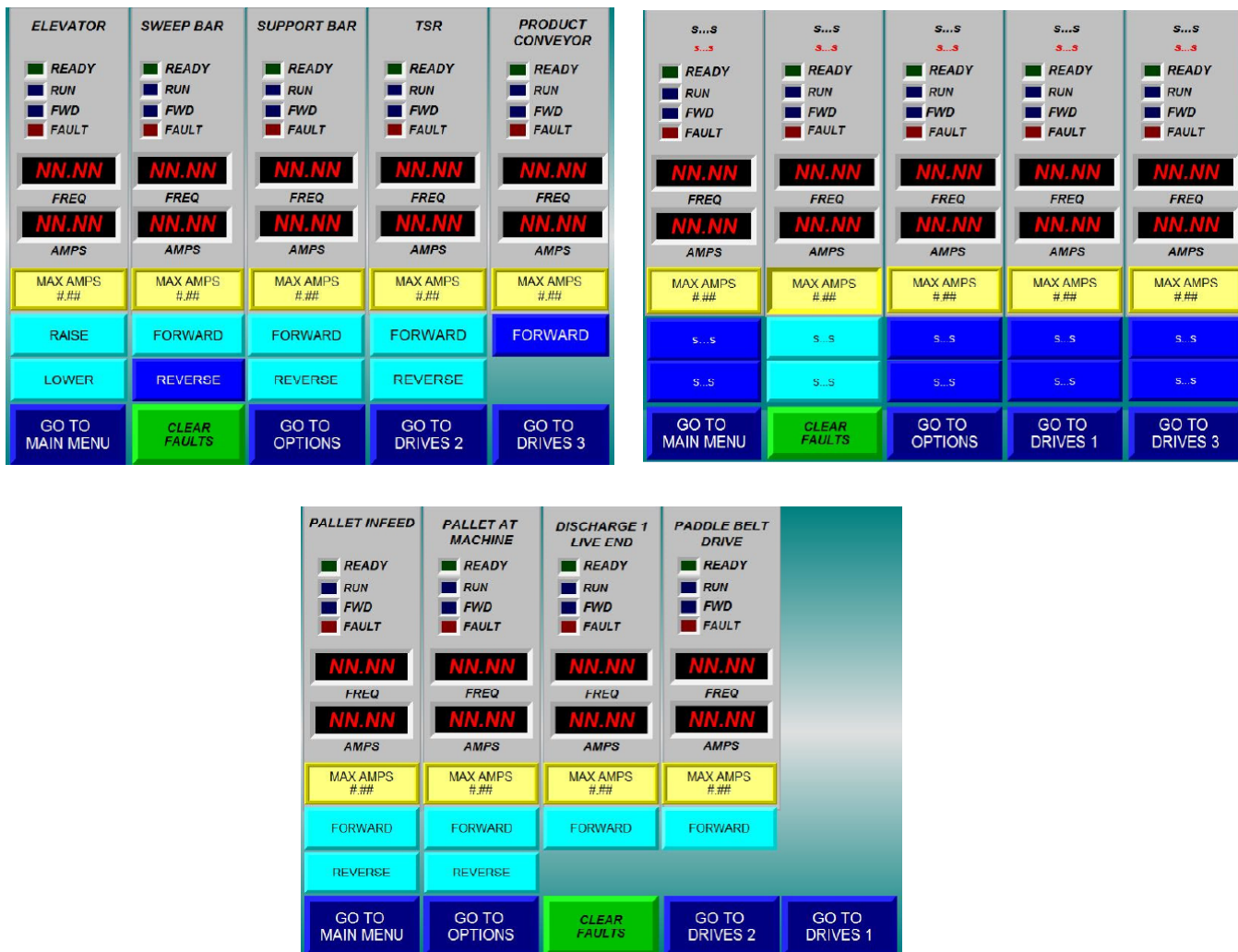
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



DRIVE STATUS SCREEN

Displays the current state of the variable frequency drives of the depalletizer.

MAX. AMPS buttons allow the input of the maximum allowed load for the VFD, accessible only through LOGIN.

CLEAR FAULTS button acknowledges any occurred drive fault.

GO TO MAIN MENU button returns to the Main Menu screen.

DRIVE SCREEN# button displays additional drive status screens.

GO TO OPTIONS button displays the machine option screen.

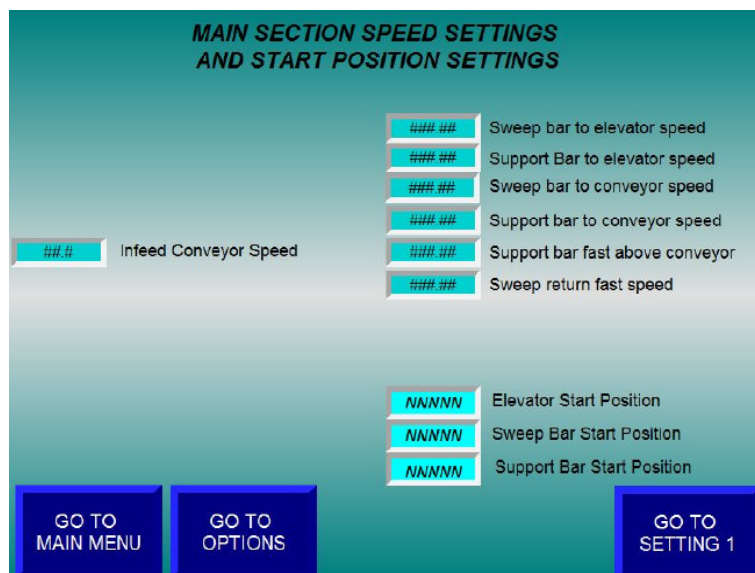
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



MAIN SECTION SPEED SETTINGS SCREEN

To change the value of the timer press the ENTER TIMER NUMBER button, a keypad appears that allows a numeric input (e.g. 11). Now the TIMER PRESET can be changed. Pressing the TIMER PRESET button opens a keypad that allows a numeric input (e.g. 750).

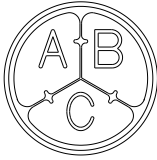
Time parameters are in milliseconds: 00750 = 0.75 sec.

The GO TO MAIN MENU button returns the main menu screen.

The GO TO OPTIONS button opens the machine option screen.

The GO TO SETTING 1 button opens the first settings screen.

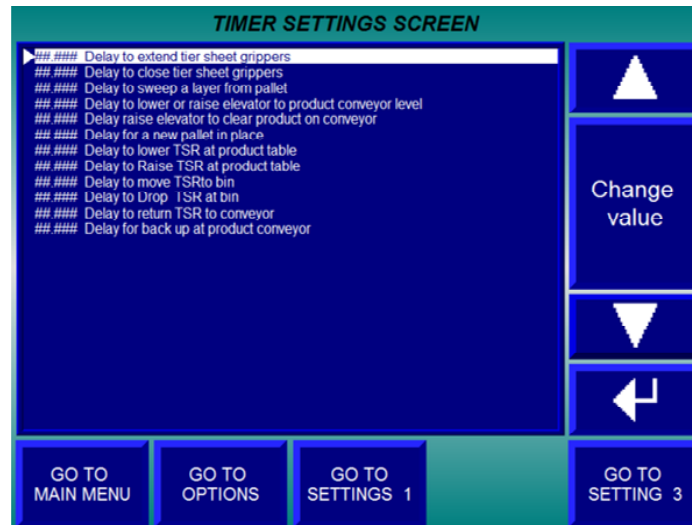
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



MACHINE MODIFY SCREEN

To change the value of the timer use the arrow button and move to the desired timer. Then press the CHANGE VALUE button, a keypad appears that allows a numeric input. Now the TIMER PRESET can be changed.

Time parameters are in milliseconds: 00750 = 0.75 sec.

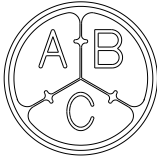
The GO TO MAIN MENU button returns the main menu screen.

The GO TO OPTIONS button opens the machine option screen.

The GO TO SETTING 1 button opens the first settings screen.

The GO TO SETTING 3 button opens the third settings screen.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

	ELEVATOR SETTINGS	SWEEP BAR SETTINGS	SUPPORT BAR SETTINGS
Enter mm to convert in Inch ####.##	CONVEYOR LEVEL #####	SWEEP BAR AT TABLE POS #####	SUPPORT BAR AT START #####
Enter Inch to convert to mm ####.##	LAST LAYER #####	SWEEP BAR AT ELEVATOR POS #####	SUPPORT BAR AT END OF TABLE #####
	OFFSET ###	SWEEP BAR AT CONVEYOR POS #####	SUPPORT BAR APPROACHING SPROCKE* #####
GO TO MAIN MENU	GO TO OPTIONS	GO TO SETTING 1	GO TO SETTING 3

ENCODER SETTINGS SCREEN

To change the value of any of the encoder settings press the desired button, a keypad appears that allows a numeric input. Note: These changes must only be made by a qualified maintenance personal.

The GO TO MAIN MENU button returns the main menu screen.

The GO TO OPTIONS button opens the machine option screen.

The GO TO SETTING 1 button opens the first settings screen.

The GO TO SETTING 3 button opens the third settings screen.

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



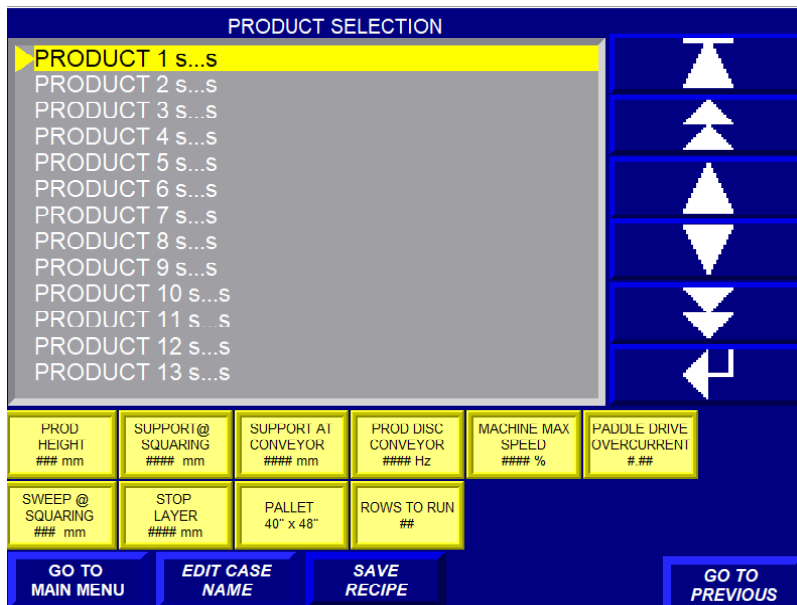
RELOAD MASTER SETTINGS SCREEN

Press RELOAD DEFAULTS button to reset all timer settings to their default master setting. The correct login is required to access and reload default values.

To aboard press GO TO RETURN or GO TO MAIN MENU button.



TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



PRODUCT SELECTION SCREEN

Button	Function
PRODUCT display	Displays available products. Currently selected product is highlighted. To create a new product, navigate to an empty line and input name and product data
NAVIGATION buttons	Moves the cursor up or down the product list and allows the selection of the product to be run
GO TO MAIN MENU button	Displays the main menu screen
EDIT CASE NAME button	Opens a keypad for editing the product name
SAVE RECIPE button	Saves current selected product name and settings
GO TO PREVIOUS button	Returns to the previous displayed screen

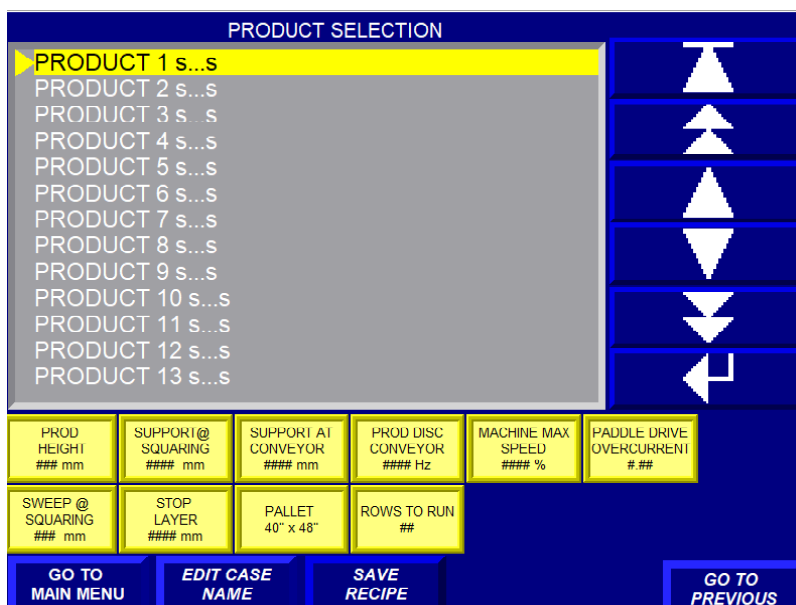
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TECHNICAL MANUAL

MODEL "108"

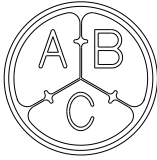
Sweep Off Bulk Depalletizer



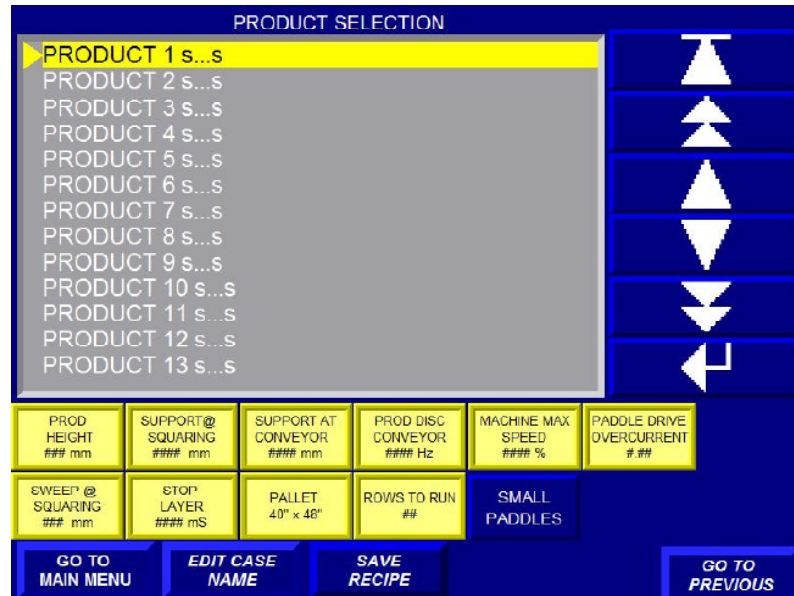
PRODUCT SELECTION SCREEN

Button	Function
PRODUCT HEIGHT ENTRY button	Allows the input of the product height via a numeric keypad. ONLY accessible through LOGIN
SUPPORT AT SQUARING button	Allows the input of the Support Bar position at the Squaring Position via a numeric keypad. ONLY accessible through LOGIN
SUPPORT AT CONVEYOR button	Allows the input of the Support Bar position at the Product Conveyor Position via a numeric keypad. ONLY accessible through LOGIN
PRODUCT DISC CONVEYOR button	Allows the input of the Bottle Discharge Conveyor frequency via a numeric keypad. ONLY accessible through LOGIN
MACHINE MAX SPEED button	Allows the input of the speed of the machine as a percentage of the max speed of the depalletizer
PADDLE CONVEYOR OVERCURRENT button	Allows the input of the maximum allowed over current for the paddle drive. ONLY accessible through LOGIN
SWEEP AT SQUARING button	Allows the input of the Sweep Bar position at the Squaring Position via a numeric keypad. ONLY accessible through LOGIN

SERIAL NUMBER **24464**



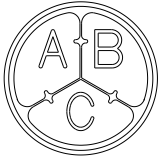
TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



PRODUCT SELECTION SCREEN

Button	Function
SWEEP AT SQUARING button	Allows the input of the Sweep Bar position at the Squaring Position via a numeric keypad. ONLY accessible through LOGIN
STOP LAYER button	Allows the input of the Sweep Bar position at the Product Conveyor position via a numeric keypad. ONLY accessible through LOGIN
PALLET 40x48 button	Changes the machine up to run 40x48 pallets (if applicable)
ROWS TO RUN button	Allows the input of the number of rows to strip after the product low level eye has cleared

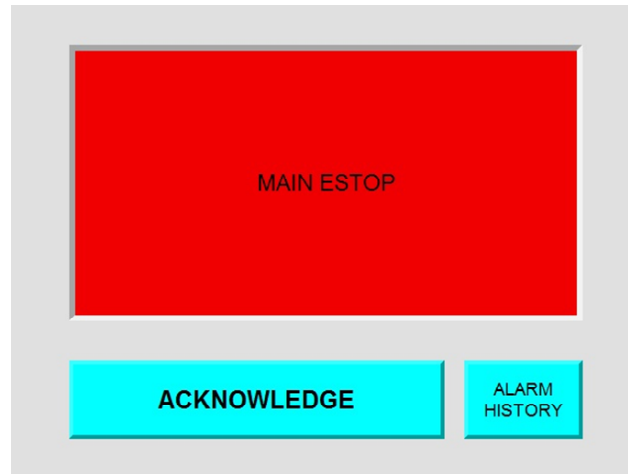
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TECHNICAL MANUAL

MODEL "108"

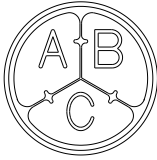
Sweep Off Bulk Depalletizer



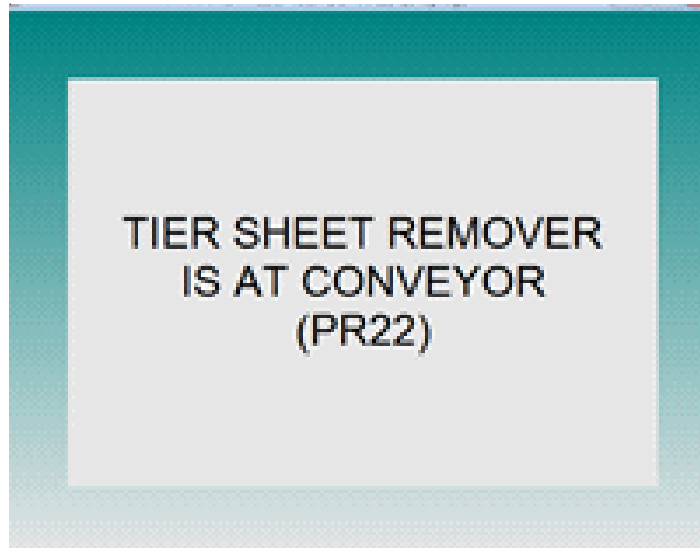
FAULT SCREEN

When a machine fault occurs, this screen will display the fault details in the MULTI STATE INDICATOR display. After investigating and removing the cause of the fault, clear out the fault message by pressing the ACKNOWLEDGE button.

The ALARM HISTORY button opens the alarm history screen.

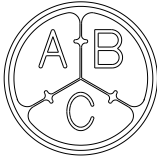


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



ILLEGAL HAND FUNCTION SCREEN

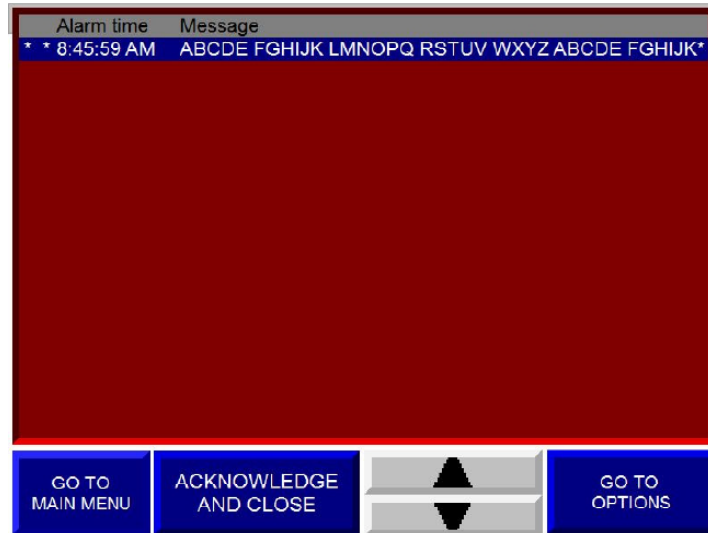
When an illegal hand function is attempted, this screen will appear describing the conditions necessary for the operation, or the reason the operation cannot be performed.



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



FAULT SCREEN

When a machine fault occurs, this screen will display the fault details in the ALARM HISTORY display. After investigating and removing the cause of the fault, clear out the fault message by pressing the ACKNOWLEDGE button.

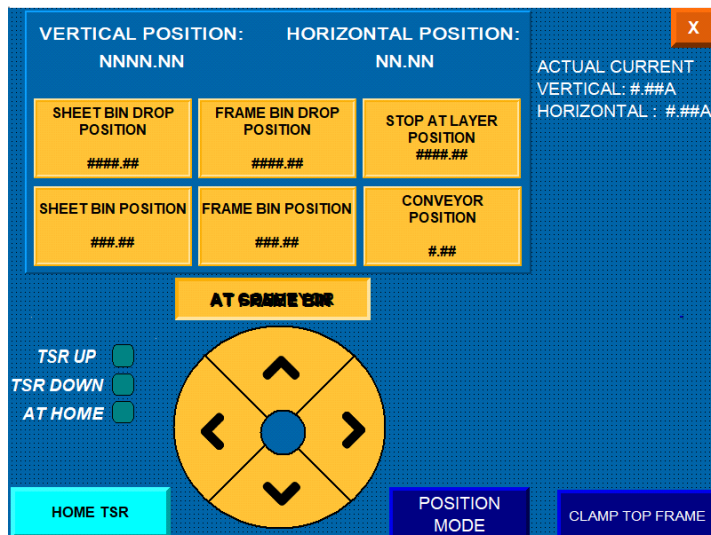
The SILENCE ALARMS button will temporarily turn off the audible alarm sound.



TECHNICAL MANUAL

MODEL "108"

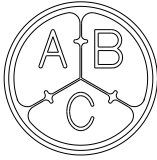
Sweep Off Bulk Depalletizer



TIER SHEET REMOVER SCREEN

Button	Function
SHEET BIN DROP POSTION button	Allows the input of the vertical position of the TRS at the Sheet Bin position via a numeric keypad. ONLY accessible through LOGIN
FRAME BIN DROP POSTION button	Allows the input of the vertical position of the TRS at the Frame Bin position via a numeric keypad. ONLY accessible through LOGIN
STOP AT LAYER POSITION button	Allows the input of the vertical position of the TRS at the Layer position via a numeric keypad. ONLY accessible through LOGIN
SHEET BIN POSTION button	Allows the input of the horazontal position of the TRS at the Sheet Bin position via a numeric keypad. ONLY accessible through LOGIN
FRAME BIN POSTION button	Allows the input of the horazontal position of the TRS at the Frame Bin position via a numeric keypad. ONLY accessible through LOGIN
CONVEYOR POSITION button	Allows the input of the horazontal position of the TRS at the Layer position via a numeric keypad. ONLY accessible through LOGIN
HOME TSR button	Allows the opperator to move the Tier Sheet Remover to its HOME/Safe position
CLAMP TOP FRAME button	Allows the operator to actuate the top frame clamps

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

INSTALLATION INSTRUCTIONS

This section will cover machine placement, pre-operating procedures, and installation testing procedures. In addition to these instructions there also may be additional or replacement instructions in the pocket of this technical manual.

LIST OF REQUIRED TOOLS

You will need the following tools and equipment to complete the installation:

- 1) (2) forklifts with a MIN. 6 ft fork extension, side shift capability and the ability to lift 5000 Lbs each
- 2) a set of Imperial Allen Wrenches
- 3) a set of Imperial Wrenches
- 4) plumb bob, level, alignment pins
- 5) band cutter
- 6) a set of Screw drivers (Phillips, Flat...), retaining ring plier
- 7) impact wrench, sockets
- 8) 6-8 heavy duty dollies for moving machinery
- 9) lift harness or sling
- 10) a hammer drill
- 11) (70) anchor bolts 3/8" or 8mm, min. 2" or 50mm long
- 12) (90) anchor bolts 1/2" or 12mm, min. 3" or 75mm long
- 13) (10) anchor bolts 5/8" or 14mm, min. 3.5" or 90mm long
- 14) 10 ft ladder

SERIAL NUMBER **24464**



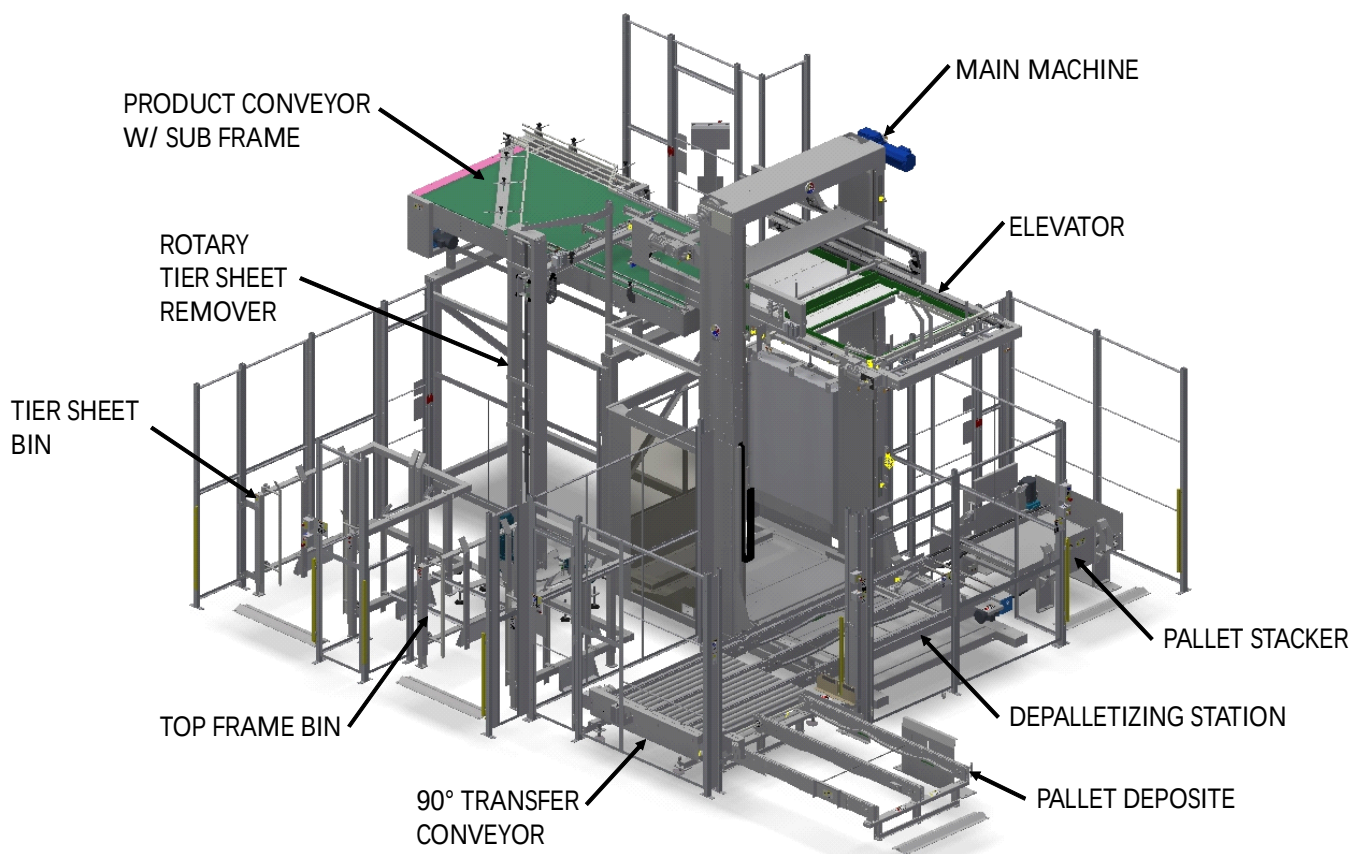
TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

MACHINE PLACEMENT

- Move the skid(s) as close as possible to the final operating position when the machine arrives at your facility.
- Remove any shipping materials (visqueen, skid mounting bolts, etc.) from all parts except air cylinders (strings, banding, or tie materials may hold the cylinder rods in place).
- Remove the machine parts from their skids using a fork lift and the designated lift points. Do not twist or handle the machine roughly. Discard the skid materials.
- Using the fork lift gently move the "Main Frame-Lower" into its final operating location. Then level horizontally and vertically by shimming and then lagging to the floor.



SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

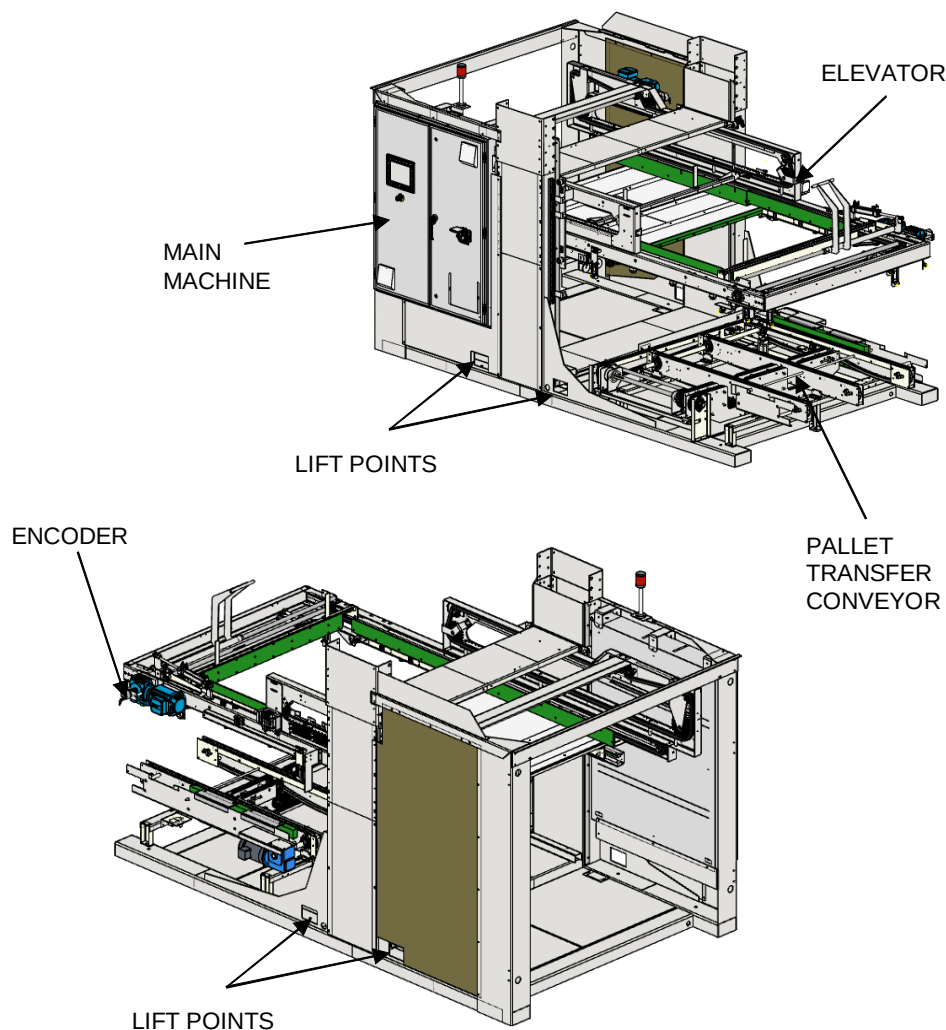
LOWER MAIN FRAME PLACEMENT

- Move the skid as close as possible to the final operating position when the machine arrives at your facility.
- Remove any shipping materials (visqueen, skid mounting bolts, etc.) from all parts except air cylinders (strings, banding, or tie materials may hold the cylinder rods in place).

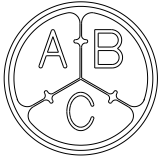


- Using two (2) fork lifts, one on either side of the main frame. Carefully enter forks at designated Lift Points no more than 6 inches to avoid damage to internal cables, wire troughs or supports.
- Gently raise the Lower Main Frame off the skid, Remove skid and lower the frame down to the floor. Level horizontally and vertically by means of adjusting bolts and shims.

When this piece is installed keep in mind that the relationship of the bottle conveyor and the main machine are critical, measurements regarding this relationship should be taken prior to the main frame placement to ensure correct line integration with existing equipment.



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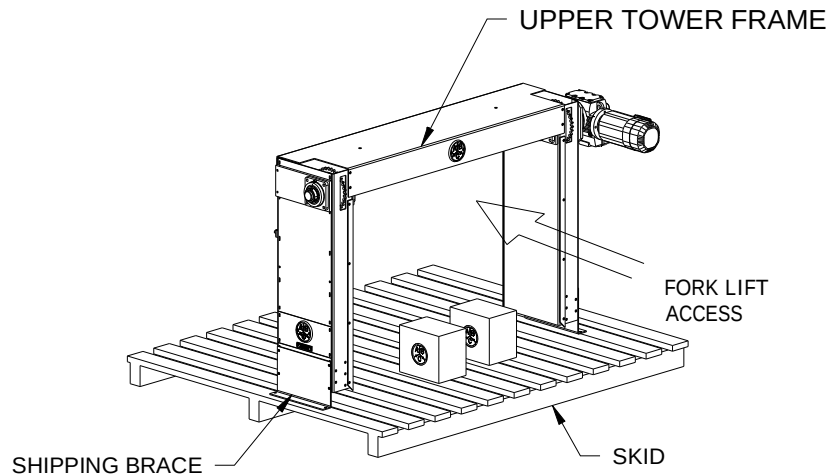


TECHNICAL MANUAL

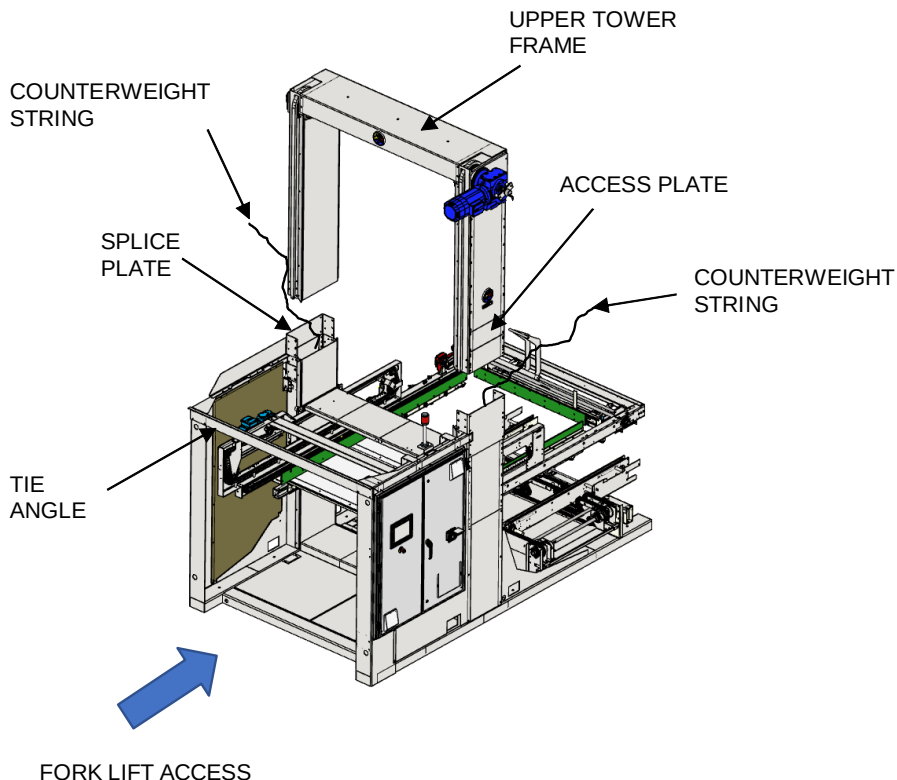
MODEL "108"

Sweep Off Bulk Depalletizer

UPPER TOWER FRAME INSTALLATION



- Unbolt Upper Tower Frame from skid. Access Fork Lift as shown and secure Upper Tower Frame to Forks. Remove Shipping Braces from frame.
- Move Upper Tower Frame over the Lower Main Frame from the Fork Lift Access direction.
- Remove the Tie Angle to get better access for the Fork Lift Truck.
- Remove the Access Plates on the Upper Tower Frame (both sides), there is a string attached to the counterweight Lift Chains on both sides. Bring this string up through the access hole.
- Align the columns with each other and lower the Upper Tower Frame into the Splice Plates.
- Use the provided screws and nuts to secure both frames together.



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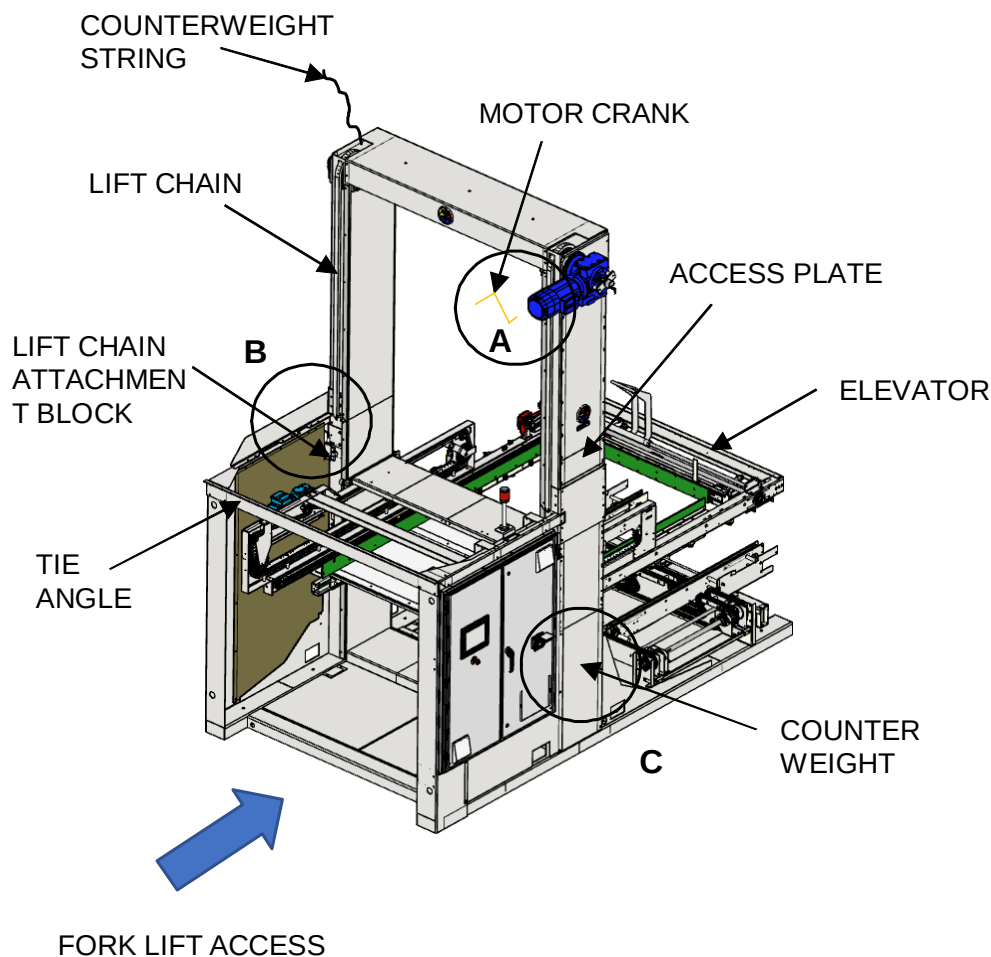
TECHNICAL MANUAL

MODEL "108"

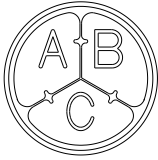
Sweep Off Bulk Depalletizer

ELEVATOR HOOK-UP

- Bring the string up through the inside of the Upper Tower Frame columns and out of the opening for the Hoist Sprocket at the top of the columns.
- Pull the chain up through the columns and thread over the sprocket and down until the chain is tight. The number of chain links from the sprocket and down to the Lift Chain Attachment Block on each side must be exactly the same.
- To get the chains down to the elevator attachment blocks, remove the Brake Cover from the motor. Screw in the brake release handle into the manual brake release arm of the motor. Slide the provided Motor Crank handle (painted YELLOW) onto the end of the fan blade shaft. Release the brake and turn the crank handle to manually turn the motor until the chains reach the Lift Chain Attachment Blocks, engage the brake and connect the chains to the blocks.
- Turn the motor in the opposite direction until the elevator starts to lift. At this time shipping straps and blocking can be removed. The Limit Switch Arms mounted on the Slack Chain Limit Switches should ride along the outside of the chain (not in-between the chain and the Main Frame).
- Remove the Motor Crank handle, reinstall the Brake Cover and attach all Access Plates and the Tie Angle.



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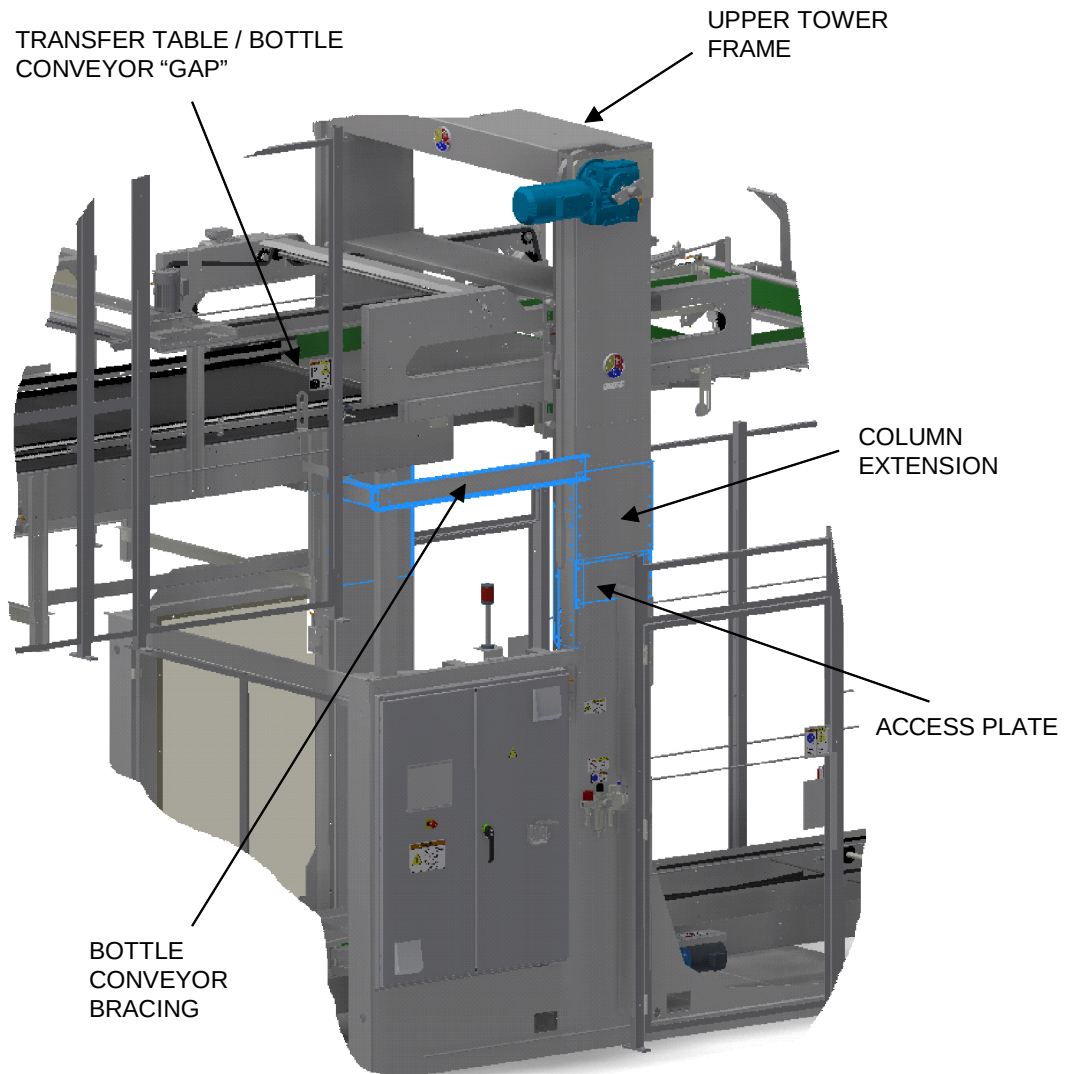


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MODEL "108"

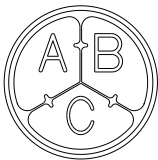
Sweep Off Bulk Depalletizer

COLUMN EXTENSION INSTALLATION - HIGH LEVEL DISCHARGE



- Before installing the Upper Tower Frame add the Column Extension to the Upper Tower Frame utilizing the splice plate and provided hardware. Splice Plate points up.
- Lift both onto the Lower Base Frame and bolt units together.
- Once the Bottle Conveyor has been placed onto the mezzanine, follow the instructions how to align the Bottle Conveyor and the Transfer Table of the Main Machine.
- Make sure there is a 1/4" "GAP" between the Transfer Table and the Bottle Conveyor.
- Add additional Bottle Conveyor Bracing between the Bottle Conveyor and the Main Machine to maintain "GAP" throughout the production cycle.

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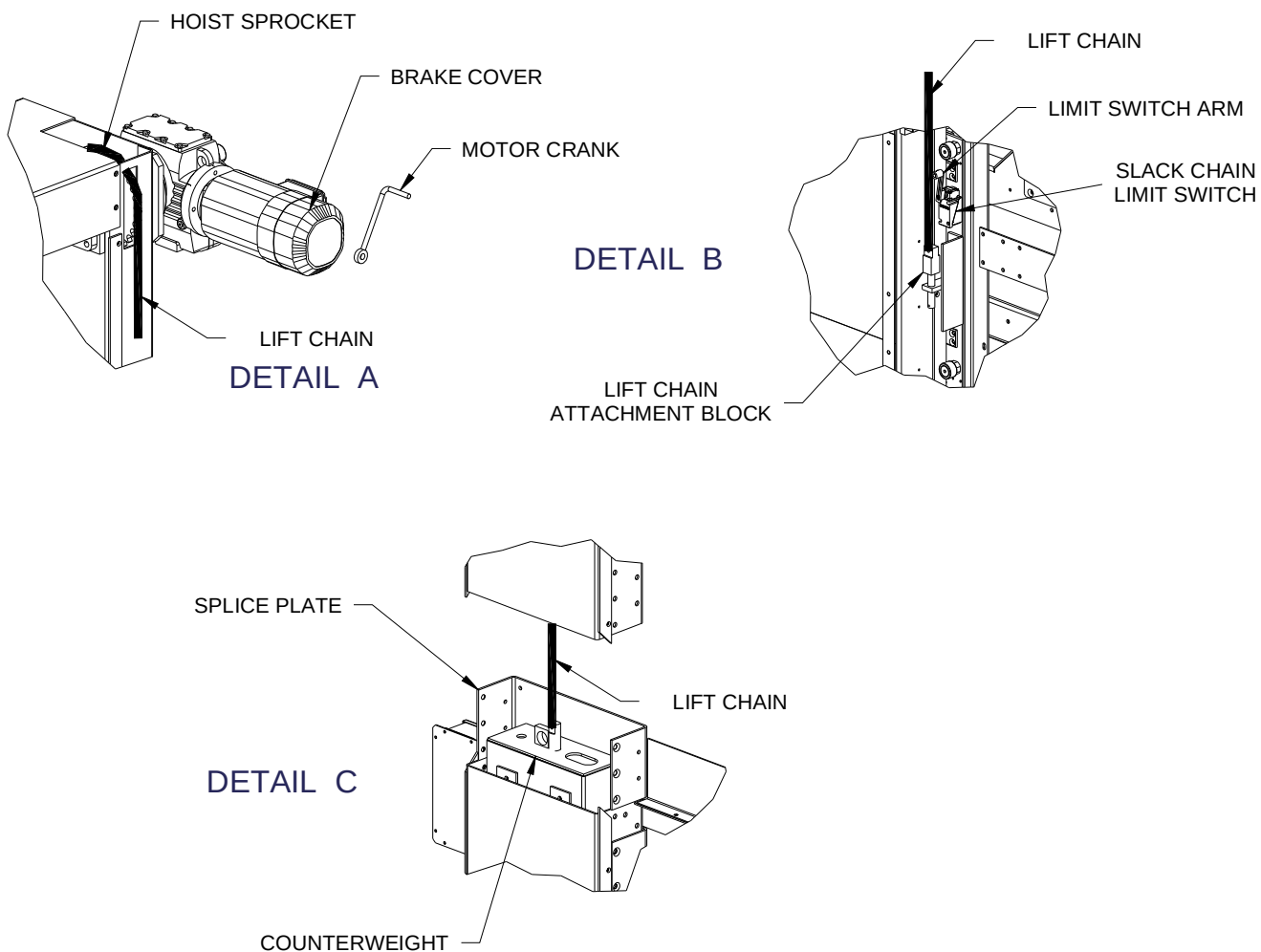


TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

ELEVATOR HOOK-UP DETAILS



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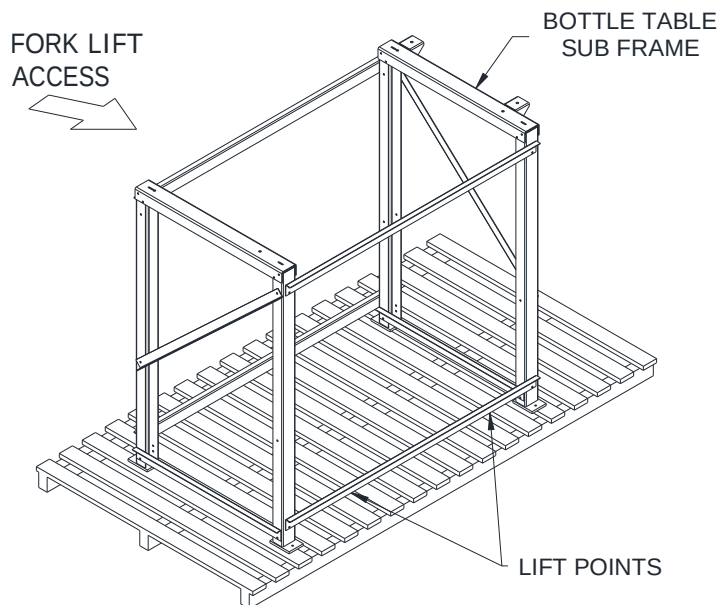


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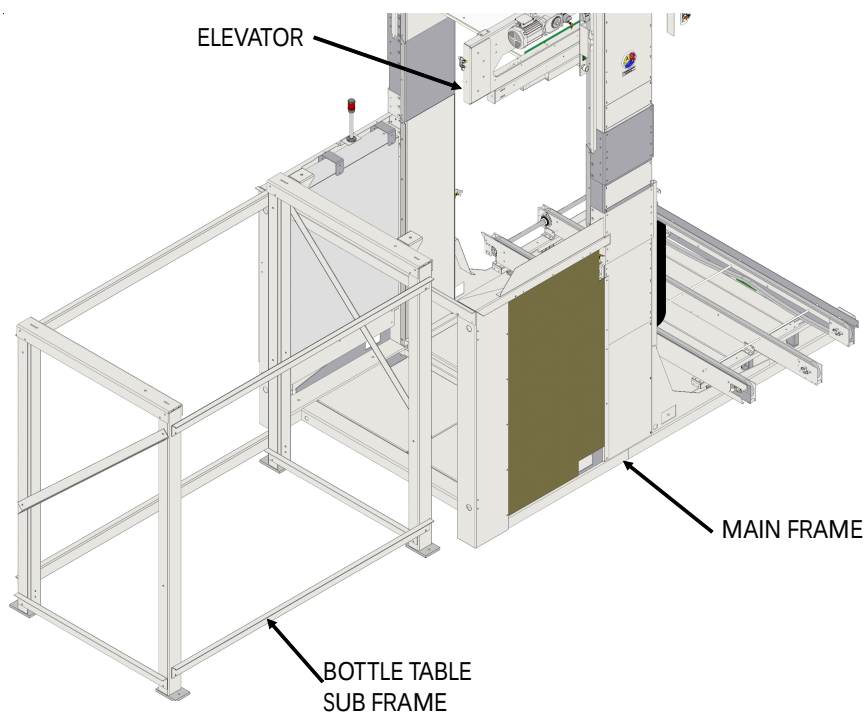
MODEL "108"

Sweep Off Bulk Depalletizer

BOTTLE DISCHARGE CONVEYOR INSTALLATION



- Remove lag screws from Bottle Table Sub Frame legs and lift sub frame off the skid.
- Move the Bottle Table Sub Frame to the Lower Main Frame it is close to the main frame.
- (see next page for more instructions)



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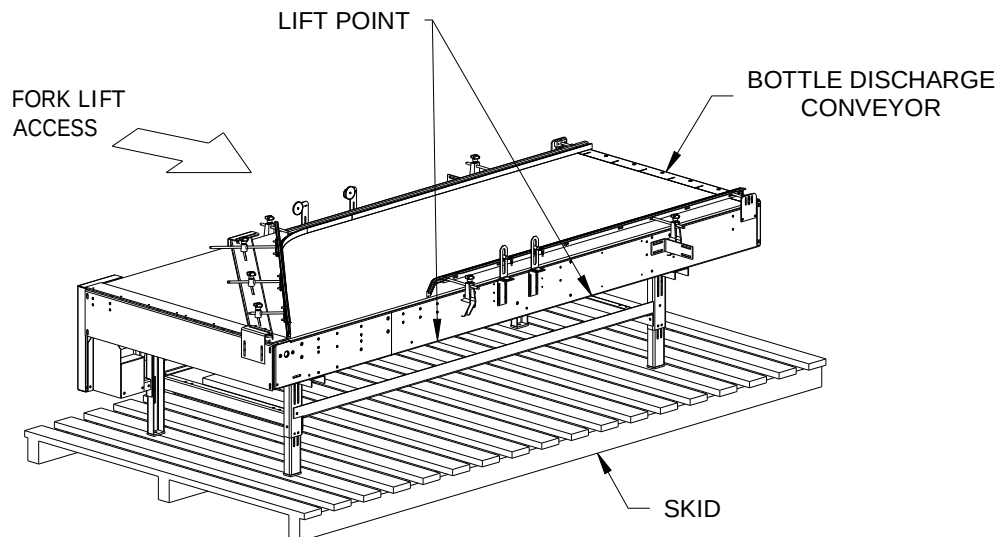


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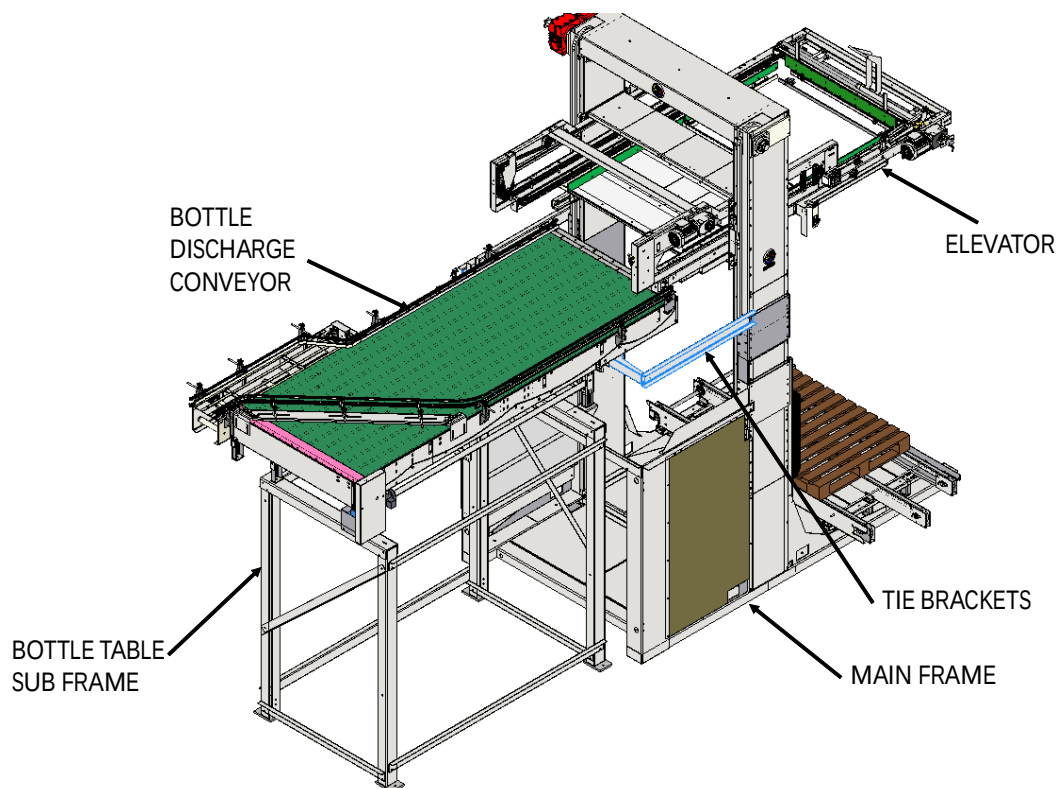
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Sweep Off Bulk Depalletizer

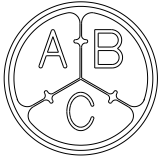
BOTTLE DISCHARGE CONVEYOR INSTALLATION



- Remove lag screws from Bottle Discharge Conveyor legs and lift conveyor off the skid.
- Place the bottle discharge table onto Bottle Table Sub Frame and bolt in place.
- Move the Bottle Discharge Conveyor into the Lower Main Frame until the Tie Bracket on the main Frame line up with the holes on the bottle discharge conveyor.



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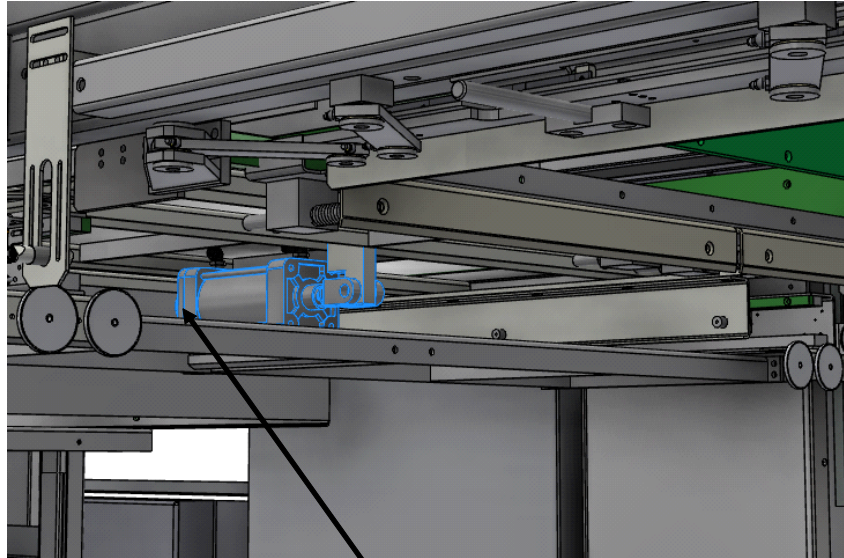


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MODEL "108"

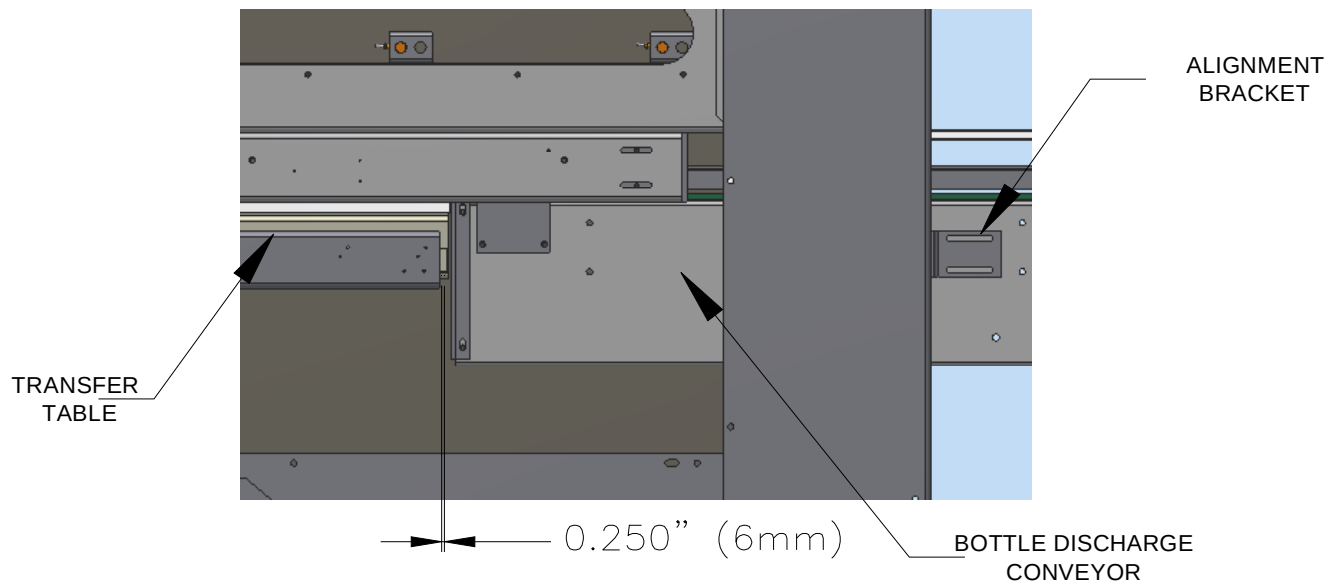
Sweep Off Bulk Depalletizer

BOTTLE DISCHARGE CONVEYOR INSTALLATION



Transfer Table Cylinder

- Retract Transfer Table Cylinder so the Transfer Table is all the way towards the Bottle Discharge Conveyor.
- Verify that there is a gap of min. 1/4" (6mm) between the Transfer Table and the Bottle Discharge Conveyor.
- Readjust the gap by moving the Bottle Discharge Conveyor closer or farther away from the Transfer Table.



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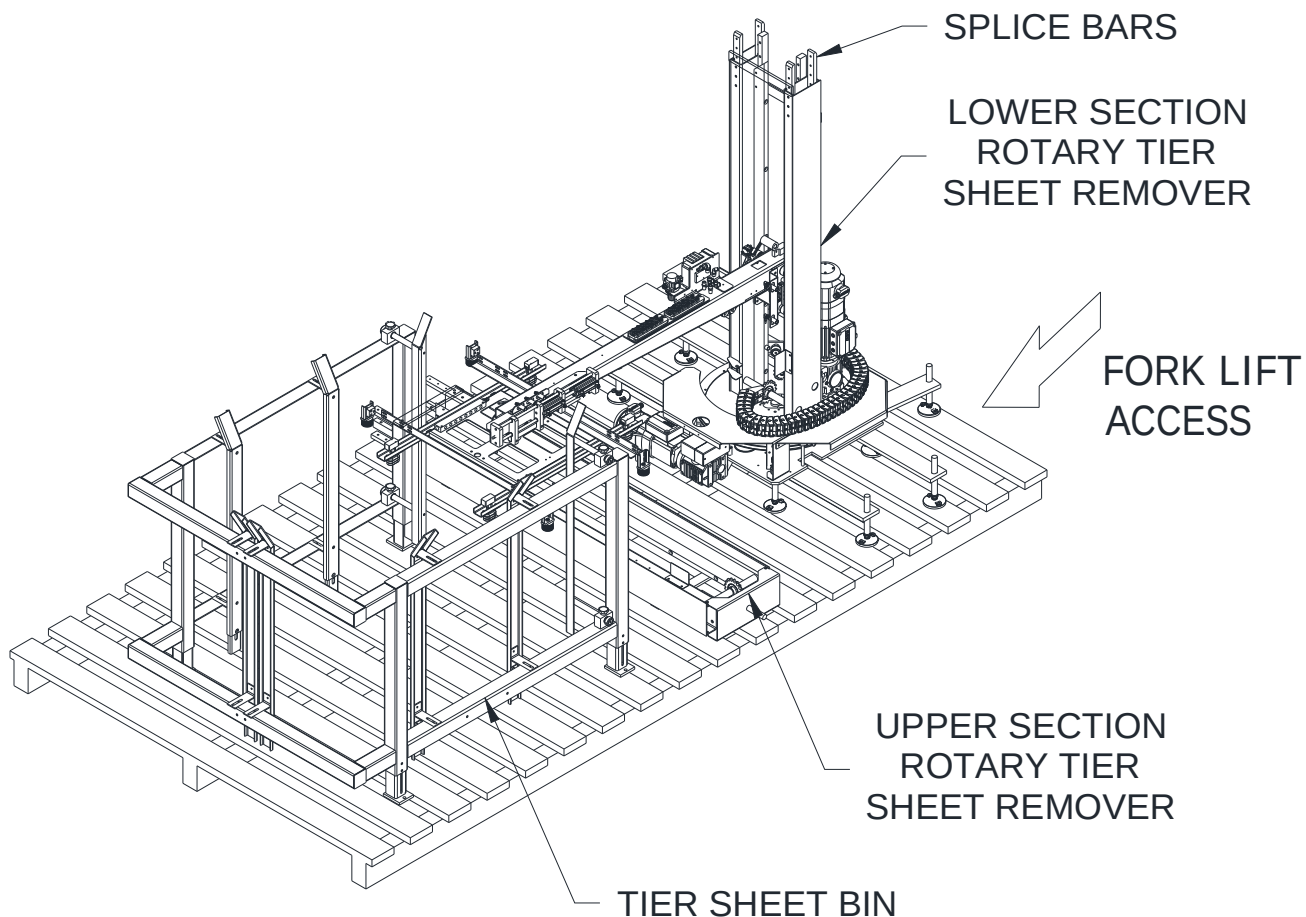


TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

TIER SHEET/TOP FRAME REMOVER INSTALLATION



- Remove Rotary Tier Sheet Inserter from skid and move in place. Lift Upper Column over Lower Column. Slide Upper Column over the Splice Bars and bolt columns together. Add additional Splice Bars on back side (see detail).

SERIAL NUMBER **24464**



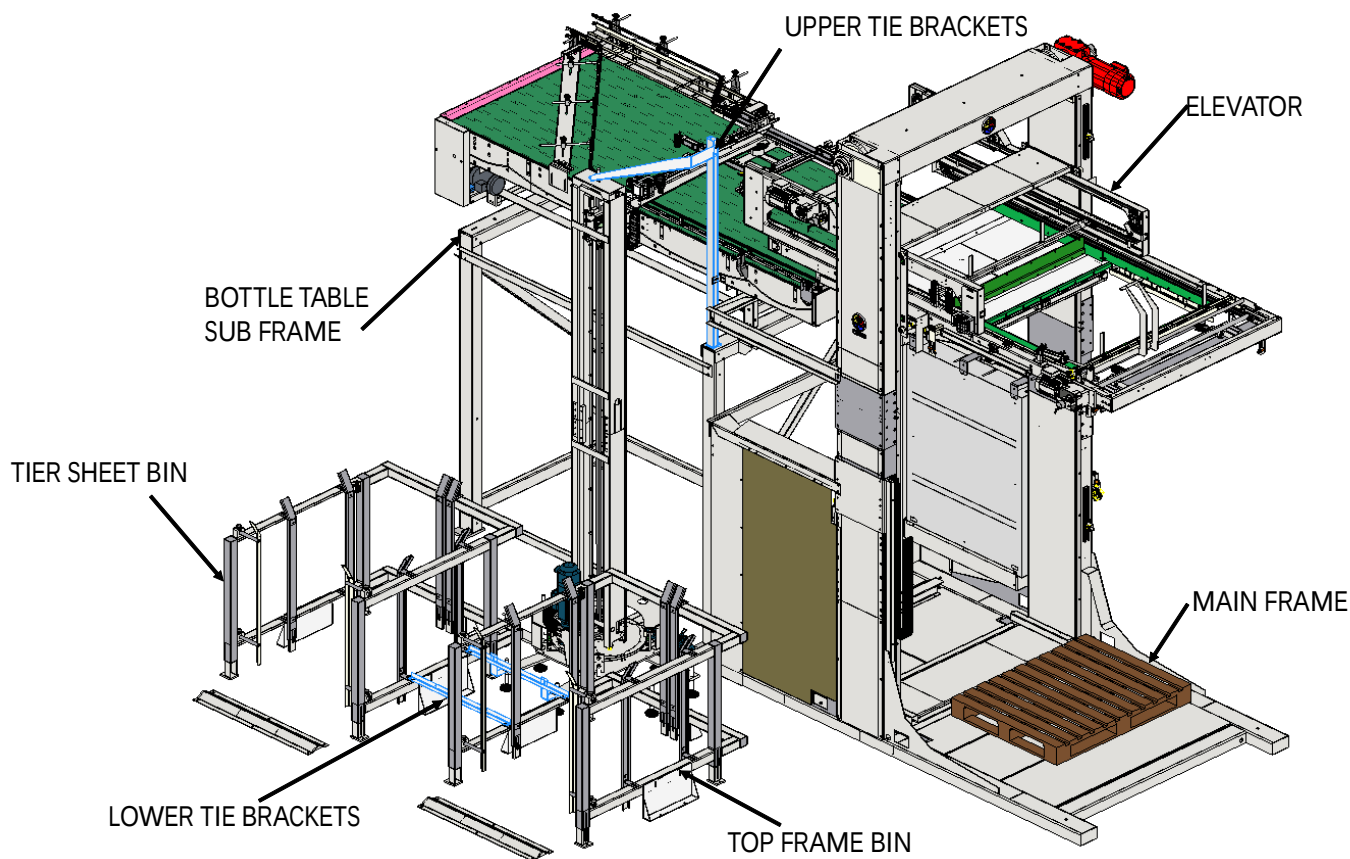
TECHNICAL MANUAL

MODEL "108"

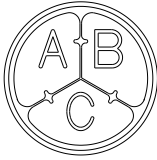
Sweep Off Bulk Depalletizer

TIER SHEET/TOP FRAME REMOVER INSTALLATION CONT.

- Move Rotary Tier Sheet Inserter in place. Level the Inserter. Line up Tie Bracket with the holes in the Main Frame and bolt in place. Add Upper Tie Bracket, slide bearing over column pin and align with bracket on upper main column.
- Place Tier Sheet Bin in place but DO NOT bolt in place.
- Re-connect all pneumatic and electrical connections.
- Connect the Top Frame / Tier Sheet Bins to the Rotary Tier Sheet Remover using the Lower Tie Brackets.
- Check alignment of Tier Sheet bin to inserter vacuum head after guarding is in place and the machine is operational.
- In hand functions move inserter vacuum head over the Bins and lower inserter vacuum head into the bins. The center of the bins must be in line with the center of the inserter vacuum head. Once the Bins are properly aligned lag them to the floor and attach guard brackets.



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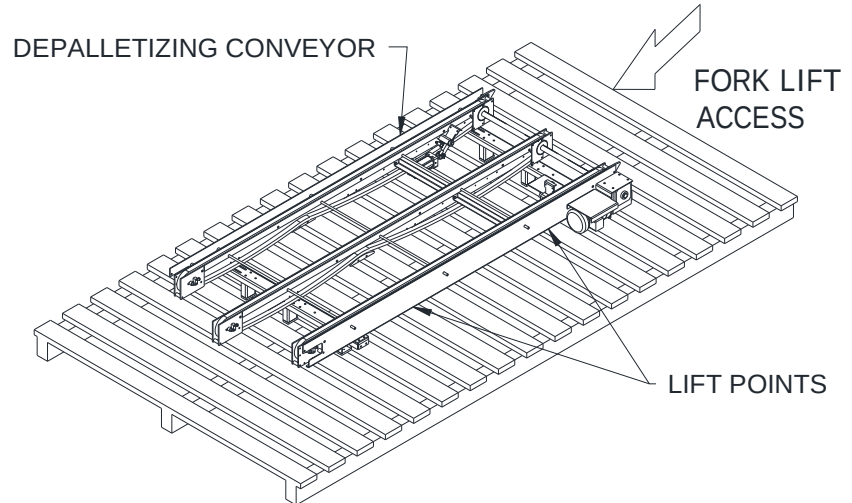


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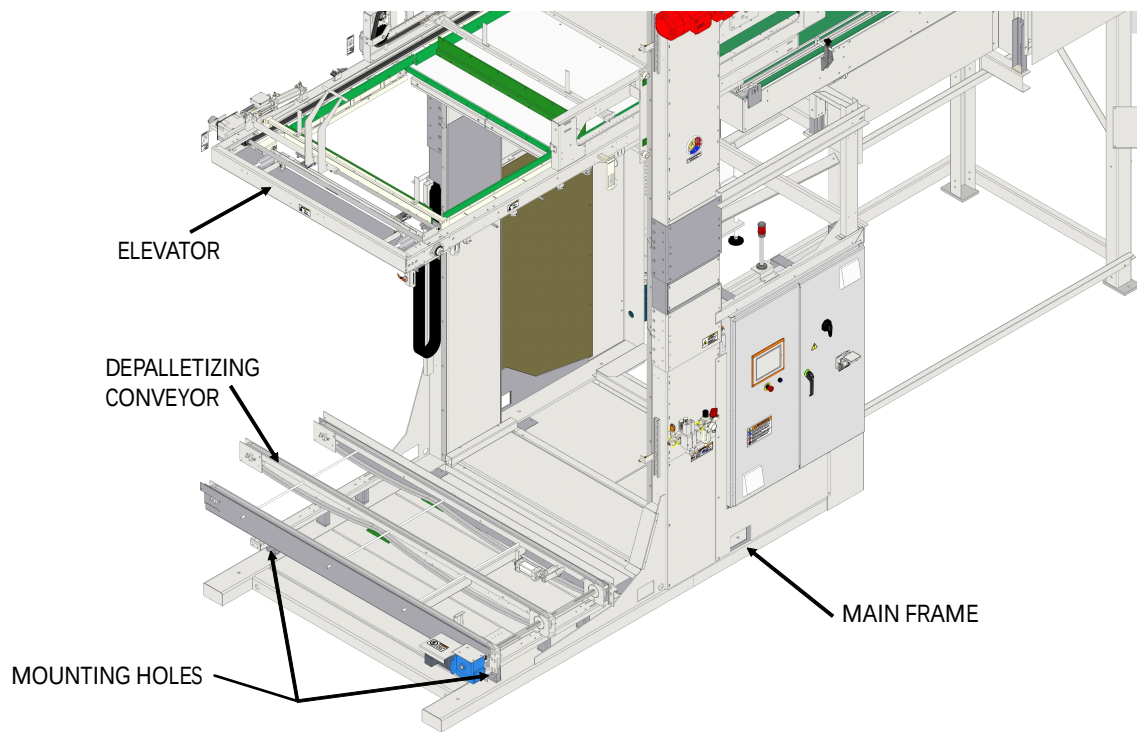
MODEL "108"

Sweep Off Bulk Depalletizer

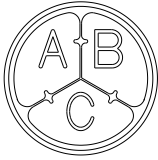
DEPALLETIZING CONVEYOR INSTALLATION



- Remove lag screws from Depalletizing Conveyor legs and lift the conveyors off the skid. Be careful not to damage the Drive Motor with the fork.
- Move the Depalletizing Conveyors to the Main Frame (see Floor Plan for correct location).
- Align Location Holes in the Main Frame with Depalletizing Conveyor feet and fasten in place.



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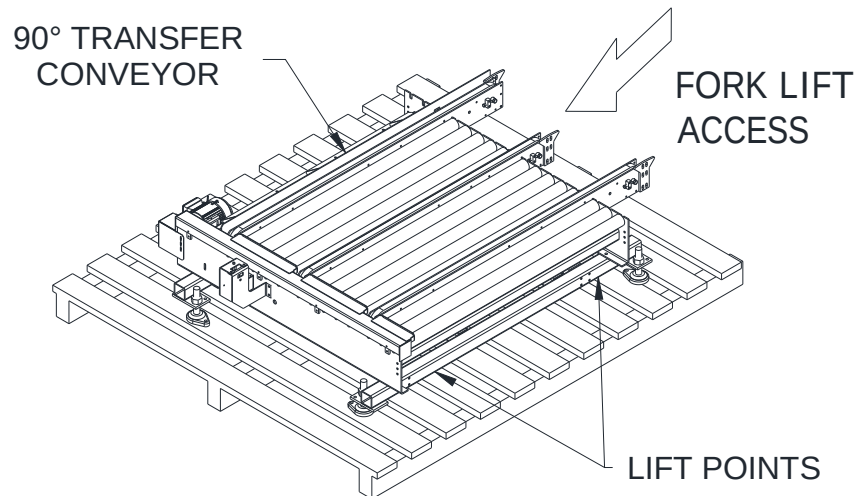


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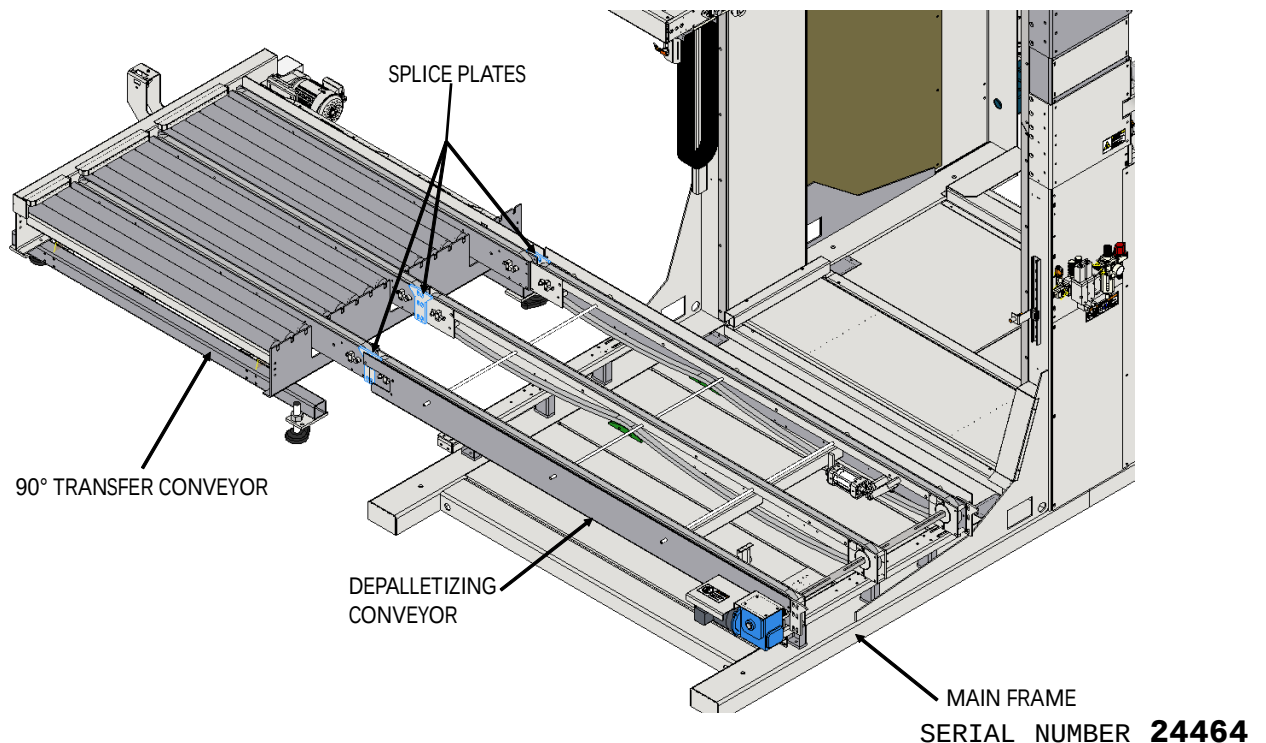
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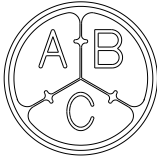
Sweep Off Bulk Depalletizer

INFEED & STAGING CONVEYOR INSTALLATION



- Remove lag screws from 90° Transfer Conveyor legs and lift the conveyors off the skid. Be careful not to damage the Drive Motor with the fork.
- Move the 90° Transfer Conveyor to the Depalletizing Conveyor (see Floor Plan for correct location).
- Align Splice Plates with Location Holes in the Depalletizing Conveyor and fasten in place.



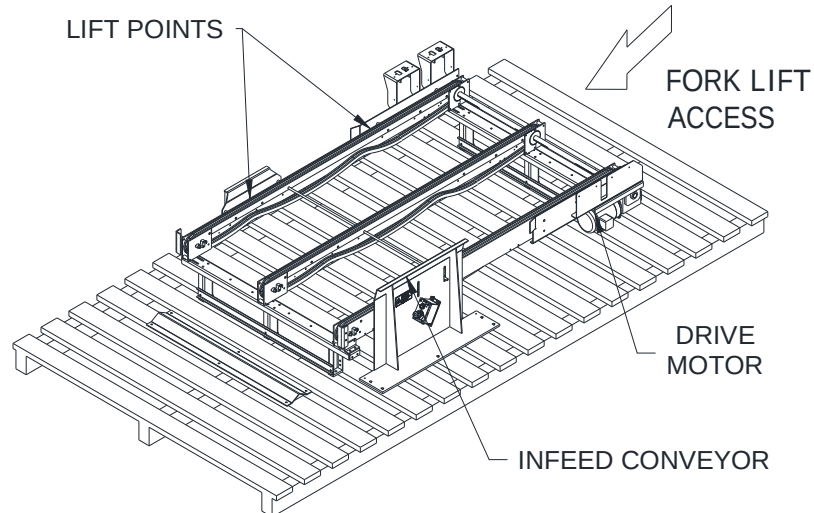


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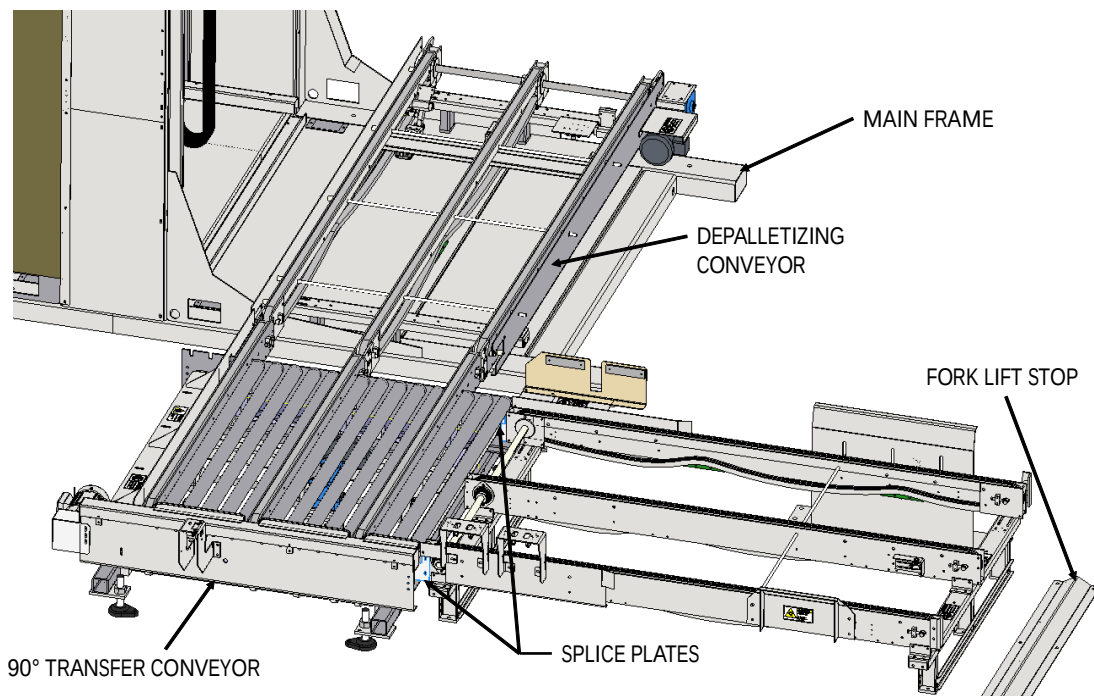
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Sweep Off Bulk Depalletizer

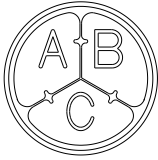
INFEEED & STAGING CONVEYOR INSTALLATION



- Remove lag screws from Infeed Conveyor legs and lift the conveyor off the skid. Be careful not to damage the Drive Motor with the fork.
- Move the Infeed Conveyor to the 90° Transfer Conveyor (see Floor Plan for correct location).
- Align Splice Plates with Location Holes in the 90° Transfer Conveyor and fasten in place.
- Fasten the Fork Lift Stop to the floor in the desired location.



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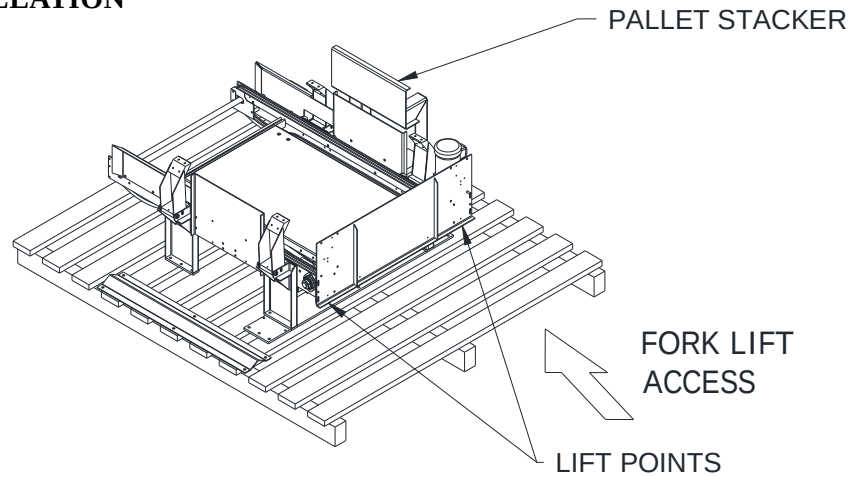


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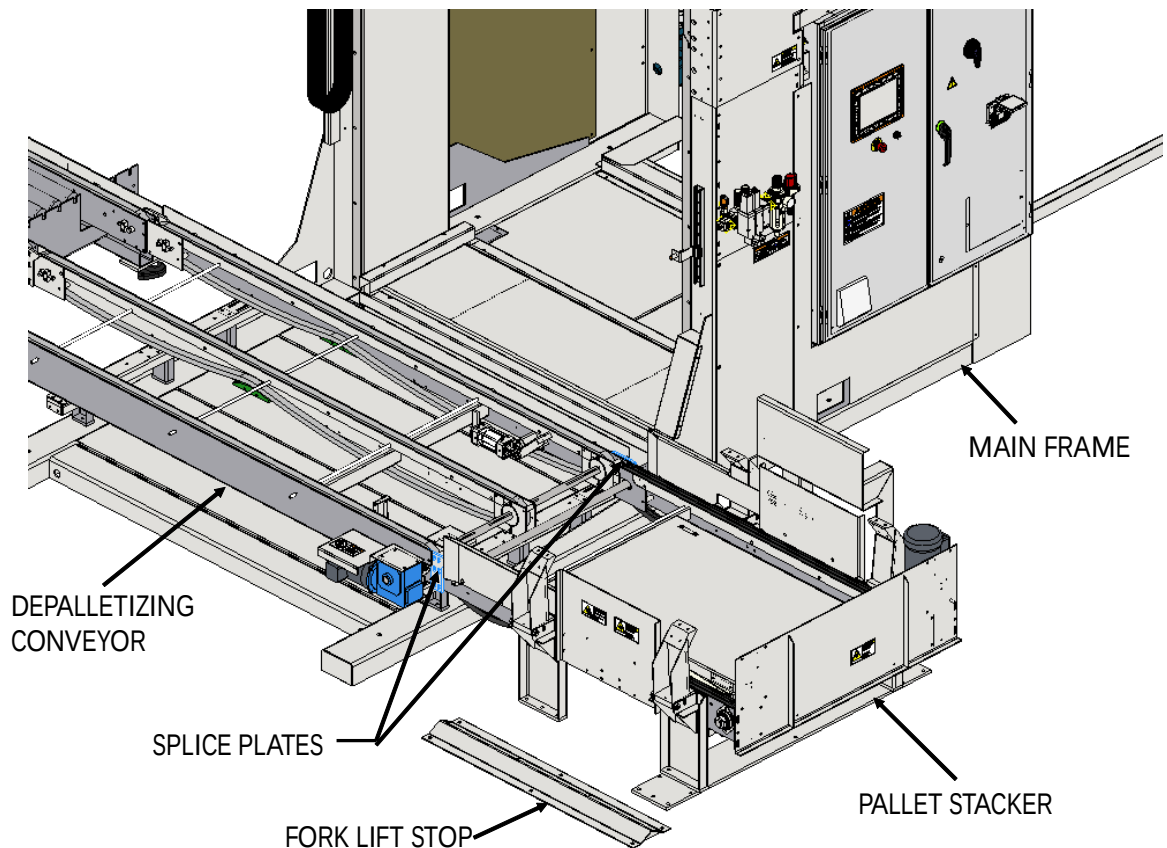
MODEL "108"

Sweep Off Bulk Depalletizer

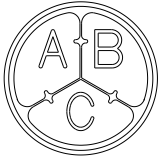
PALLET STACKER INSTALLATION



- Remove lag screws from the Pallet Stacker legs and lift the stacker off the skid.
- Move the Pallet Stacker to the Empty Pallet Conveyor (see Floor Plan for correct location).
- Align Holes in Pallet Stacker with holes in the Empty Pallet Conveyor and bolt in place.
- Fasten the Fork Lift Stop to the floor in the desired location.



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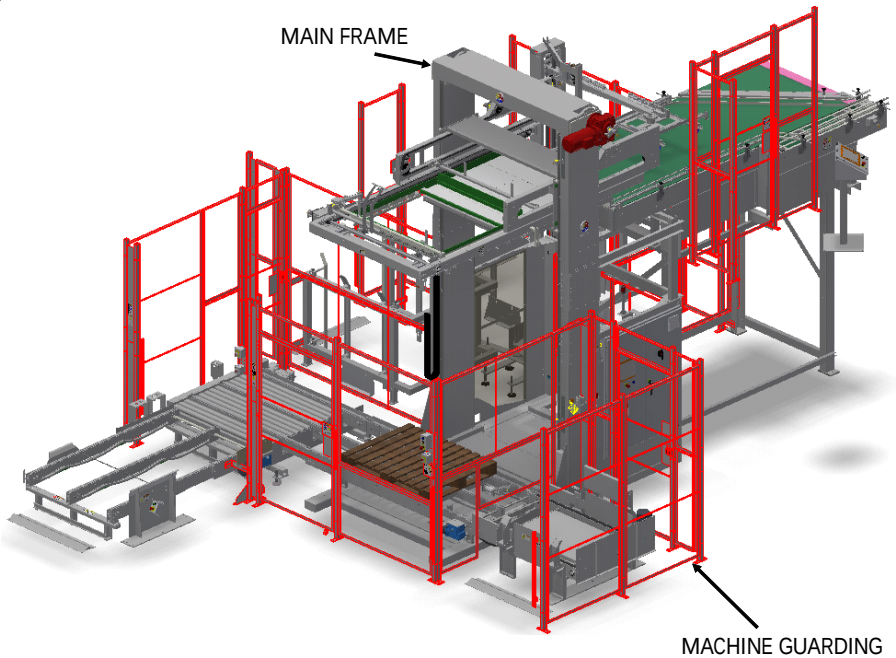


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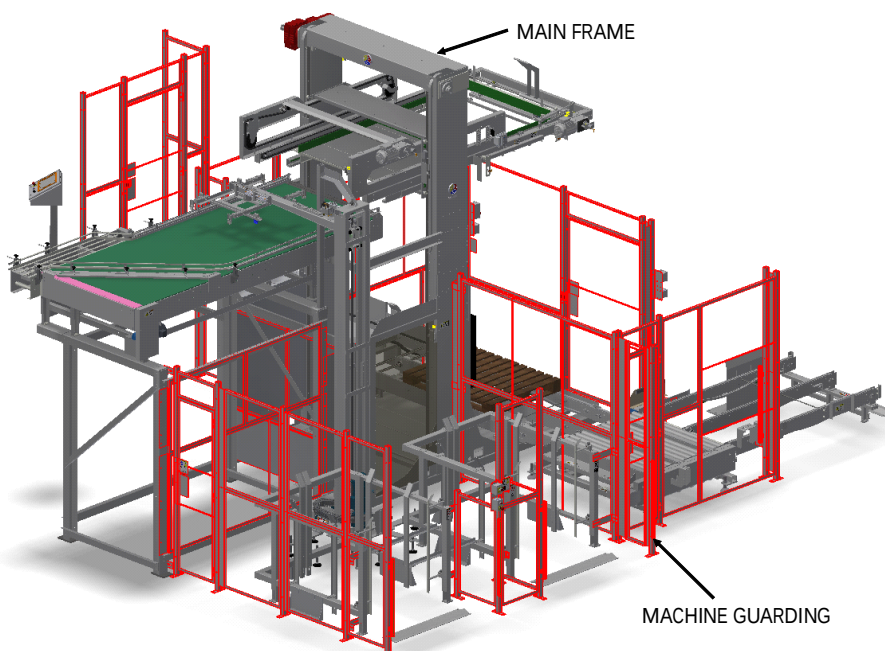
MODEL "108"

Sweep Off Bulk Depalletizer

GUARDING INSTALLATION



- Install all supplied Machine Guarding in the proper places.
- Reattach all provided guard mounting brackets.
- Align all doors and door switch brackets. All sections of guarding need to be level and plum. If necessary shim guard posts before lagging posts in place.
- Reconnect all door switch cables.
- Verify that the light curtains are aligned properly.



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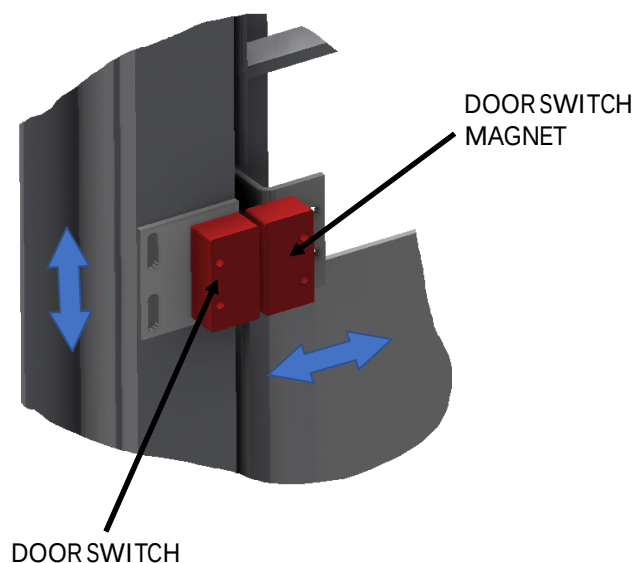
TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

GUARDING INSTALLATION

- Reconnect door switch and light curtain cables.
- Realign door switch if necessary.



FLOOR ANCHORING

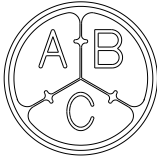
After levelling the Bulk Palletizer and its components, lag machine and guarding in place. Use appropriate anchor bolts consistent with your flooring.

If shim plates were used to level the machine, make sure the shim plates are lagged or otherwise fastened to the machine or floor.

FINAL INSPECTION

- Make sure all components are in their correct places.
- Level and height adjust all components.
- Reconnect all cables and pneumatic air lines.
- Lag components to the ground using anchor bolts.
- Remove all remaining bands, straps or ties from the machine.
- Remove all hand tools and equipment used to install the machine.
- Hook up electrical and pneumatic connections.

SERIAL NUMBER **24464**



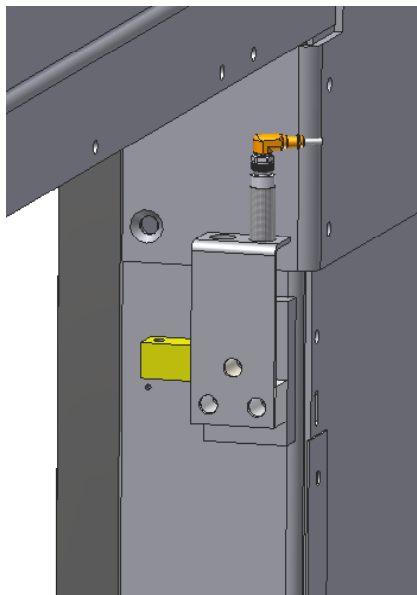
TECHNICAL MANUAL

MODEL "108"

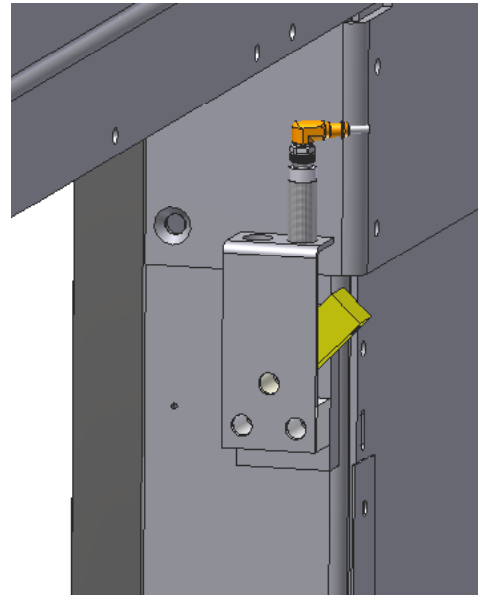
Sweep Off Bulk Depalletizer

PRE-OPERATING PROCEDURES

- Check and tighten all loose nuts, bolts and set screws. Motion during shipping may have loosened these parts.
- Check all moving parts for free motion. This would include all air cylinders and their related devices.
- Lubricate the machine according to the maintenance guidelines page and the recommended lubricant list included with this manual.
- Once again, be sure the machine is level.
- Connect the facility air supply hose to the machine. Your facility air supply hose should provide 80 to 85 p.s.i. and be a minimum 3/4 pipe.
- Wire the facility electrical supply line into the machine electrical enclosure. See the wiring diagram for this machine located in the pocket of this technical manual to verify the electrical requirements.
- Flip the elevator stop blocks (located on machine columns) back out of the way (you may need to raise the elevator first in "hand" mode). With the safety blocks in position the chains accumulate slack, fault the machine, and prevent it from running its cycle.

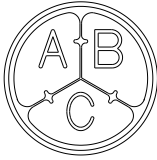


IN (SAFETY)



OUT (RUN)

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

FLOOR ANCHORING

After levelling the Bulk Palletizer and its components, lag machine and guarding in place. Use appropriate anchor bolts consistent with your flooring.

If shim plates were used to level the machine, make sure the shim plates are lagged or otherwise fastened to the machine or floor.

FINAL INSPECTION

- Make sure all components are in their correct places.
- Level and height adjust all components.
- Reconnect all cables and pneumatic air lines.
- Lag components to the ground using anchor bolts.
- Remove all remaining bands, straps or ties from the machine.
- Remove all hand tools and equipment used to install the machine.
- Hook up electrical and pneumatic connections.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

MAINTENANCE OVERVIEW

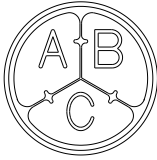
The maintenance schedule, for a basic machine, is only a GUIDELINE for normal operation. Normal operation may be defined as operating the machine for eight hours a day, five days a week under the designed operating parameters of the machine. If your machine will be used unusually lightly or heavily, then you should adjust your maintenance schedule accordingly. All items listed do not apply to all machines. Please disregard those items that do not apply to your machine.

 	 	Do not work on an energized machine. Do not work on the machine if you are not fully trained or qualified to service A-B-C packaging machines or if you do not fully understand the materials in this manual and/or your company's safety manual(s). Contact A-B-C Packaging Machine Corporation for any maintenance procedure not described in this manual.
 	 	Certain maintenance procedures may only require the machine to be energized BUT NOT CYCLING, such as testing for airflow to a part. It is very important to energize the machine only to complete the necessary task and then <u>de-energize</u> the machine again.

GENERAL MAINTENANCE INSTRUCTIONS

- Before conducting any necessary adjustments, services, preventative inspection or repairs the bulk depalletizer **MUST** be in a safe state (Lock out / Tag out procedure, Maintenance Lock out Blocks, etc.)
- Follow all company or governmental rules and regulations concerning safe working condition on machinery
- Only after the machine is safe, the work on the machine can start
- All maintenance and repair work should be recorded and kept in a Maintenance/Repair Log
- After the work has been conducted a functional test should be performed
- Using the manual function screen the individual functions of the bulk depalletizer can be verified by activating the specific function
- As a final step the bulk depalletizer can be set in dry cycle mode and run for a few minutes to verify that all movements are free and smooth.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

SANITATION PROCESS

If it should become necessary to clean this equipment, disconnect the unit first. Do not use liquid cleaners, aerosols, abrasive pads, scouring powders or solvents, such as benzine or alcohol. Use a soft cloth lightly moistened with a mild detergent solution. Ensure the surface cleaned is fully dry before reconnecting power."

Recommended PPE (personal protective equipment) for general housekeeping...

- Safety glasses / goggles
- Hearing protection (per facility policy)
- Shoes appropriate to the environment (examples; steel toe, slip resistant, water resistant)
- Clothing appropriate to the environment (proper fit, in good repair, material suitable to the task)
- Means to secure neck ties, jewelry, hair, or other items that could become entangled in the equipment.
- Hand protection appropriate to the task (examples; disposable gloves, cut resistant gloves when handling broken glass, thermally insulated gloves for cleaning around machine components that may be hot such as motor and gearboxes)
- Dust mask / respirator (in very dusty environments)

Common tools used in housekeeping...

- Vacuum
- Brooms / dustpan
- Soft cloth rags or disposable towels
- Duster
- Ladder
- Mild commercially available cleaner such as "Formula 409"
- Spray bottle
- Bins or containers for disposing of waste materials (glass, cardboard, paper, spent rags, general refuse)

Begin at the top of the machine and work your way down

- Vacuum off dust (DO NOT use pressurized air)
- Clear out product accumulation
- Wipe down exterior surfaces
- Clean guard windows
- Sweep under the machine and the surrounding the area
- Put workspace in order
- Visually inspect for any damage to equipment (report findings)
- Visually inspect for oil leaks (report findings)
- Visually inspect for excessive build-up of grease or grime on chains, shafts and bearings (report findings)
- Account for all cleaning products and tools

Findings reported from visual inspections should be addressed by maintenance staff in a timely manner.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

MAINTENANCE GUIDELINES

DAILY	SECTION	ACTION
	Electric Eyes & Reflectors	Clean lenses and reflective surfaces
	Entire Machine	Blow off dust, clear out product accumulation, wipe off excessive grease
	Filters - Air & Vacuum	Clean or replace
	Running Shafts	Grease (if required)
	Slide Bars or Shafts	Grease (if required)
WEEKLY	SECTION	ACTION
	Air Cylinders	Check for leakage, rebuild or replace if necessary
	Air Lines	Check for leaks and loose connections
	Side Squaring Linkage	Grease
	Belts	Check tension, tracking and laces
	Chain Slides	Grease
	Chains	Check tension
	Control Valves	Check for leakage
	Proximity Switches	Check operation and mounting
	Rear-End Gear Boxes	Check oil level and refill as required
	Speed Reducers	Check oil level and refill as required
	Vacuum Control Valves	Clean
	Vacuum Cups	Check for wear and replace as required
	Vacuum Hoses	Check for leaks and loose connections
MONTHLY	SECTION	ACTION
	Adjusting Shafts	Grease
	Casters	Grease
	Chains	Check for loose, broken or missing cotter pins. Tighten as required
	Entire Machine	Check for worn belts, loose and worn parts and clean thoroughly
	Roller Chains	Grease
	Sprockets	Check alignment, keys and tighten set screws
BI-MONTHLY	SECTION	ACTION
	Collars	Tighten set screws
	Entire Machine	Tighten all fasteners. Clean all rust spots and repaint if applicable
	Chains	Check for loose, broken or missing cotter pins. Tighten as required
	Flow Controls	Adjust as required and tighten lock nuts
SEMI-ANNUALLY	SECTION	ACTION
	Air Valves	Check for leakage, rebuild or replace if necessary
	Rear-End Gear Boxes	Replace oil
	Speed Reducers	Replace oil
	Flange Bearings	Grease

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

RECOMMENDED LUBRICANT LIST

The following list contains the lubricants that are used at the A-B-C Packaging Machine Corporation factory in assembling your machine (s). We suggest these lubricants continue to be used with your machine (s).

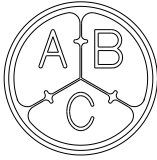
ITEM	MFR	DESCRIPTION
Adjusting Shafts, Bearings, Cam followers, Chain Tracks, Flight Chain Clutch Assemblies, Slide Bars, Slide Shafts and Zerk Fittings	Sentinel	**SL-WR White Synthetic Lubricant Water Resistant
Enclosed Rear-End Drive	Sentinel	**SL-WR White Synthetic Lubricant Water Resistant
(ABC Manufactured)	Sentinel	**SL-WR White Synthetic Lubricant Water Resistant
Open Bevel Gear	Sentinel	**SL-WR White Synthetic Lubricant Water Resistant
Float-A-Shaft (Tol-O-Matic)	Sentinel	**SL-WR White Synthetic Lubricant Water Resistant
Worm Gear Reducers	Exxon-Mobil	**Mobilgear 636
Rear End Drive-Purchased Part No. P102-043	Exxon-Mobil	**Mobilgear 636

* Rated USDA H-1 ** Rated USDA H-2

ALTERNATE LUBRICANT LIST

ITEM	MFR	DESCRIPTION
Adjusting Shafts, Bearings, Cam followers, Chain Tracks, Flight Chain Clutch Assemblies, Slide Bars, Slide Shafts and Zerk Fittings	Keystone Lubriplate Mobil McMaster-Carr	Nevastane 2 plus SFL-2 Mobilith AW 2/ Grainger #42F46 Teflon food grade anti-seize Mc #1404K12 Cartridge
Enclosed Rear-End Drive	Keystone Lubriplate Exxon Mobil McMaster-Carr McMaster-Carr	Nevastane 2 plus SFL-2 Polyrex EM Mobil 1 Synthetic / Grainger #6Y777 Synthetic Teflon PN# 1378K33 Open Gear Grease PN# 1403K21
Open Bevel Gear	McMaster-Carr Keystone Lubriplate Mobil	Open Gear Grease PN# 1403K21 Nevastane 2 plus SFL-2 Mobilith SHCPM Synthetic Bearing Grease Grainger #42F48
Float-A-Shaft (Tol-O-Matic)	Keystone Lubriplate Mobil McMaster-Carr McMaster-Carr Exxon	Nevastane 2 plus SFL-2 Mobil 1 Synthetic / Grainger #6Y777 Synthetic Teflon PN# 1378K33 Open Gear Grease PN# 1403K21 Polyrex EM
Worm Gear Reducers	Mobil McMaster-Carr	Mobil synthetic gear oil 75W 90 Synthetic gear oil PN# 13665K51
Rear End Drive-Purchased Part No. P102-043	McMaster-Carr	Synthetic gear oil PN# 13665K51

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

DETAILED SEQUENCE OF DEPALLETIZER OPERATIONS

Reading the following operating sequence will be very helpful in understanding and trouble shooting the majority of the machine problems.

Refer to your machine's electrical diagram(s) for corresponding PLC input/output indicators when determining whether an operation has or has not been performed.

A full pallet with bands and wrap is placed on the pallet conveyor actuating (EE31). All banding and wrapping material are carefully removed. Only then should the "pallet ready" button (PB9) be pressed. If the machine is not ready to accept the new pallet, the "pallet ready" indicator light (LT9) will illuminate. If the roller/chain transfer conveyor station is empty, the pallet load will proceed into that station until (EE32) is made. During the infeed cycle the infeed light curtain (LC1) is muted.

After the machine has exited the previous empty pallet (EE34), and the elevator has raised to accept the new pallet (PR1), and the 90 degree transfer chains have raised (PR35), the pallet conveyors will energize and raise the pallet stops (PR27-28) to infeed the next full pallet load into the machine (EE33).

The pallet enters the machine (EE33). The stop bar lowers (SOL1B) (PR5). The elevator begins to lower (DRIVE1). When (EE1) is blocked by the product, the elevator switches to slow speed. The stop bar will contact the top of the product while the elevator is lowering and will clear (PR5). (PR5) being clear, the stop bar is raised to full up position (SOL1A). The elevator will further lower a predetermined distance, dependent upon container height and realized by the encoder. The elevator is now at the proper elevation for the tier of containers to be moved over onto the transfer table. The elevator table extends (SOL3A) to the product (PR6). The sweep bar (DRIVE2) moves in slow speed to contact the back side of the layer (ENCODER SETTING). The support bar (DRIVE3) moves in slow speed to contact the front side of the layer (ENCODER SETTING). The layer is now secured snugly on all four sides. Tier sheet grippers are extended (SOL11) towards the tier sheet and close (SOL12). The sweep and support bars will move in medium speed to sweep the layer onto the transfer table.

When the sweep bar reaches the front edge of the transfer table (ENCODER SETTING), the table will retract (SOL3B) (PR7). Support bar is keeping the layer contained utilizing the encoder (ENCODER SETTING). The elevator will then rise for a short time to allow any leaning product to fall from the pallet rather than be pushed down into the pallet during lowering.

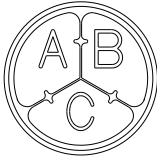
The elevator must now be vertically repositioned to align the transfer table with the bottle discharge conveyor (ENCODER SETTING).

If the product conveyor is clear (EE2 and/or EE4), the sweep and support bars will start in slow speed. Once the conveyor supports the first few rows of containers (ENCODER SETTING), the support bar will switch to high speed to clear the layer (PR20). The sweep bar will continue to push the entire layer onto the conveyor (ENCODER SETTING).

The sweep bar returns in high speed to the front edge of the table (ENCODER SETTING), the support bar then waits for the layer to clear and then returns back to its home position (ENCODER SETTING).

While the bars are returning, the elevator raises until it is above the product (EE1). The sweep bar can then return to its home position (PR11) which allows the stop bar to lower, repeating the sweep cycle until the pallet has been emptied. PR26 signals last layer.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

The off-loaded tier of containers is moving (DRIVE4) towards (EE4). Once (EE4) is made (DRIVE6) stops locating the tier in alignment with the tier sheet remover. The tier sheet remover moves over the bottle discharge conveyor ENCODER SETTING. A pick-up frame with vacuum suction cups lowers (SOL5) until ENCODER SETTING is made. Vacuum generators are switched on (SOL6) and grab the tier sheet. The pick-up head raises ENCODER SETTING. Then the tier sheet remover moves over the collection bin ENCODER SETTING. The tier sheet remover returns for the next cycle.

Once the top frame and / or tier sheet has been removed the layer travels towards the end of the conveyor where it will either side or end transferred to the downstream conveyor.

Note: See Electrical Component Locations next page

SERIAL NUMBER **24464**

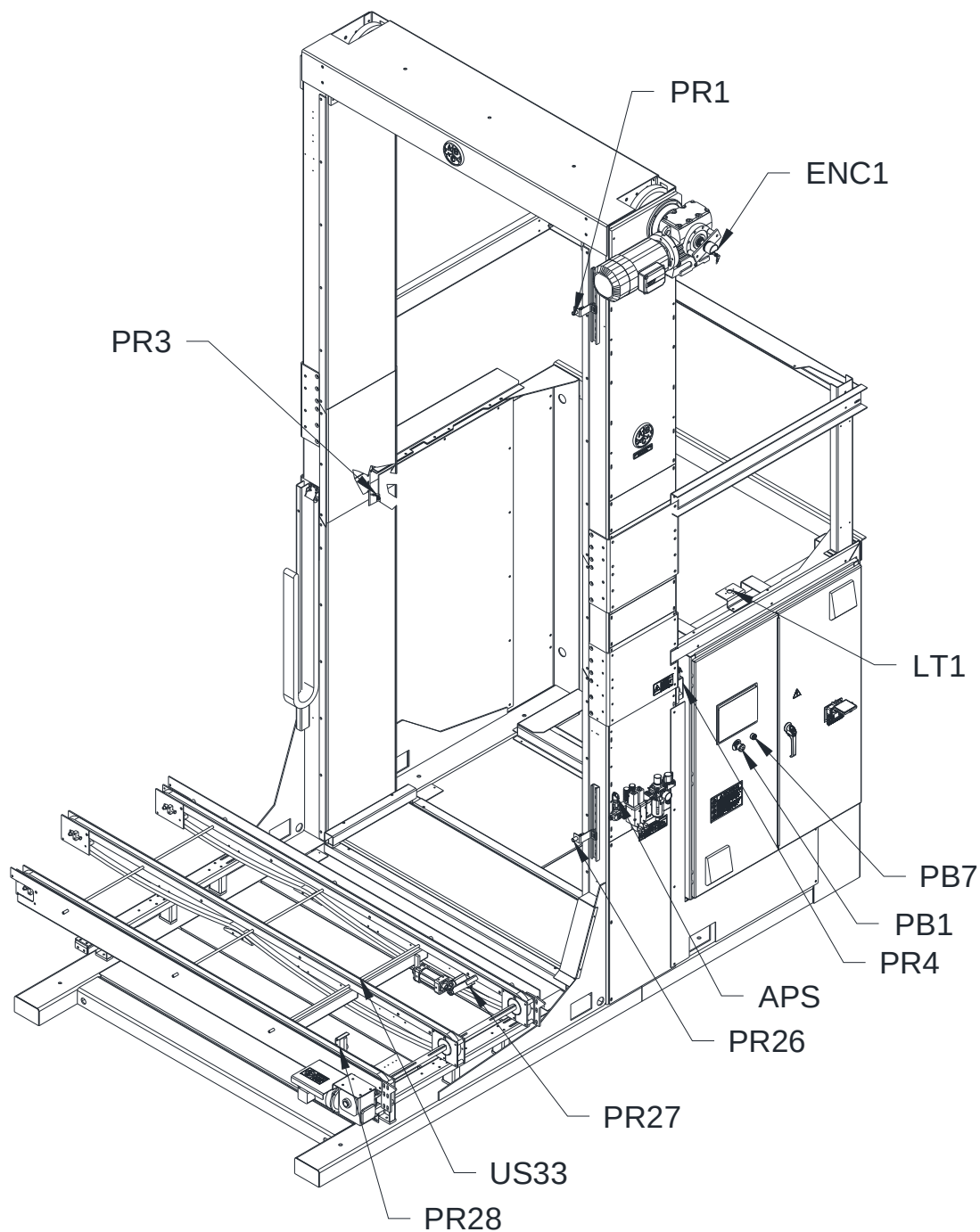


TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

PROXIMITY SENSOR & PHOTOEYE LOCATION



BASE FRAME ASSEMBLY

SERIAL NUMBER **24464**

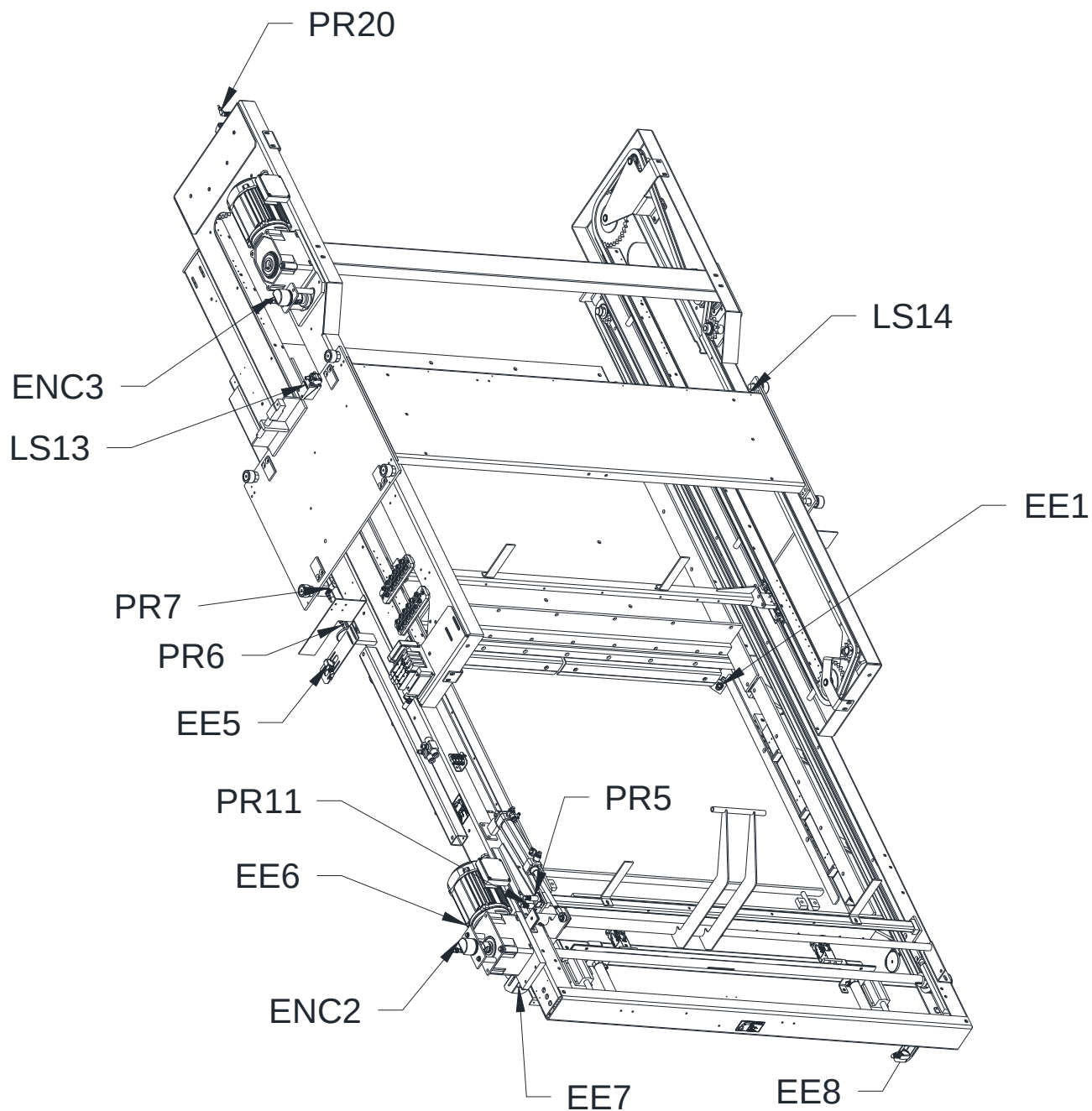


TECHNICAL MANUAL

MODEL "108"

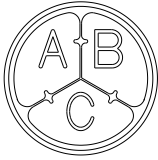
Sweep Off Bulk Depalletizer

PROXIMITY SENSOR & PHOTOEYE LOCATION



ELEVATORASSEMBLY

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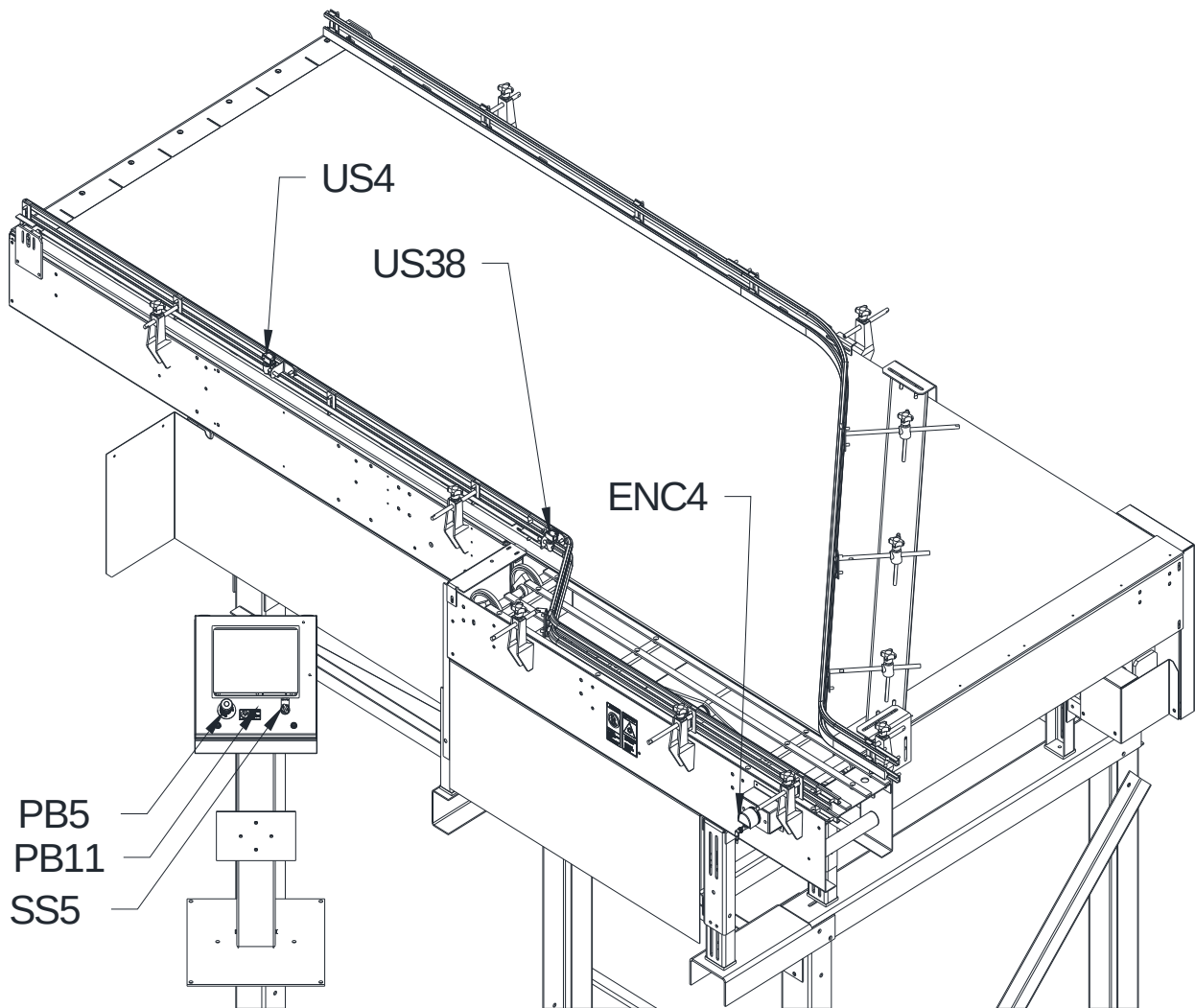


TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

PROXIMITY SENSOR & PHOTOEYE LOCATION



PRODUCT CONVEYOR ASSEMBLY

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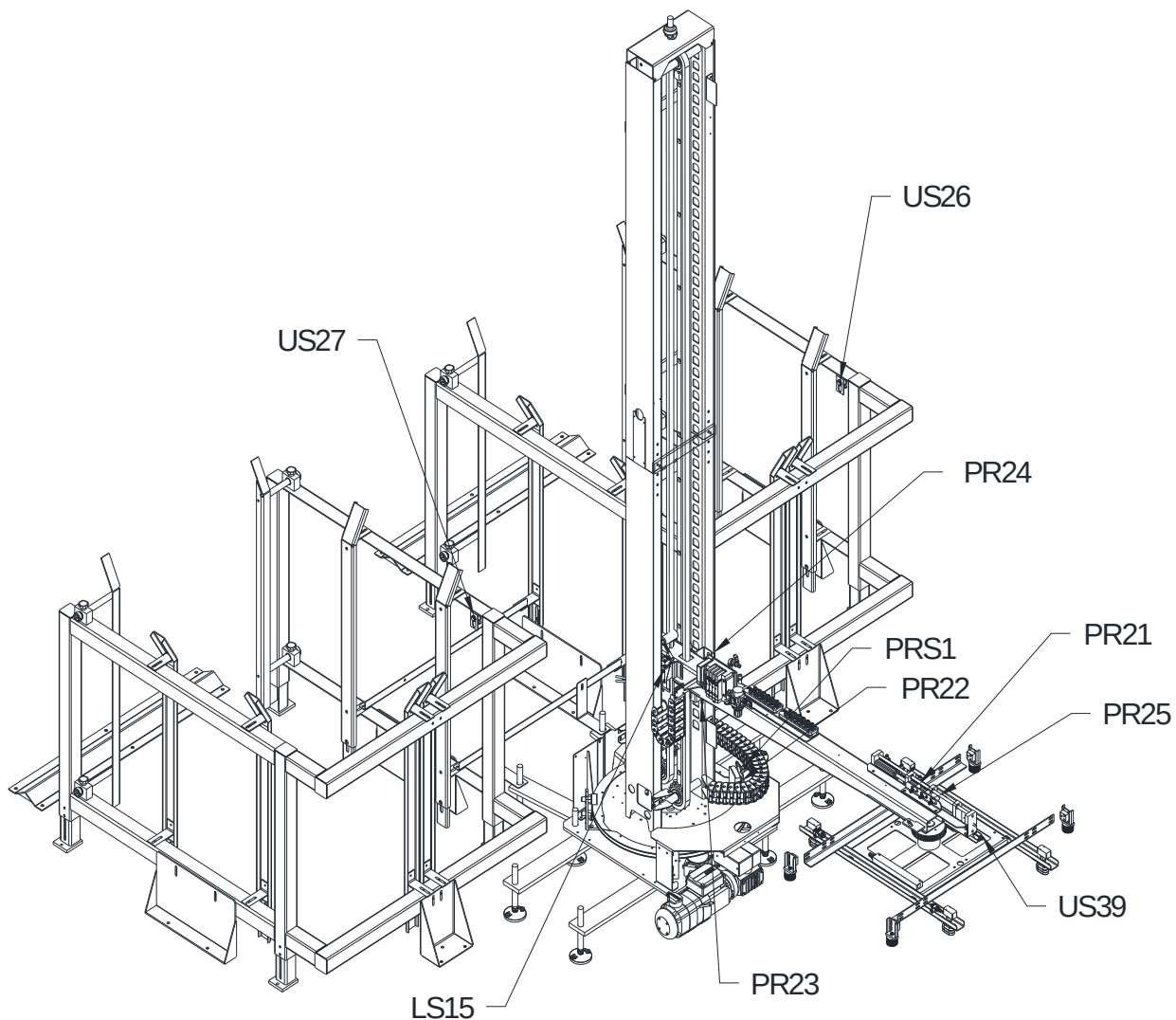


TECHNICAL MANUAL

MODEL "108"

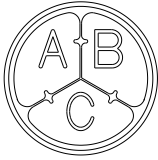
Sweep Off Bulk Depalletizer

PROXIMITY SENSOR & PHOTOEYE LOCATION



TIER SHEET REMOVER ASSEMBLY

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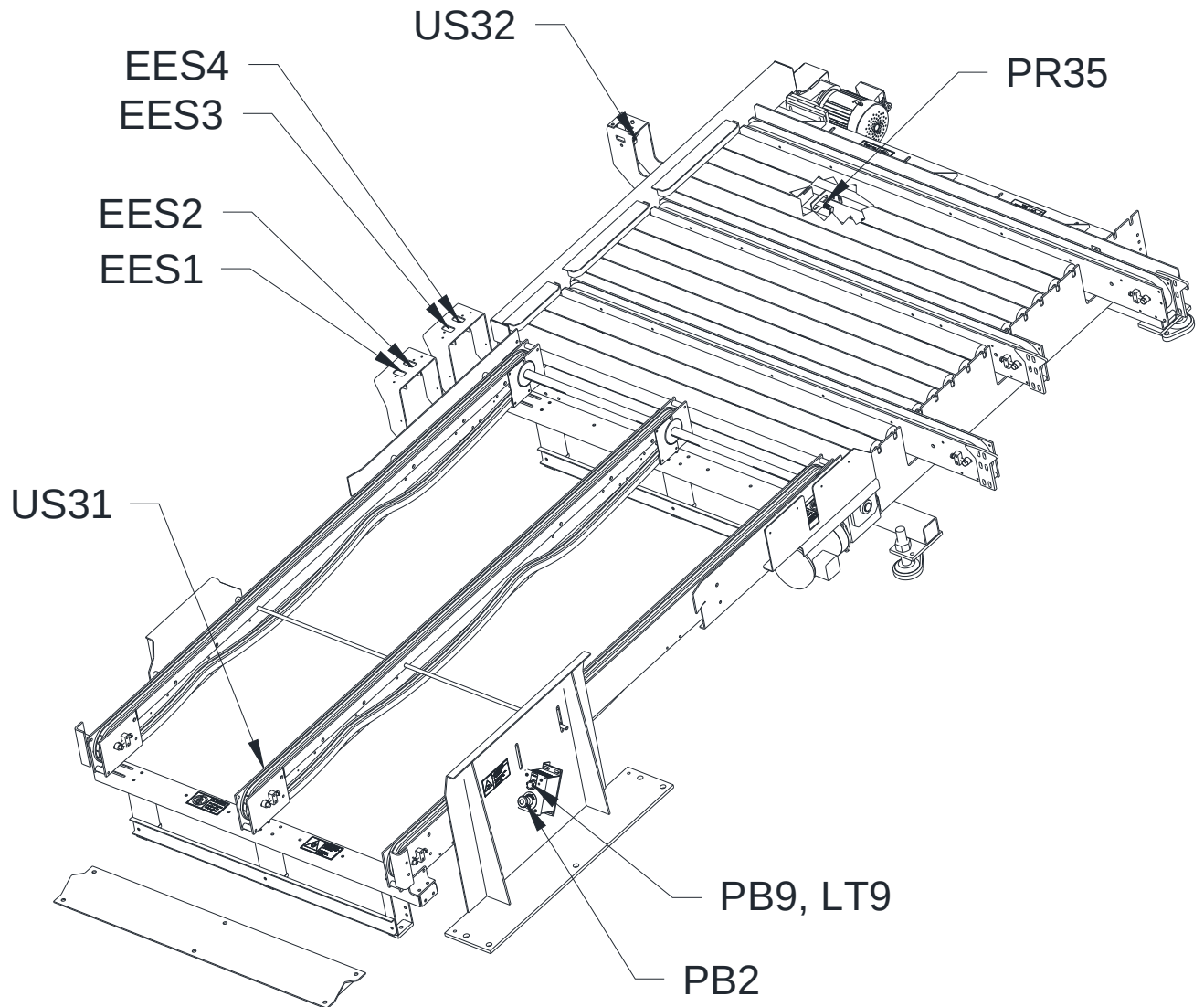


TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

PROXIMITY SENSOR & PHOTOEYE LOCATION



PALLETCONVEYORASSEMBLY

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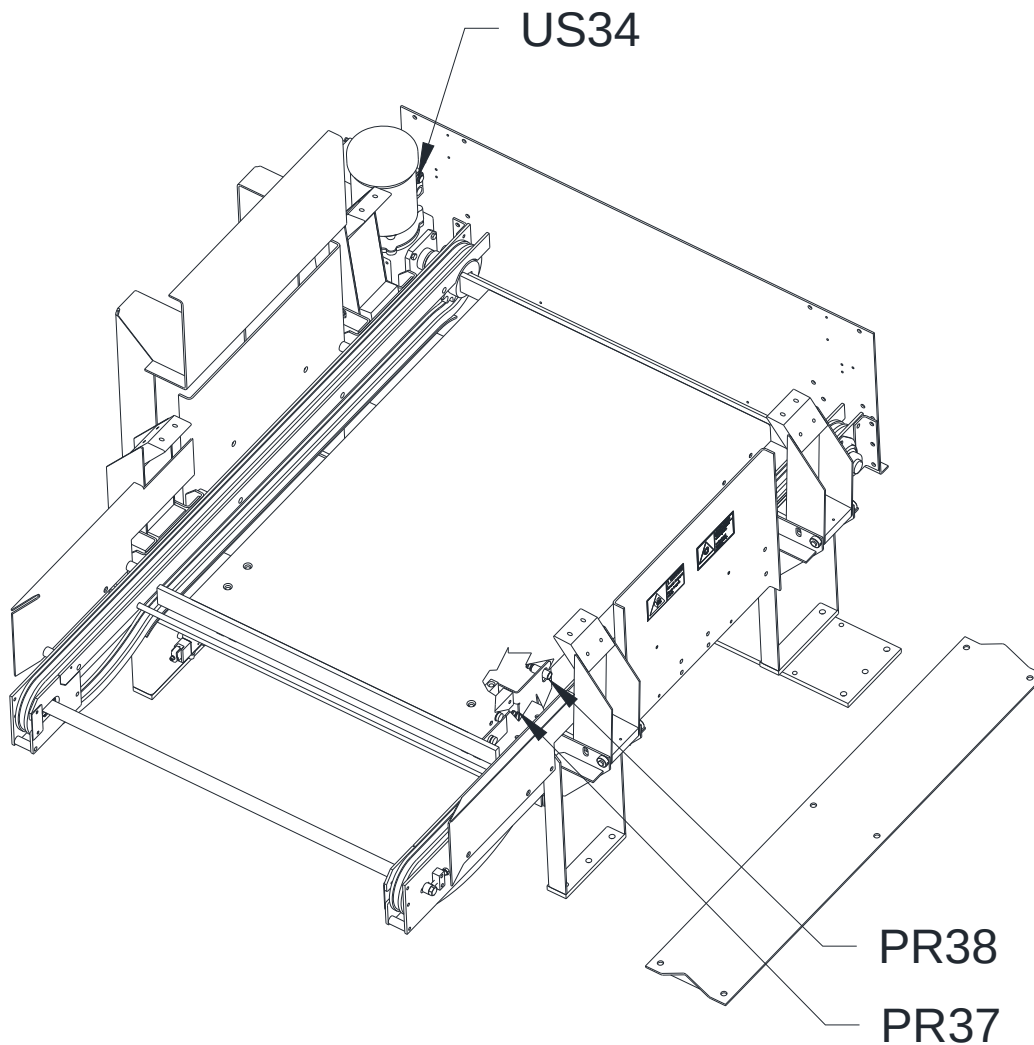


TECHNICAL MANUAL

MODEL "108"

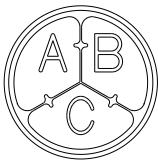
Sweep Off Bulk Depalletizer

PROXIMITY SENSOR & PHOTOEYE LOCATION



PALLET STACKER ASSEMBLY

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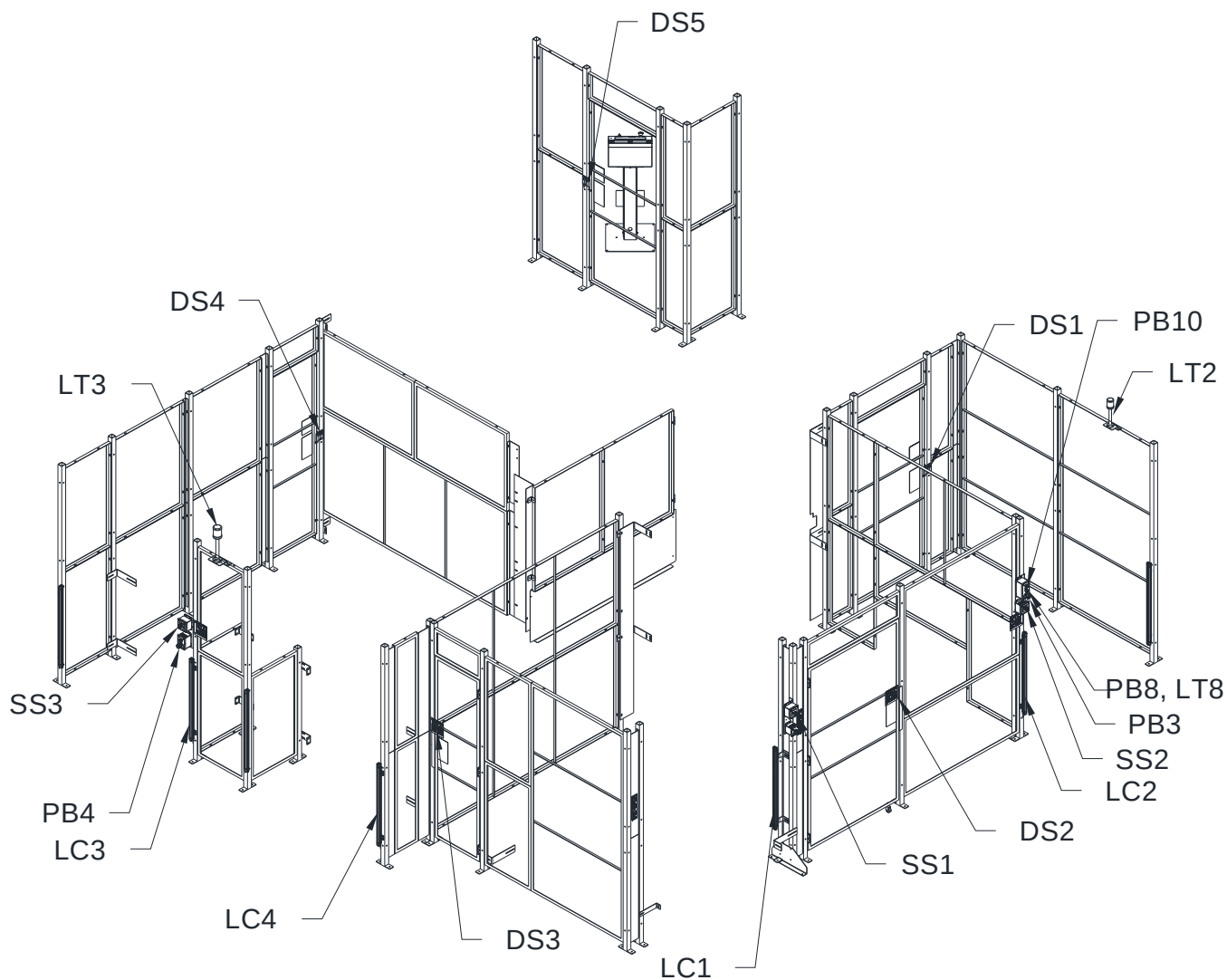


TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

PROXIMITY SENSOR & PHOTOEYE LOCATION



GUARDING ASSEMBLY

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

ELECTRICAL COMPONENT FUNCTION		
COMPONENT	FUNCTION	OPERATED BY
APS	AIR ON	SUPPLY PRESSURE
DS1/2/3/4/5	GUARD DOORS	DOOR MAGNET
EE1	ELEVATOR IS BELOW THE TOP LAYER OF BOTTLES ON THE PALLET	BOTTLES ON PALLET
EE5	PALLET LEANING FORWARD	PALLET LOAD
EE6	PALLET LEANING BACK	PALLET LOAD
EE7	PALLET LEANING LEFT	PALLET LOAD
EE8	PALLET LEANING RIGHT	PALLET LOAD
EE37	PRODUCT READY TO PUSH (RECTANGULAR)	BOTTLES ON BOTTLE CONVEYOR
EES1	INFEED MUTING EYE	FULL PALLET
EES2	INFEED MUTING EYE	FULL PALLET
EES3	INFEED MUTING EYE	FULL PALLET
EES4	INFEED MUTING EYE	FULL PALLET
ENC1	ENCODER (ELEVATOR)	ENCODER COUNT
ENC2	ENCODER (SWEEP BAR)	ENCODER COUNT
ENC3	ENCODER (SUPPORT BAR)	ENCODER COUNT
ENC4	ENCODER (PRODUCT CONVEYOR)	ENCODER COUNT
LC1	LIGHT CURTAIN AT INFEED	PRODUCT OR PERSON
LC2	LIGHT CURTAIN AT STACKER	PRODUCT OR PERSON
LC3	LIGHT CURTAIN AT BIN 1	PRODUCT OR PERSON
LC4	LIGHT CURTAIN AT BIN 2	PRODUCT OR PERSON
LT1	MACHINE STACK LIGHT (STATUS INDICATOR)	ILLUMINATED INDICATOR
LT2	SAETY ZONE PALLET STACKER	ILLUMINATED INDICATOR
LT3	SAETY ZONE PALLET TIER SHEET REMOVER	ILLUMINATED INDICATOR
LT9	FULL PALLET IS READY	ILLUMINATED INDICATOR
LT8	STACKER IS FULL	ILLUMINATED INDICATOR
LS13	LEFT CHAIN SLACK LIMIT SWITCH	ELEVATOR CHAIN
LS14	RIGHT CHAIN SLACK LIMIT SWITCH	ELEVATOR CHAIN
LS15	TSR CHAIN SLACK LIMIT SWITCH	ELEVATOR CHAIN
PB1/2/3/4	E-STOP BUTTON	PUSH BUTTON
PB7	MAIN MACHINE SAFETY RESET	PUSH BUTTON
PB8	RESET STACKER COUNT	PUSH BUTTON
PB9	PALLET READY FOR INFEED	PUSH BUTTON
PB10	SAFETY RESET PALLET STACKER	PUSH BUTTON
PB11	SAFETY RESET REMOTE	PUSH BUTTON

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

ELECTRICAL COMPONENT FUNCTION		
COMPONENT	FUNCTION	OPERATED BY
PR1	ELEVATOR IS ALL THE WAY UP	FLAG ON ELEVATOR
PR11	SWEEP BAR IS AT HOME POSITION	SWEEP BAR FLAG
PR20	SUPPORT BAR IS AT HOME POSITION	SUPPORT BAR FLAG
PR21	TIER SHEET REMOVER AT BIN 1	FLAG
PR22	TIER SHEET REMOVER AT CONVEYOR	CARRIAGE FLAG
PR23	TIER SHEET REMOVER DOWN	VACUUM CUP SUPPORT FRAME
PR24	TIER SHEET REMOVER UP	VACUUM CUP SUPPORT FRAME
PR25	TIER SHEET REMOVER AT BIN 2	FLAG
PR26	ELEVATOR DOWN OVER TRAVEL	ELEVATOR FLAG
PR27	PALLET STOP	PALLET STOP FLAG
PR28	PALLET STOP	PALLET STOP FLAG
PR3	ELEVATOR SAFETY BLOCKS OPEN	LEFT SAFETY BLOCK
PR37	PALLET STACKER IS DOWN	STACKER TABLE FLAG
PR38	PALLET STACKER IS UP	STACKER TABLE FLAG
PR4	ELEVATOR SAFETY BLOCKS OPEN	RIGHT SAFETY BLOCK
PR5	STOP BAR IS DOWN	STOP BAR
PR6	TABLE EXTENDED OUT TO PALLET	TABLE FLAG
PR7	TABLE RETRACTED TO OPEN POSITION	TABLE FLAG
SS1	SAFETY BYPASS SELECTOR SWITCH INFEED	OPERATOR
SS2	SAFETY BYPASS SELECTOR SWITCH STACKER	OPERATOR
SS3	SAFETY BYPASS SELECTOR SWITCH TSR	OPERATOR
SS5	HMI SELECTOR SWITCH	OPERATOR
US26	TRS BIN 1 FULL	TIER SHEET
US27	TRS BIN 2 FULL	TOP FRAME
US31	PALLET IN PLACE (1ST STATION)	PALLET
US32	PALLET IN PLACE (AT STAGING 1)	PALLET
US33	PALLET IN PLACE (AT DDEPALLETIZING)	PALLET
US34	PALLET IN PLACE (STACKER)	PALLET
US38	PRODUCT BACK UP	BOTTLES
US39	TIER SHEET HELD	TIER SHEET
US4	PRODUCT BACK-UP	BOTTLES ON BOTTLE CONVEYOR

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

TROUBLESHOOTING OVERVIEW

The information in this section should help you solve many of the problems and probable causes that may happen with your machine. This manual is intended to describe only the basic machine.

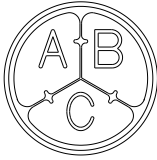


Do not work on an energized machine. Do not work on the machine if you are not fully trained or qualified to service A-B-C packaging machines or if you do not fully understand the materials in this manual and/or your company safety manual(s). Contact A-B-C Packaging Machine Corporation for any troubleshooting procedure not described in this manual.



Certain troubleshooting procedures may only require the machine to be energized but **BUT NOT CYCLING**, such as testing for air flow to a part. It is very important to energize the machine only to complete the necessary task and then **de-energize the machine again.**

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

1. Machine will not go into auto mode

Causes:

- A. Machine not in start position – table out, elevator up, stop bar up, sweep bar all the way back, support bar at edge of table.

Note: When each of these conditions is met, a switch is made – except the support bar (which is just a momentary contact). All switches must stay made.

- B. Pallet stacker is not in auto.
- C. EE-1 is misaligned.
- D. Upper or lower over travel switches are made.
- E. Hand / Auto switch broken.
- F. Low or no air pressure.

Note: Sometimes turning off and on main power will reset machine.

2. Machine comes into auto – elevator comes down, table comes out and sweep and support bars close on the bottom layer, but machine will not cycle.

Causes:

- A. Stop bar home switch PR-11 not being made.
- B. Table at pallet sensor PR-7 not being made.

3. Elevator moves down on stack but won't stop and stop bar knocks over layers as elevator moves down.

Causes:

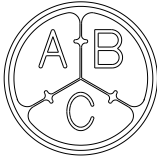
- A. Layer height proximity switch PR-5 is not being made by stop bar.

4. Layer sweeps onto elevator table but won't stop on table

Causes:

- A. Encoder ENC2 missed count
- B. Coupling loose or broken
- C. Bad cable connection

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

5. Pallet has been completed but will not run out.

Causes:

- A. Pallet stacker is full.
- B. Pallet in place, switch or eye is no longer made.
- C. Pallet stacker up switch is not made.
- D. Pallet in place at stacker sensor is made.

6. New pallet will not run in.

Causes:

- A. Switch or eye for pallet in place is still made.
- B. Pallet ready switch has not been made.
- C. Pallet staged switch not made by pallet.
- D. Empty pallet run out still latched – waiting for pallet to run out in auto, make the pallet in place at stacker sensor with a flag

7. New pallet runs in but stop bar will not come down.

Causes:

- A. Pallet in place, switch or eye is not made.
- B. No air supply.

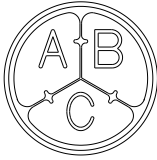
8. Layer will not sweep off elevator table onto bottle conveyor.

Causes:

- A. Bottle conveyor table full eye EE-4 is made. Test eye function and check input to PLC don't just look at LED on eye.
- B. Support bar is jammed or valve is defective.

Note: Also see problem # 18 & 27.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

9. Rear corner bottles are smashing on table guides or being knocked over as layer is sweeping onto elevator table.

Causes:

- A. Table is shifting in too fast.
- B. Table guides misadjusted.

10. Pallet conveyor drive is dropping out electronic overload.

Causes:

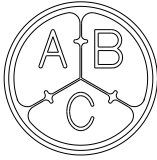
- A. Conveyor tube sprocket broken or bent.
- B. Pallet guide rail is dragging on conveyor
- C. Motor is bad.
- D. Drive unit is bad.
- E. Not enough acceleration time on VFD.
- F. Incoming power problem.
- G. Not enough deceleration time.

11. Elevator table is stopping at different heights at bottle conveyor.

Causes:

- A. Actuator flag bent.
- B. Frequency (Hz) for drive has changed or elevator binding.
- C. Elevator motor MTR1 brake needs adjustment or replace.
- D. Motor MTR1 is faulty.
- E. Excessive side to side play on elevator.
- F. Worn or loose upper elevator sprockets, or sprocket keys worn or shaft key-way worn.
- G. Excessive play in elevator drive gearbox / motor unit.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

12. Support bar leads sweep-bar and causes large gap when sweeping bottles onto elevator table.

Causes:

- A. Sweep bar is binding.
- B. Sweep motor faulty.
- C. Sweep or support drive (VFD) faulty or incorrectly set.

13. Tier sheet is being pulled onto elevator table even when grippers grab.

Causes:

- A. Table shifting too soon or too fast.
- B. Squaring sides are not in far enough to clamp tier sheet.

14. Overload or OP & OC lights come on motor frequency (Hz) drive units.

Causes:

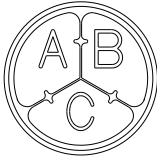
- A. Fuse on one of the inlet power legs is blown.
- B. Chain or sprocket causing drag.
- C. Motor is defective.
- D. Defective drive board in drive unit.
- E. Deceleration or acceleration too short on VFD.

15. Machine goes into auto but will not move down onto stack.

Causes:

- A. EE-1 is blocked, defective, or not seeing reflector or sender.
- B. Pallet is no longer being detected in place.
- C. Motor overloaded
 - I. Check brake contactor and wires.
 - II. Check brake solenoid.
 - III. Check drive unit.
 - IV. Check for elevator bind.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

16. Machine sweeps layer onto bottle table correctly, but sweep and support bars stop on table when returning and elevator has not moved from sweep off height.

Causes:

- A. Encoders ENC2 and/or ENC3 missed count.
 - I. Check for loose coupling or cable connection.

17. Machine drops out of auto and operator must push auto start button to restart.

Causes:

- A. Frequency drive or drives pulses off or fault, but this happens too quickly to pull in fault relay so machine just drops out of auto.
 - I. Normally it's the sweep bar returning that causes this. However, once you locate the drive responsible for the pulse, lengthen the deceleration time.
- B. Check chain slack switches for bounce.
- C. Check selector switch hand / auto for loose contact.
- D. Check sweep, support, and elevator chains and sprockets for bind.
- E. Check air pressure switch for pulse or false trip.

18. Machine sweeps layer off of pallet onto table but the table does not return so elevator can move.

Causes:

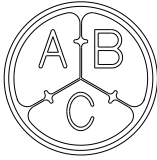
- A. Encoder ENC2 missed count.
- B. Valve did not actuate.
 - I. Check to see if output for table return is on. If so, then valve is bad or output is bad.
- C. PR11 or pr20 was energized when sweeping.

19. Machine sweeps layer onto table. Table returns but elevator does not move.

Causes:

- A. PR-7 table returned not made or is bad.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

20. Bottles are falling when going onto conveyor.

Causes:

- A. Rails are not flush with side guides on table.
- B. Table is not stopping at correct height.
 - I. Check encoder setting for product height

21. Support bar does not follow sweep bar after bottles are swept onto table. This causes the support bar to hit cross member.

Causes:

- A. Encoders ENC2 and/or ENC3 missed count.
 - I. Check for loose coupling or cable connection.

22. Machine sweeps layer in midair.

Causes:

- A. Encoder ENC2 is faulty.
- B. Cable connection loose.

23. Machine starts in auto elevator comes down to squaring height and stops and then table won't extend, support bar, and sweep won't move and stop bar won't go up.

Causes:

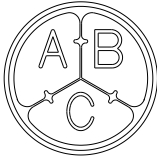
- A. Brake relay not turning off. Test for this by:
 - I. Input on / off.
 - II. Remove input wire from brake relay and restart.
- B. EE21 input on. Check eye and input. Should not be on in this position.

24. Machine is running normal and it sweeps a layer onto the bottle table. The sweep bar returns and the support starts to return but stops midway.

Causes:

- A. Encoder ENC3 is faulty.
- B. Cable connection loose.

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

25. A layer is being swept onto the bottle conveyor and the support bar all of a sudden starts reversing. It does this at the same place every time.

Causes:

A. PR-6 is being tripped or is stuck on with input staying on.

26. Machine is in auto and sweeps a layer onto the elevator table but the elevator table doesn't retract, and the machine stops.

Causes:

A. Encoder ENC2 is faulty.

B. Cable connection loose.

C. The output is coming on, but the valve SOL3 is not operating.

D. The cylinder is disconnected from the table.

E. The table is jammed.

27. A layer is on the elevator at the bottle table height, and when the operator tries to sweep it off in manual, the message "not at bottle table height" comes on and the sweep bar won't move, this problem happens intermittently.

A. Encoder ENC2 is faulty.

B. Cable connection loose.

28. Elevator lowers down to layer and stop bar raises up to home position and elevator slows down but won't stop. Elevator continues to creep down finally stopping several layers low and starts to sweep.

A. Encoder ENC2 is faulty.

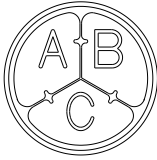
B. Cable connection loose.

28. Infeed light curtain is block by pallet load, pallet load can not be moved in auto or hand mode.

A. Infeed guard eye is in mute mode while pallet load is infeeding. Due to power loss, e-stop or drive fault pallet load is blocking photo eye.

To Recover, access hand function screen and press INFEED SECTION FORWARD or REVERSE button for several seconds until the master contactor will power up and the PLC will command the VFD to start forward or reverse. Repeat procedure if infeed guard photo eye is still blocked.

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

**Technical Reference Drawings
and Parts Lists**

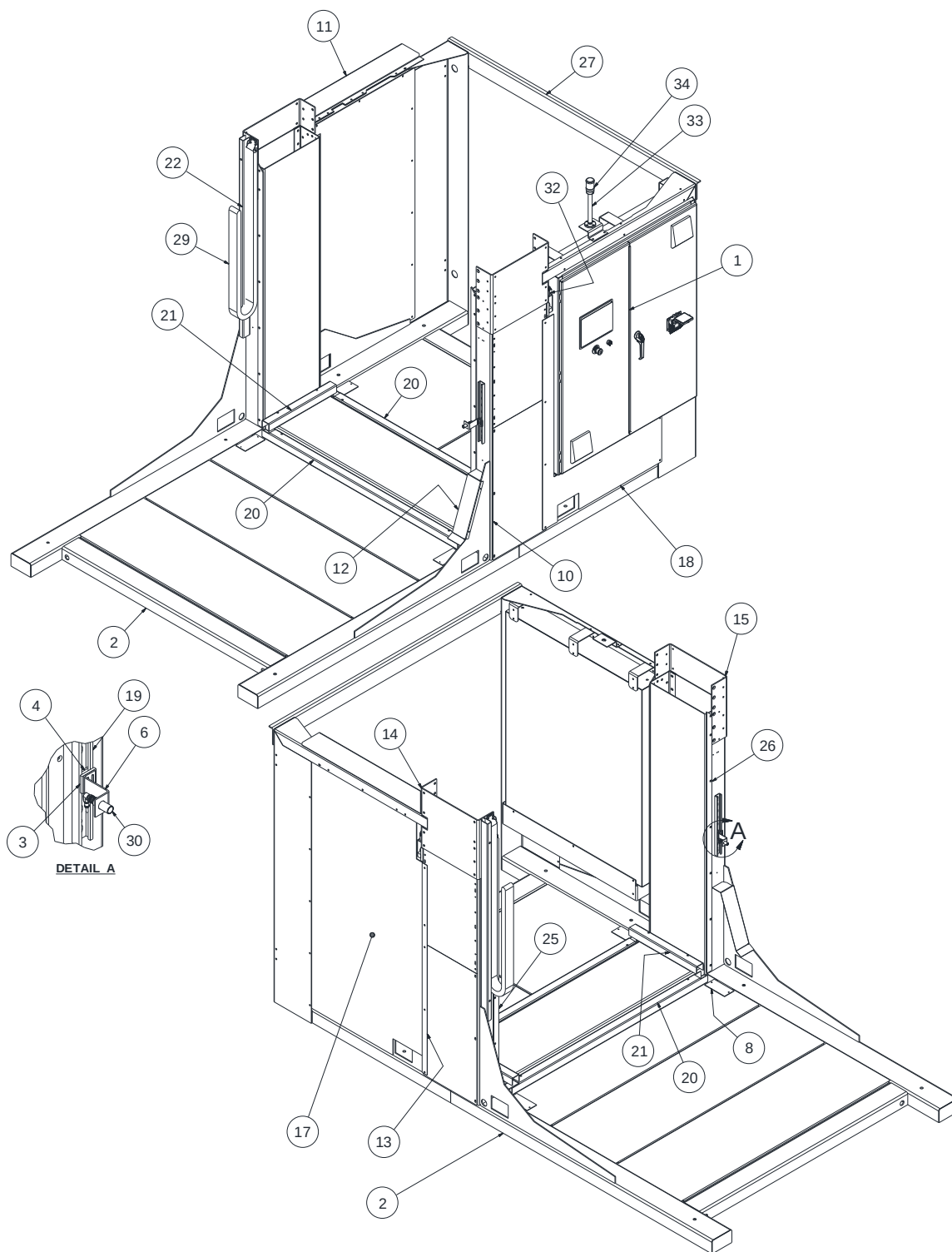
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TECHNICAL MANUAL

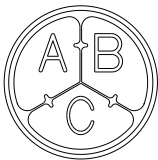
MODEL "108"

Sweep Off Bulk Depalletizer

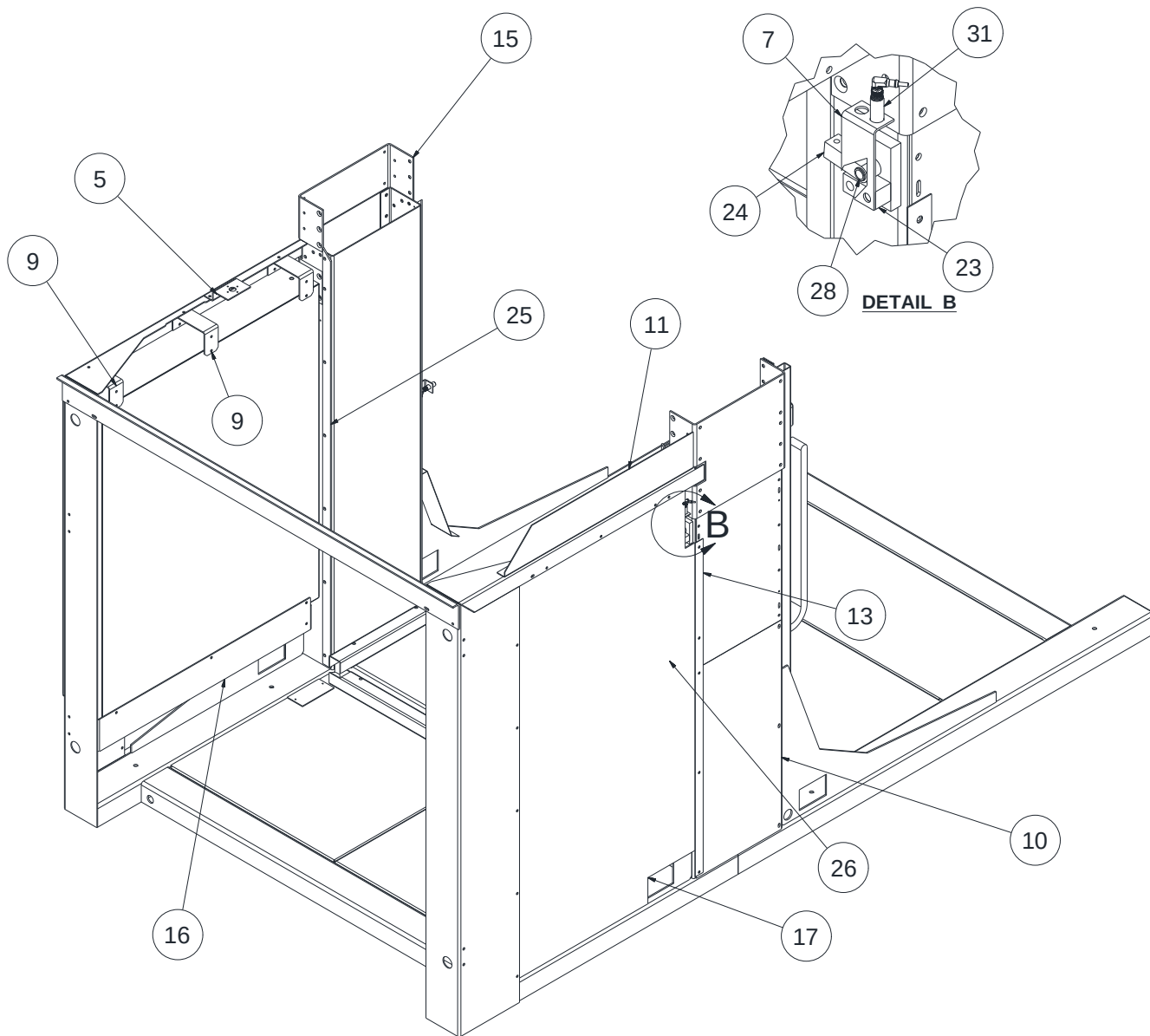


Base Frame Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



Base Frame Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

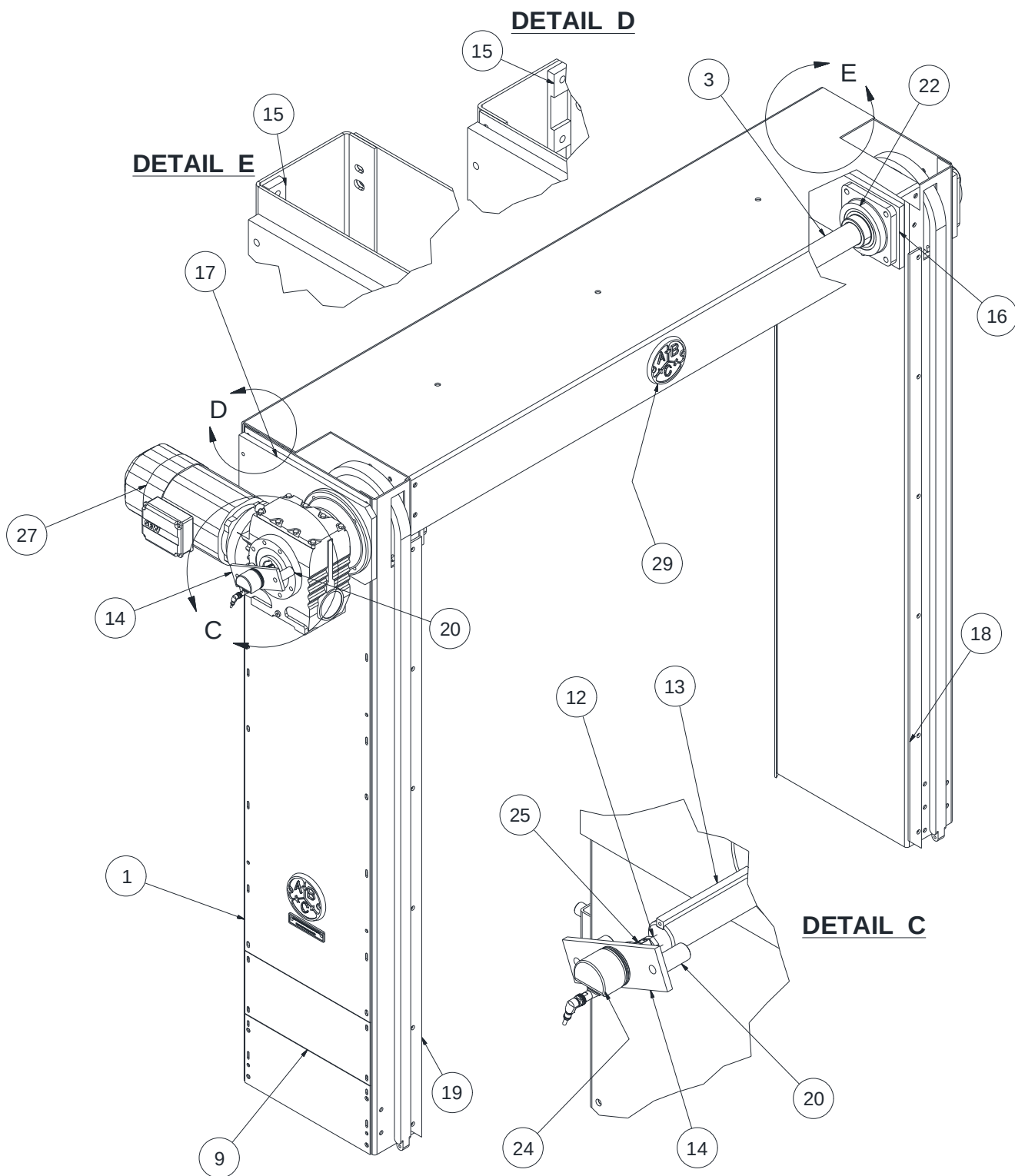
Base Frame Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	15C16294	ENCLOSURE DOOR LAYOUT
2	1	20E1224	LOWER MAIN FRAME WELD RH DUAL ENCL.
3	1	60A52259	BACK UP PLATE
4	1	60A52260	NUT PLATE
5	1	60A52786	BEACON LIGHT MTG. PLATE
6	1	60A57337	PROX BRACKET ELEVATOR COLUMN
7	2	60A58215	BLOCK COVER
8	4	60A69839	TOP COVER CONVEYOR
9	3	60A75668	ENCLOSURE TOP BRACKET
10	2	60B69347	LOWER XL COVER PLATE
11	1	60B69807	UPPER GUARD LH
12	1	60B80718	SENSOR BLOCK GUARD RH
13	1	60C50204	RH REAR GUARD CLAMP
14	1	60C69349	LOWER XL COLUMN SPLICE LH
15	1	60C69350	LOWER XL COLUMN SPLICE RH
16	1	60C80712	ENCLOSURE BOTTOM SUPPORT RH
17	1	60D50205	LH REAR GUARD
18	1	60D69351	ENCLOSURE SIDE GUARD PANEL
19	1	61A3982	CHANNEL
20	2	61B6597	CROSS TUBE
21	2	61B6598	CROSS TUBE
22	1	61B6649	CABLE TUBE COLUMN
23	2	62A31486	SUPPORT BLOCK
24	2	62A31825	HOIST BLOCK
25	2	62B31268	LOWER CAM ROLL TRACK LH
26	2	62B31269	LOWER CAM ROLL TRACK RH
27	1	62D21916	TIE ANGLE
28	2	63A11323	HOIST BLOCK PIVOT
29	1	75A843	IGUS ENERGY CHAIN 47 LINKS
30	1	P66-27093 (PR26)	PROXIMITY SENSOR
31	1	P66-27093 (PR3)	PROXIMITY SENSOR
32	1	P66-27093 (PR4)	PROXIMITY SENSOR
33	1	P66-7508	50MM STACK LIGHT BASE / POLE MOUNT
34	1	P66-7509	50MM LED STACK LIGHT, RED, 24V

SERIAL NUMBER **24464**

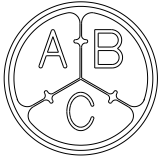


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

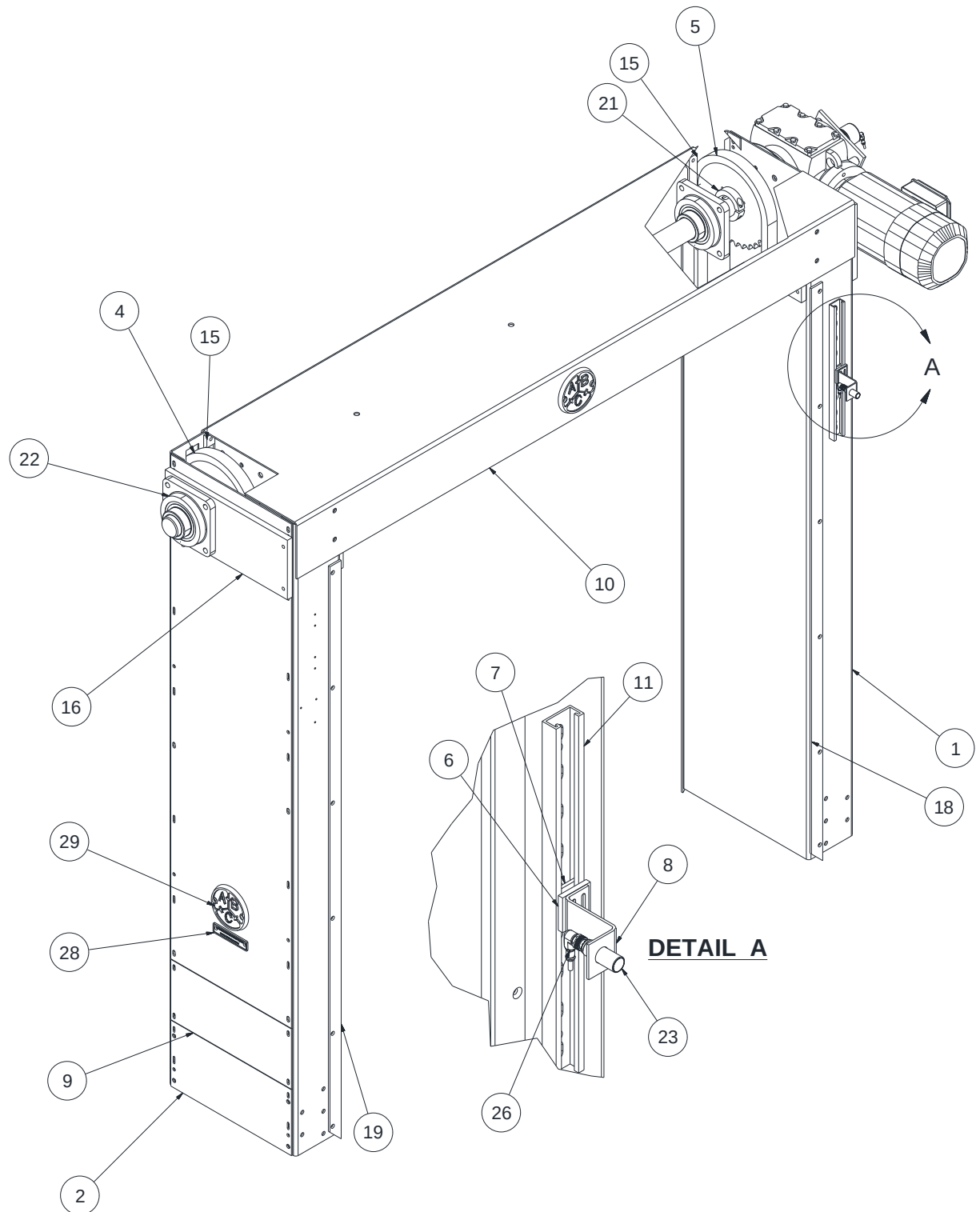


Upper Frame Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



Upper Frame Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

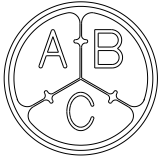
MODEL "108"

Sweep Off Bulk Depalletizer

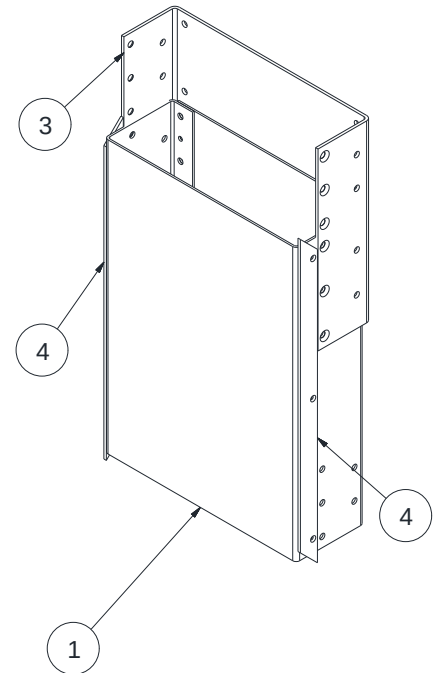
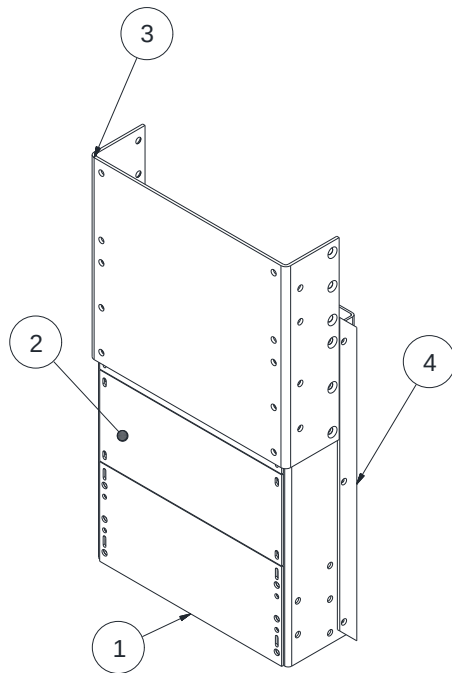
Upper Frame Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	20D0742	EXTENDED RH UPPER COLUMN WELDMENT
2	1	20D0743	EXTENDED LH UPPER COLUMN WELDMENT
3	1	47B6236	UPPER DRIVE SHAFT
4	2	48A486	HOIST CHAIN 80H X 153"
5	2	4A5344-2163	"QD" SPROCKET
6	1	60A52259	BACK UP PLATE
7	1	60A52260	NUT PLATE
8	1	60A57337	PROX BRACKET ELEVATOR COLUMN
9	2	60B73682	COVER PLATE XL W/O HOLES
10	1	60D69353	TOP COLUMN BRACE
11	1	61A3982	CHANNEL
12	1	62A31441	ENCODER ADAPTER SHAFT
13	1	62A35110	MAIN DRIVE KEY
14	1	62A37960	ENCODER MTG PLATE, HOIST
15	4	62A39418	NUT PLATE
16	3	62B35127	BEARING MOUNTING PLATE
17	1	62B35128	GEARMOTOR MOUNT HOIST
18	2	62C37084	EXTENDED UPPER CAM ROLL TRACK RH
19	2	62C37085	EXTENDED UPPER CAM ROLL TRACK LH
20	2	63A11184	LINKAGE ARM SPACER
21	4	P110-157	SPLIT COLLAR 2.5 DIA
22	3	P44-1147	4 HOLE FLANGE BEARING 2.5 DIA
23	1	P66-27093 (PR1)	PROXIMITY SENSOR
24	1	P66-43031	ENCODER
25	1	P66-43020	HI-FLEX COUPLING
26	2	P66-6966	CABLE
27	1	P71-2137	HOIST GEARMOTOR
28	2	P83-003	ABC NAMEPLATE
29	4	P83B004	A-B-C LOGO PLATE

SERIAL NUMBER **24464**



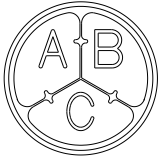
TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



Column Middle Section Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	20D0394	MIDDLE COLUMN WELDMENT
2	2	60B73682	COVER PLATE XL W/O HOLES
3	2	60C69374	UPPER XL COLUMN SPLICE
4	4	62B31272	MIDDLE CAM ROLL TRACK

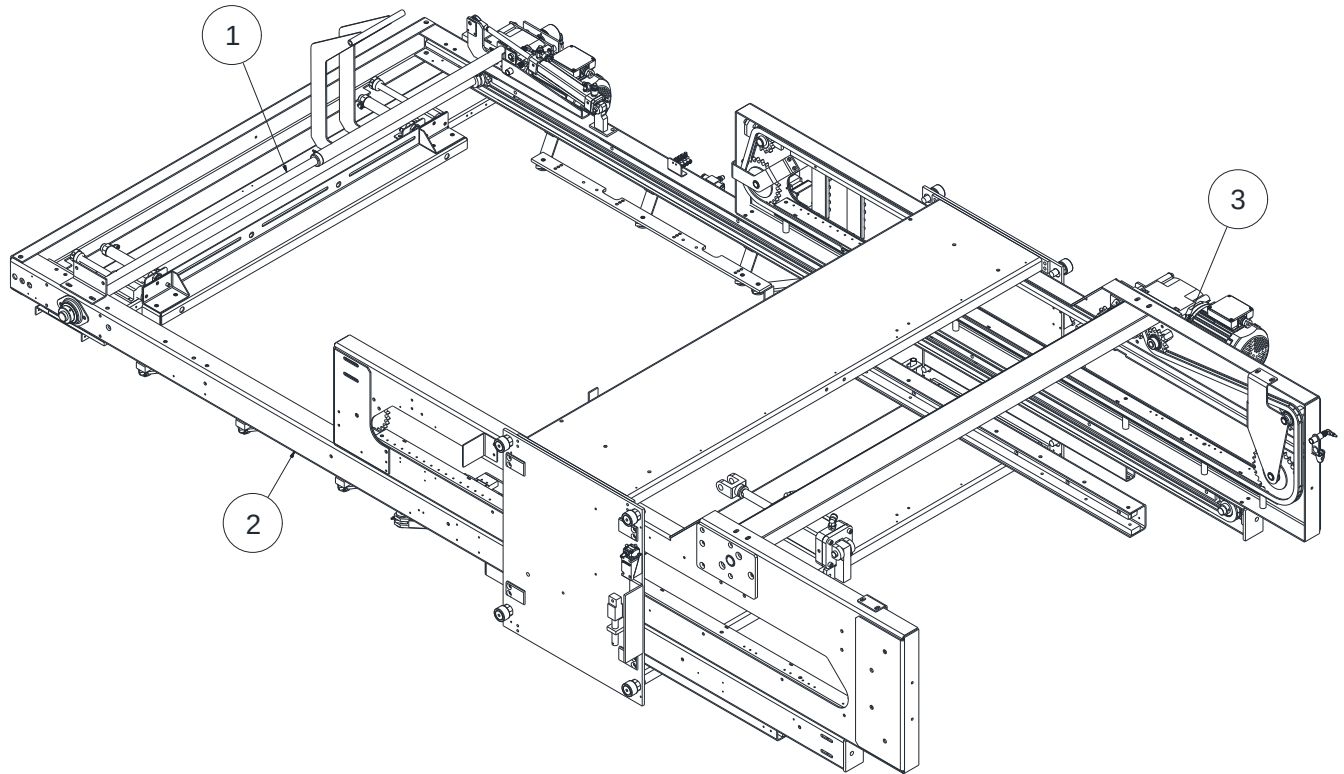
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Elevator Frame Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	15D15446	ELEVATOR STOP BAR ASSY RH IO LINK
2	1	15E16959	LOWER XL SIDE FRAME ASSY RH, IO, BROTHER
3	1	15E16960	UPPER SIDE FRAME ASSY RH, BROTHER IO

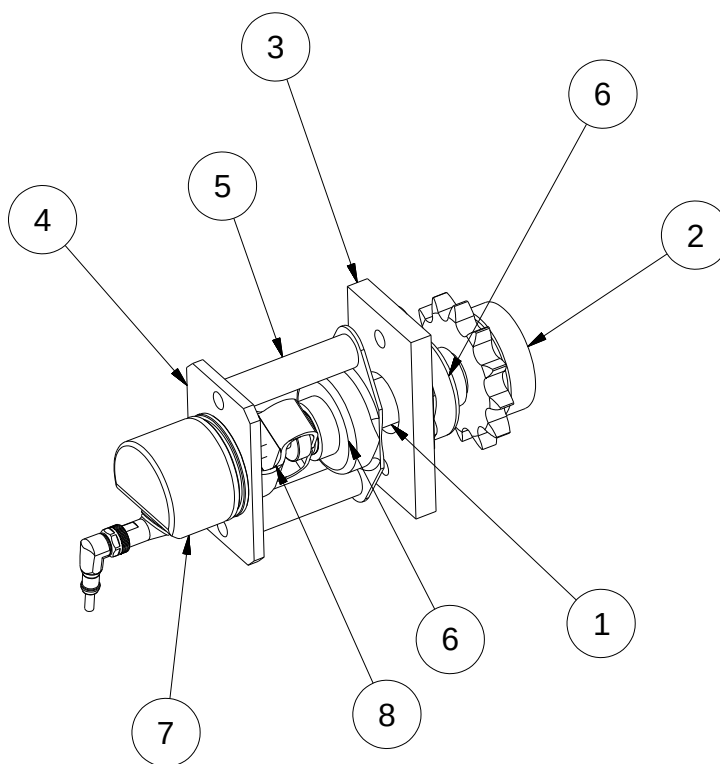
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TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

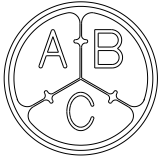


Support Bar Encoder Assembly & Parts List

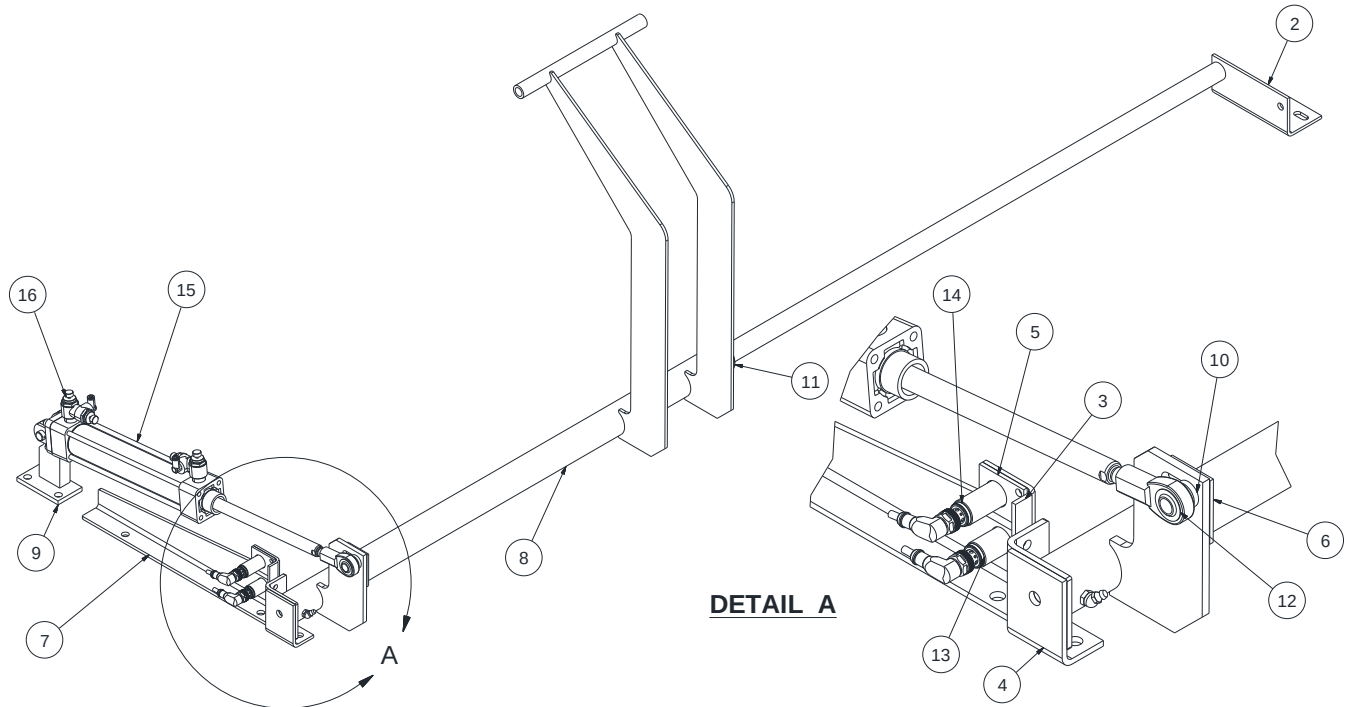
REF. (15C16961)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	47A6552	ENCODE DRIVE SHAFT
2	1	60BS12-1	SPROCKET 3/4P, 12T, 1.0B, 1/4KW
3	1	62A36876	BEARING SPACER PLATE
4	1	62A37959	ENCODER MTG. PLATE, IO LINK
5	2	63A13861	SPACER, SUPPORT BAR IO LINK ENCODER
6	2	P44-358	NICE, #6916 1" FLANGE BRG.
7	1	P66-43031	ABSOLUTE ENCODER
8	1	P66-43020	HI-FLEX COUPLING

SERIAL NUMBER **24464**



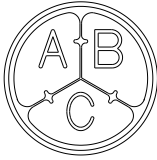
TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



Stop Bar Assembly & Parts List **REF. (15D15446)**

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	47A5058	PIVOT SHAFT
2	1	60A51634	ACTUATING ARM SUPPORT
3	1	60A54736	PROX. MOUNTING BRACKET
4	1	60A57056	ARM SUPPORT BRACE CLIP
5	1	60A69826	PROX LOCATING PLATE
6	1	60A69827	STOP ARM LOCATING PLATE
7	1	60B72084	ACTUATING ARM SUPPORT (ENCODER) LH
8	1	61C4011	ACTUATING ARM
9	1	62A37406	CYLINDER MOUNT
10	1	63A10699	ROD END SPACER
11	1	P110-007	COLLAR, 1" ID
12	1	P115-091	FEMALE ROD END
13	1	P66-27093 (PR11)	PROXIMITY SENSOR
14	1	P66-27093 (PR5)	PROXIMITY SENSOR I/O
15	1	P67-2316	SMC AIR CYLINDER 1.5"B X 7"S
16	2	P69-727	DUAL FLOW CONTROL

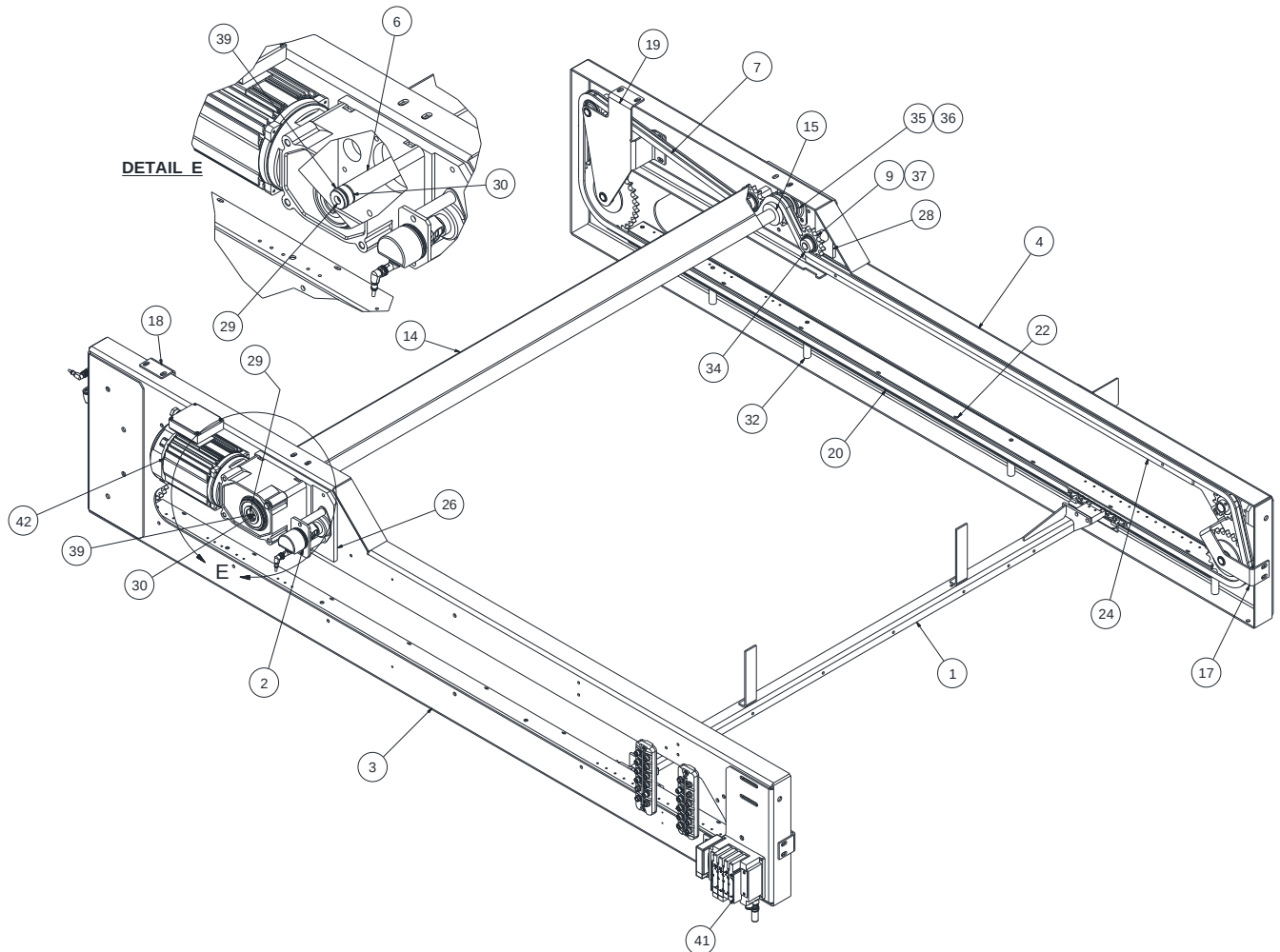
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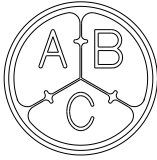
MODEL "108"

Sweep Off Bulk Depalletizer



Upper Elevator Frame Assembly
REF. (15E16960)

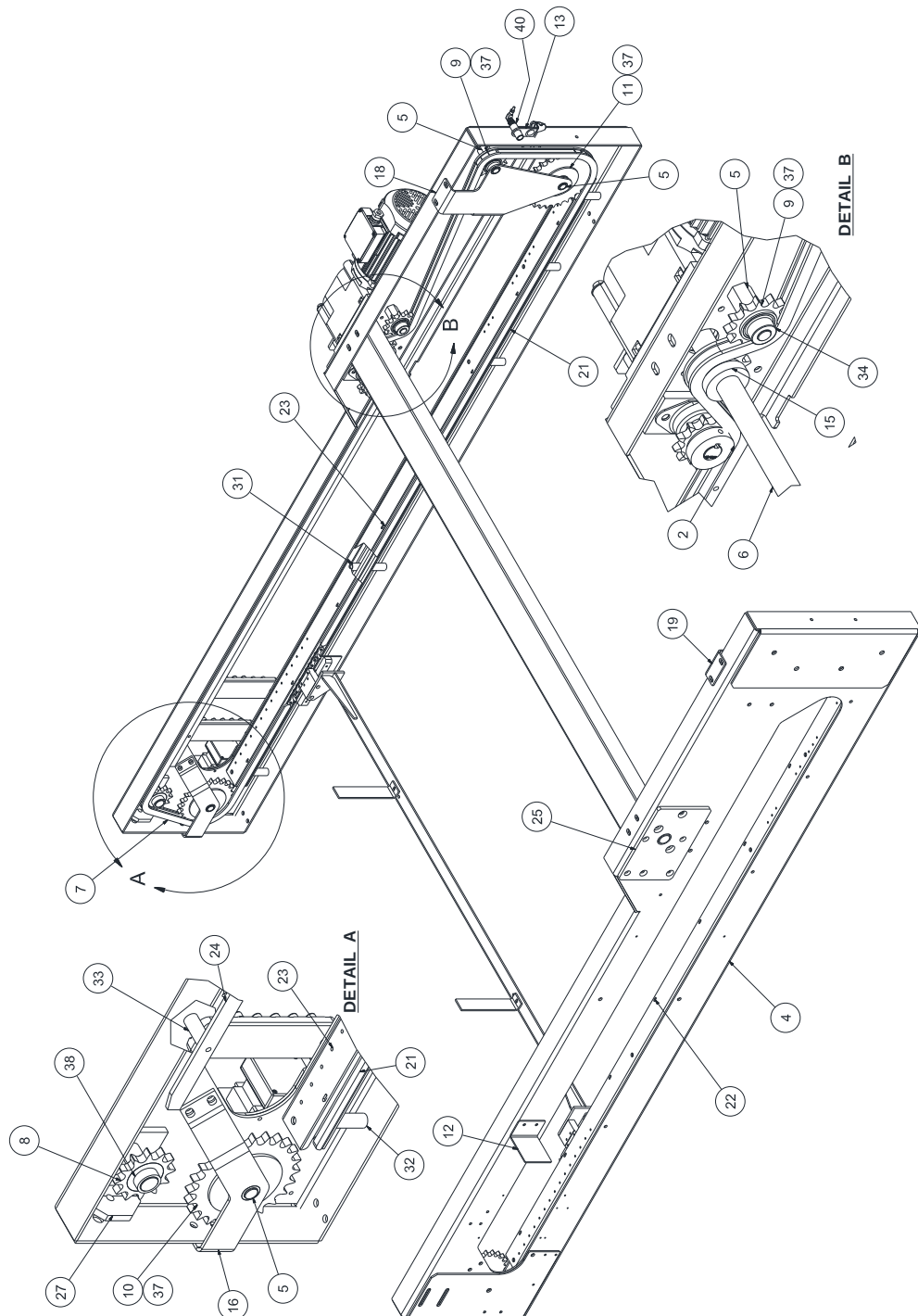
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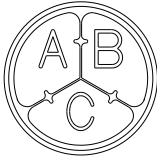
MODEL "108"

Sweep Off Bulk Depalletizer



Upper Elevator Frame Assembly
REF. (15E16960)

SERIAL NUMBER **24464**



TECHNICAL MANUAL

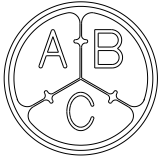
MODEL "108"

Sweep Off Bulk Depalletizer

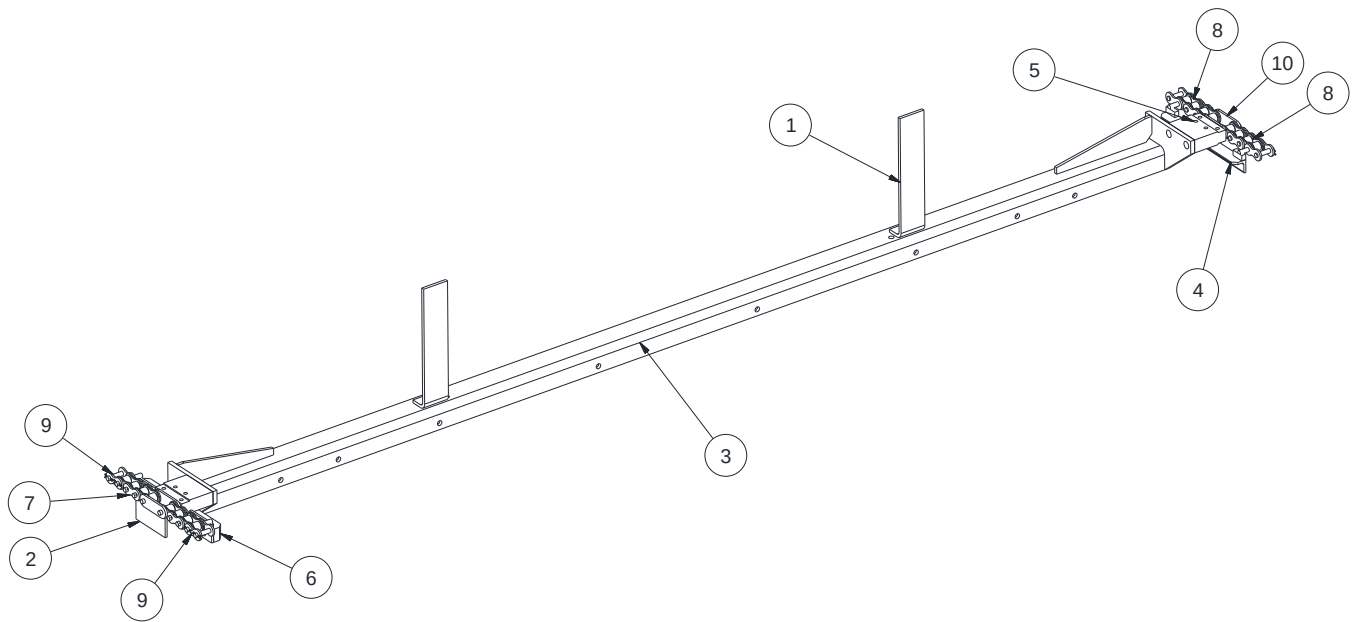
Upper Elevator Frame Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	15B13526	SUPPORT BAR ASSY LH FOR ENCODER I/O
2	1	15C16961	SUPPORT BAR ENCODER ASSY IO LINK
3	1	20D0700	UPPER XL SIDE FRAME WELDMENT LH
4	1	20D0701	UPPER XL SIDE FRAME WELDMENT RH
5	8	46A1304	IDLER SHAFT
6	1	47A4802	SHAFT - CHAIN DRIVE
7	2	48A230	SUPPORT BAR CHAIN (ENCODER)
8	2	4A4121-1687	IDLER SPROCKET
9	5	4A4122-1712	IDLER SPROCKET
10	2	4A4242-1631	IDLER SPROCKET
11	2	4A4312-1719	IDLER SPROCKET
12	1	60A57336	PROX FLAG ELEVATOR
13	1	60A77564	SWIVEL MOUNT EYE BRACKET
14	1	60B74018	ELEVATOR CROSS TIE
15	2	60BS12-1.25	SPROCKET 3/4P, 12T, 1.25B, 1/4KW
16	1	60C70000	SINGLE SPROCKET SUPPORT LH
17	1	60C70001	SINGLE SPROCKET SUPPORT RH
18	1	60C74008	TWIN SPROCKET SUPPORT LH
19	1	60C74009	TWIN SPROCKET SUPPORT RH
20	1	60D60677	CHAIN GUIDE SUPPORT BAR RH
21	1	60D60678	CHAIN GUIDE SUPPOER BAR LH
22	1	60D60690	CHAIN GUIDE SUPPORT BAR UPPER
23	1	60D60691	CHAIN GUIDE SUPPORT BAR UPPER
24	2	62A24622	CHAIN SUPPORT
25	1	62A36879	IDLER NUT PLATE RH
26	1	62A37816	MOTOR MTG PLATE, BROTHER
27	2	62B17968	CHAIN TENSIONER
28	1	62B36881	IDLER MTG PLATE
29	1	63A10603	IDLE SPROCKET RETAINER
30	1	63A13817	GEARBOX BORE SPACER
31	10	63A7291	CHAIN GUIDE SPACER
32	10	63A8548	CHAIN GUIDE RISER
33	4	63A8549	STAND OFF
34	3	P110-005	3/4" STD. COLLAR
35	1	P43-040	2 HOLE BEARING ADAPTER
36	1	P44-016	BALL BEARING 1-1/4 ID
37	9	P44-075	BEARING
38	2	P44-766	BEARING, 1", NICE 7616-DLG
39	1	P55-072	RETAINING RING 1.25 INTERNAL
40	1	P66-27093 (PR20)	PROXIMITY SENSOR
41	1	P69-4146	SMC 4 STATION VALVE BANK I/O LINK
42	1	P71-2172	BROTHER GEARMOTOR, 1HP, 90RPM

SERIAL NUMBER **24464**



TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



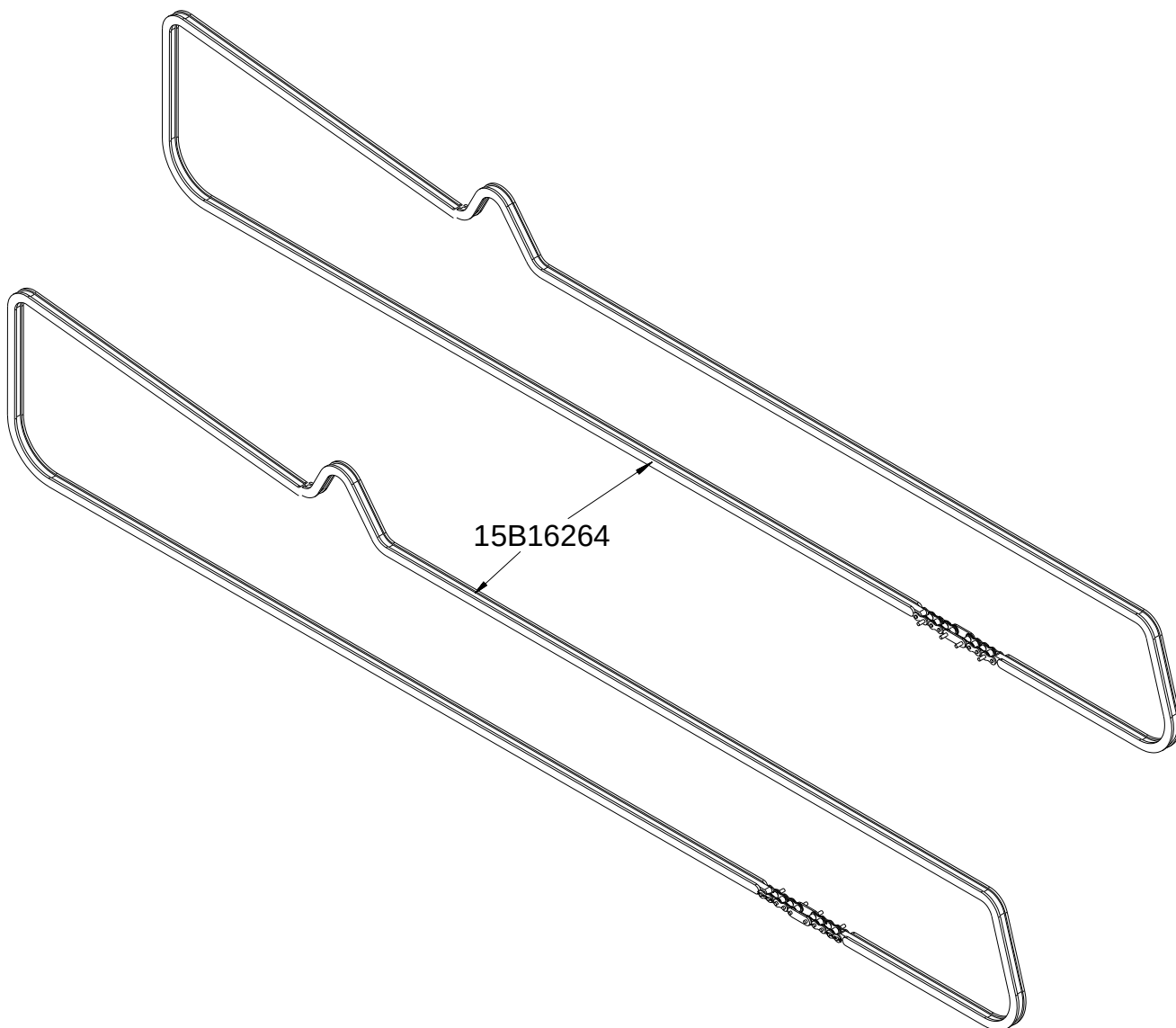
Support Bar Assembly (15B13526) & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	60A45681	TIER SHEET STOP SUPPORT BAR
2	1	60A54732	CHAIN SUPPORT PLATE
3	1	60C70004	HEAVY DUTY SUPPORT BAR
4	1	61A3087	SUPPORT BAR ANGLE
5	2	62A24620	CONNECTOR BLOCK
6	1	62A30185	MOUNTING BAR
7	4	P48-612	3/4 PITCH CONNECTING LINK
8	8	P48-613	3/4 PITCH ROLLER LINK
9	4	P48-618	CON. LINK W/ 1 EXT. PIN
10	2	P48-681	DBL. PIN EXTENDED CHAIN LINK

SERIAL NUMBER **24464**

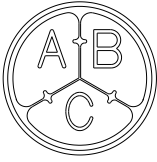


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

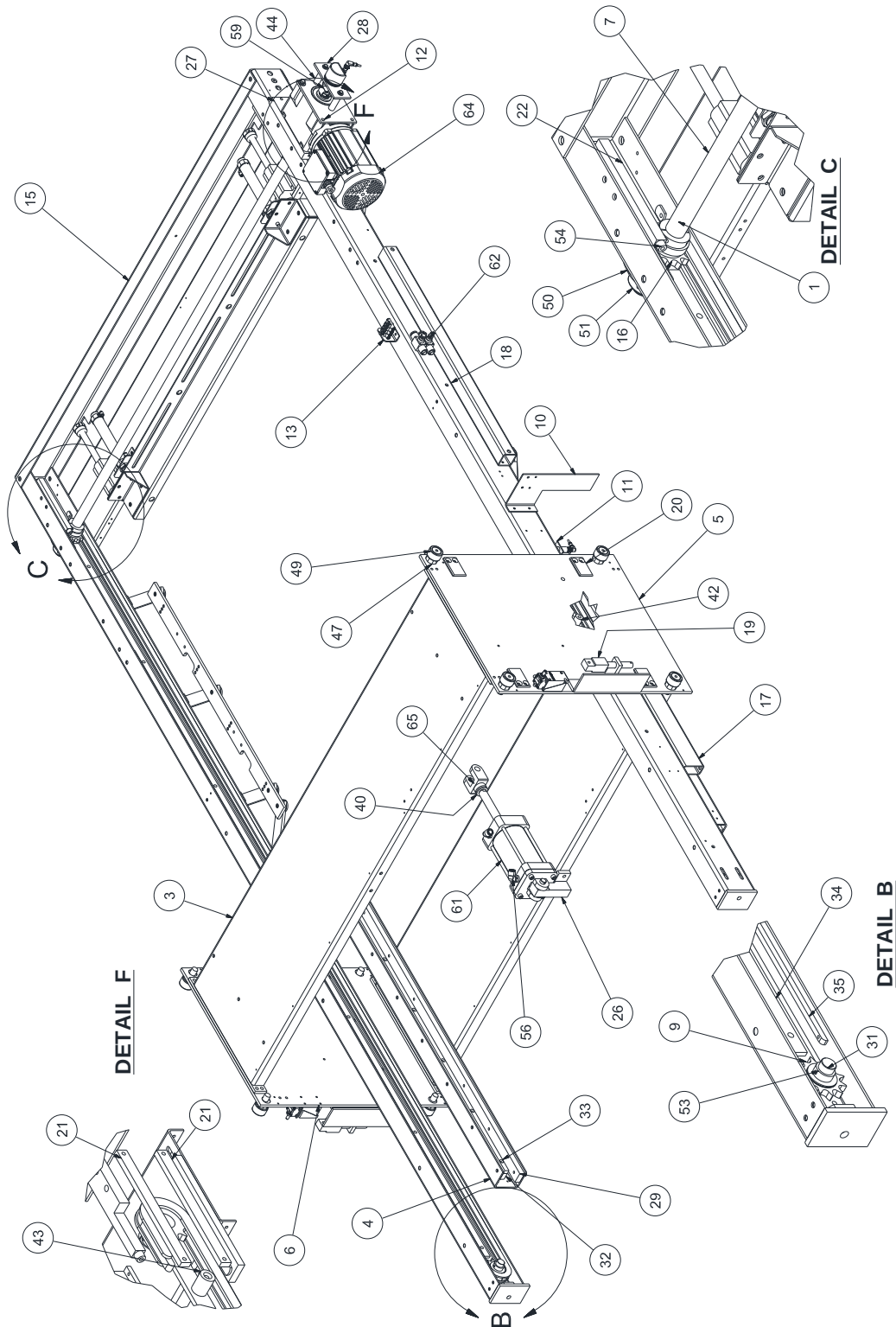


Support Bar Chain Assembly (15B16264)

SERIAL NUMBER **24464**

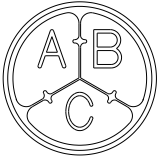


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



Lower Elevator Frame Assembly
REF.(15E16959)

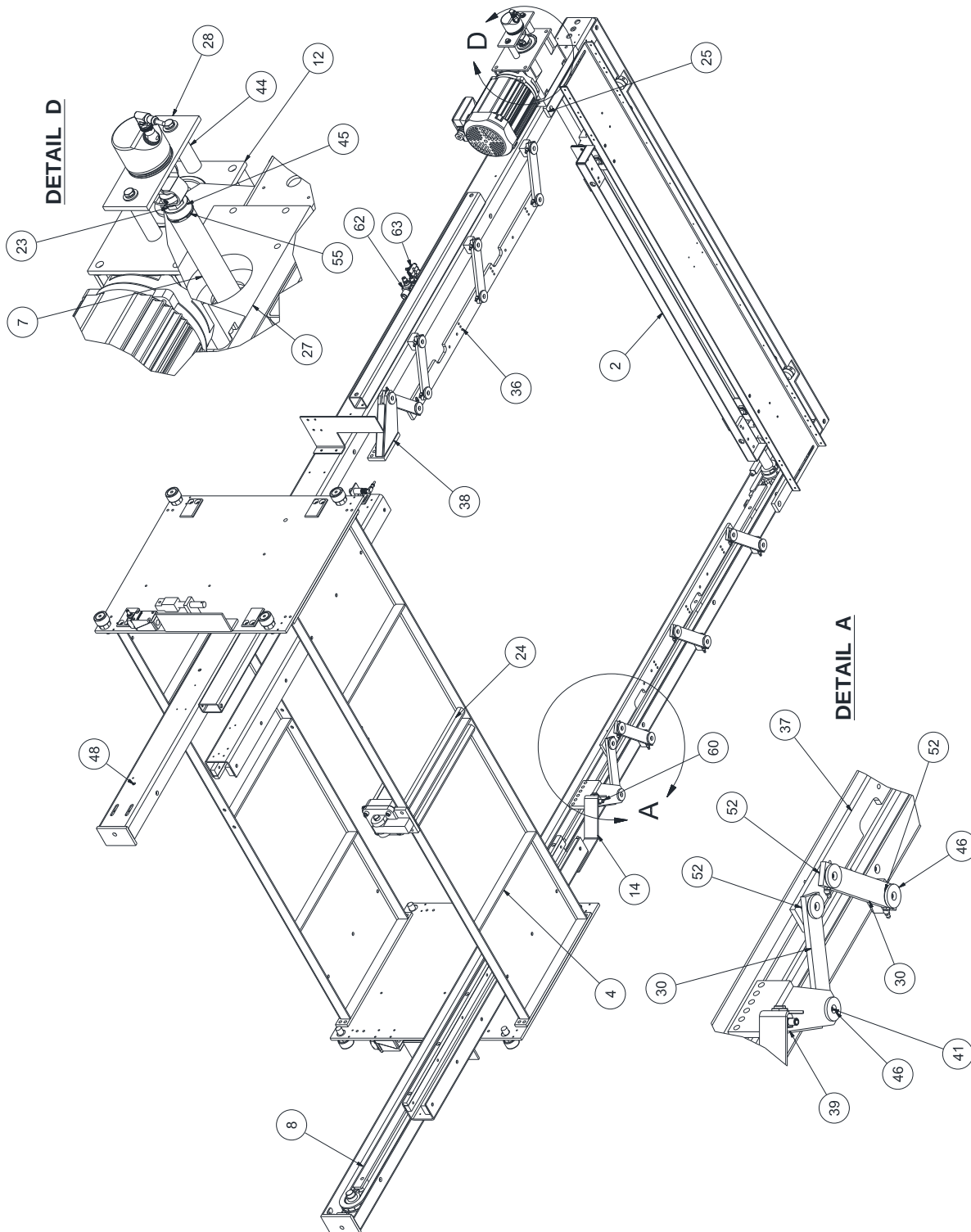
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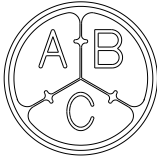
MODEL "108"

Sweep Off Bulk Depalletizer



Lower Elevator Frame Assembly
REF. (15E16959)

SERIAL NUMBER **24464**



TECHNICAL MANUAL

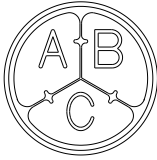
MODEL "108"

Sweep Off Bulk Depalletizer

Lower Elevator Frame Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	110A059	SPLIT COLLAR KEYED
2	1	15C13524	TIER SHEET GRIPPER SUPPORT ASSY
3	1	20C0397	SLIDE SUPPORT WELDMENT
4	1	20C0398	SLIDE SUPPORT LOWER
5	1	20C0725	SIDE PLATE FRAME WELDMENT LH
6	1	20C0726	SIDE PLATE FRAME WELDMENT RH
7	1	47B6244	DRIVE SHAFT
8	2	48A234	SWEEP BAR PUSHER CHAIN
9	2	4A4121-1687	IDLER SPROCKET
10	1	60A46746	SUPPORT BRACKET CABLE CARRIER
11	2	60A53447	SENSOR MTG. BRACKET
12	1	60A77216	ENCODER MTG. PLATE, BROTHER
13	1	60A78473	KEVIN FLOW CONTROL BRACKET
14	1	60A80841	SENSOR MTG BRACKET (EE1)
15	1	60B54772	ELEVATOR END BRACE
16	2	60BS12-1.25	SPROCKET 3/4P, 12T, 1.25B, 1/4KW
17	1	61A3039	CABLE TUBE
18	1	61B3040	CABLE TUBE
19	2	62A17026	CHAIN CLEVIS
20	8	62A17967	WEAR STRIP
21	2	62A20477	NUT PLATE
22	2	62A31279	PUSHER BAR STOP
23	1	62A35207	ENCODER ADAPTER SHAFT
24	2	62A35413	TABLE CYL TIE BAR
25	2	62A36668	SUPPORT CHANNEL SPACER
26	1	62A37405	CYLINDER CONNECTOR
27	1	62A37815	GEARMOTOR MTG. PLATE, BROTHER
28	1	62A37961	ENCODER MTG. PLATE, IO LINK
29	2	62B17903	DEPAL TABLE TRACK
30	8	62B17912	LINK
31	2	62B17968	CHAIN TENSIONER
32	2	62B22131	TOP RAIL
33	2	62B22132	TABLE SIDE GUIDE
34	2	62B31096	UPPER CHAIN RAIL
35	2	62B31097	LOWER CHAIN RAIL
36	1	62B31116	LINK SUPPORT LH
37	1	62B31117	LINK SUPPORT RH
38	1	62D28929	CONNECTING BRACKET RH
39	1	62D28990	CONNECTING BRACKET LH
40	1	63A11058	THRUST WASHER

SERIAL NUMBER **24464**



TECHNICAL MANUAL

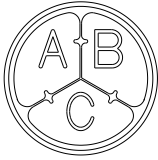
MODEL "108"

Sweep Off Bulk Depalletizer

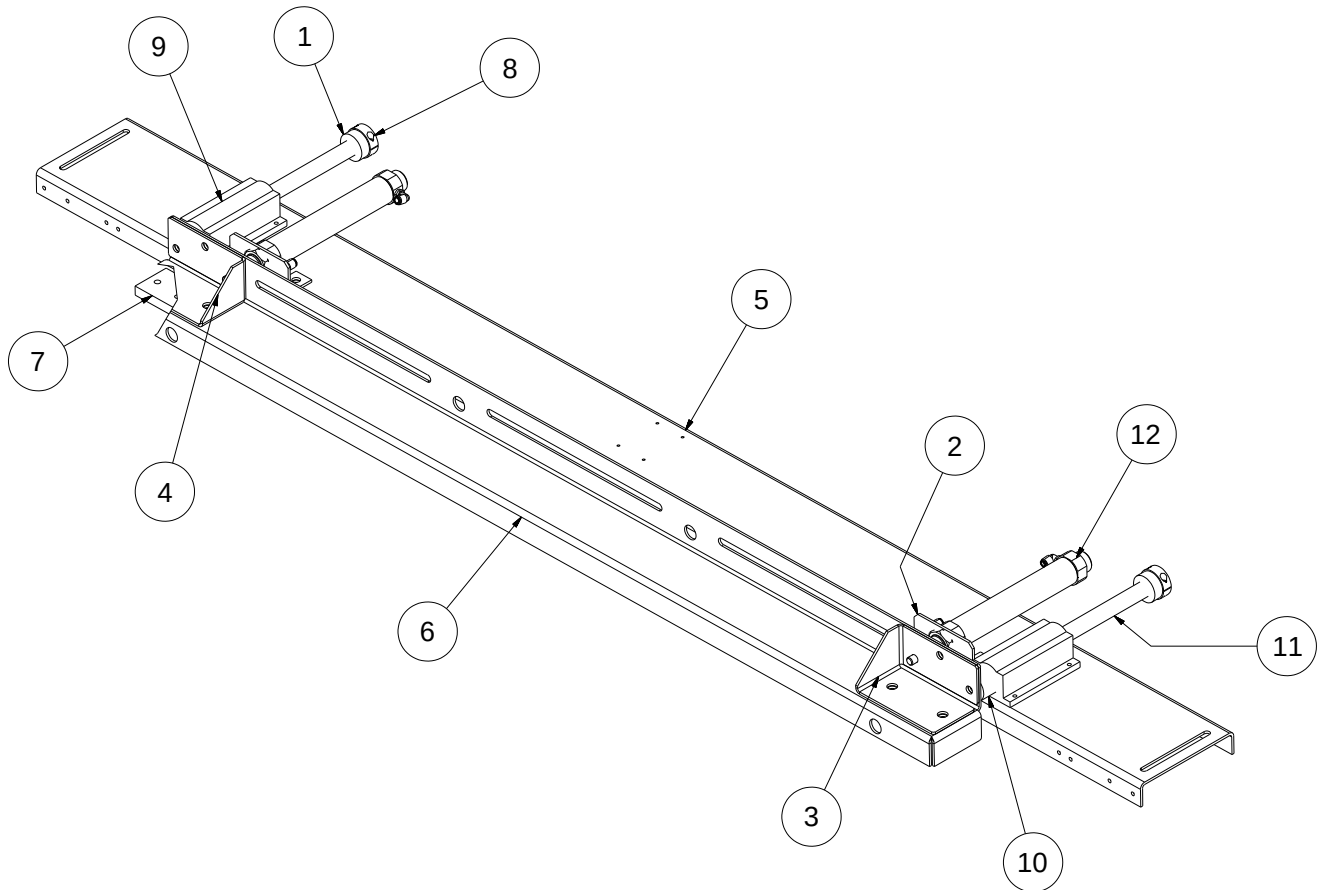
Lower Elevator Frame Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
41	2	63A11196	CONNECTOR CLEVIS PIN
42	2	63A11648	CHAIN SUPPORT SPACER
43	2	63A11649	CHAIN SUPPORT SPACER
44	2	63A11684	GUARD SPACER
45	1	63A13817	GEARBOX BORE SPACER
46	18	63A6348	WASHER
47	8	63A6374	ECCENTRIC CAM FOLLOWER SPACER
48	10	63A9732	SUPPORT CHAIN SPACER
49	8	P106-099	CAM FOLLOWER
50	1	P43-040	2 HOLE BEARING ADAPTER
51	1	P44-016	BALL BEARING 1-1/4 ID
52	32	P44-631	THRUST BUSHING
53	2	P44-766	BEARING, 1", NICE 7616-DLG
54	2	P53-108	NOISE DEADENER
55	1	P55-072	RETAINING RING 1.25 INTERNAL
56	2	P56-209	LEGRIS MALE ELBOW 1/2NPT-1/2TUBE
57	1	P66-27093 (PR6)	PROXIMITY SENSOR I/O
58	1	P66-27093 (PR7)	PROXIMITY SENSOR I/O
59	1	P66-43020	HI-FLEX COUPLING
***	1	P66-43031	ABSOLUTE ENCODER
60	1	P66-7306 (EE1)	RETRO REFLECTIVE SENSOR
61	1	P67-1617	SMC AIR CYLINDER 4"B X 5"S
	1	P79-101010	REPAIR KIT FOR P67-1617
62	2	P69-738	LEGRIS 7770-62-00 FLOW CONTROL VALVE
63	4	P69-772	INLINE FLOW CONTROL, 1/4" TUBE
64	1	P71-2172	BROTHER GEARMOTOR, 1HP, 90RPM
65	1	P79-262	LEHIGH ROD END

SERIAL NUMBER **24464**



TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



Tier Sheet Gripper Assembly (15C13524) & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	59A310	SPRING, EXTENSION
2	2	60A57174	CYLINDER MOUNT BRACKET
3	1	60A75935	GRIPPER FIXTURE BRACE LH
4	1	60A75936	GRIPPER FIXTURE BRACE RH
5	1	60C73470	SUPPORT CHANNEL
6	1	60C75934	GRIPPER MOUNT FIXTURE
7	2	62A31635	LOW TIER CENTER NUT PLATE
8	2	P110-063	.750Ø SPLIT COLLAR
9	2	P44-488	THOMSON PILLOW BLOCK
10	2	P59-276	SPRING, EXTENSION
11	2	P63-11133	LINEAR BEARING SHAFT
12	2	P67-343	SMC AIR CYLINDER 32MMB X 6"S
	1	P79-10102	REPAIR KIT FOR P67-343

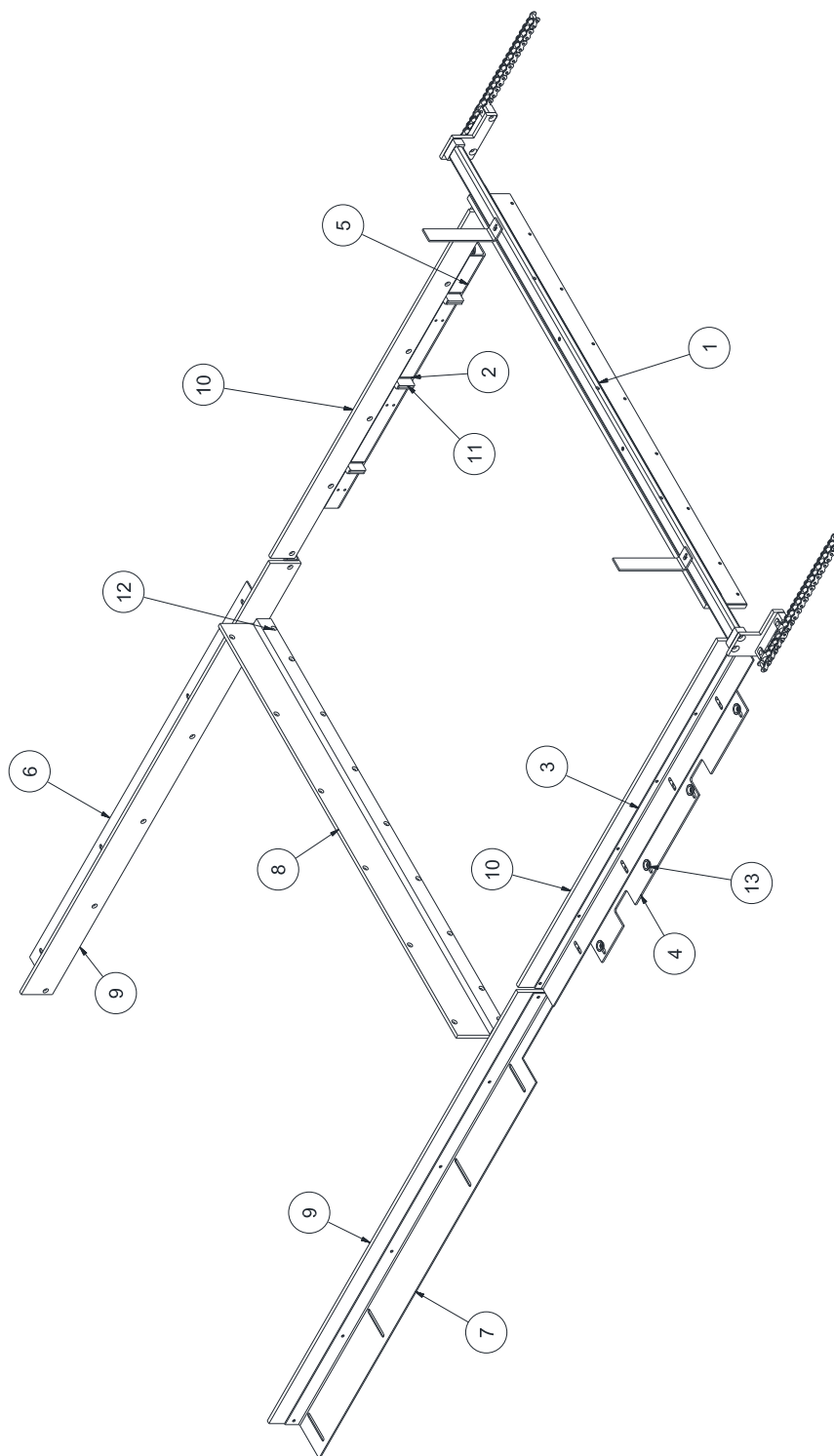
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Product Guide Assembly

SERIAL NUMBER **24464**

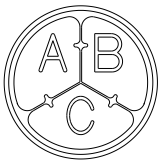


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

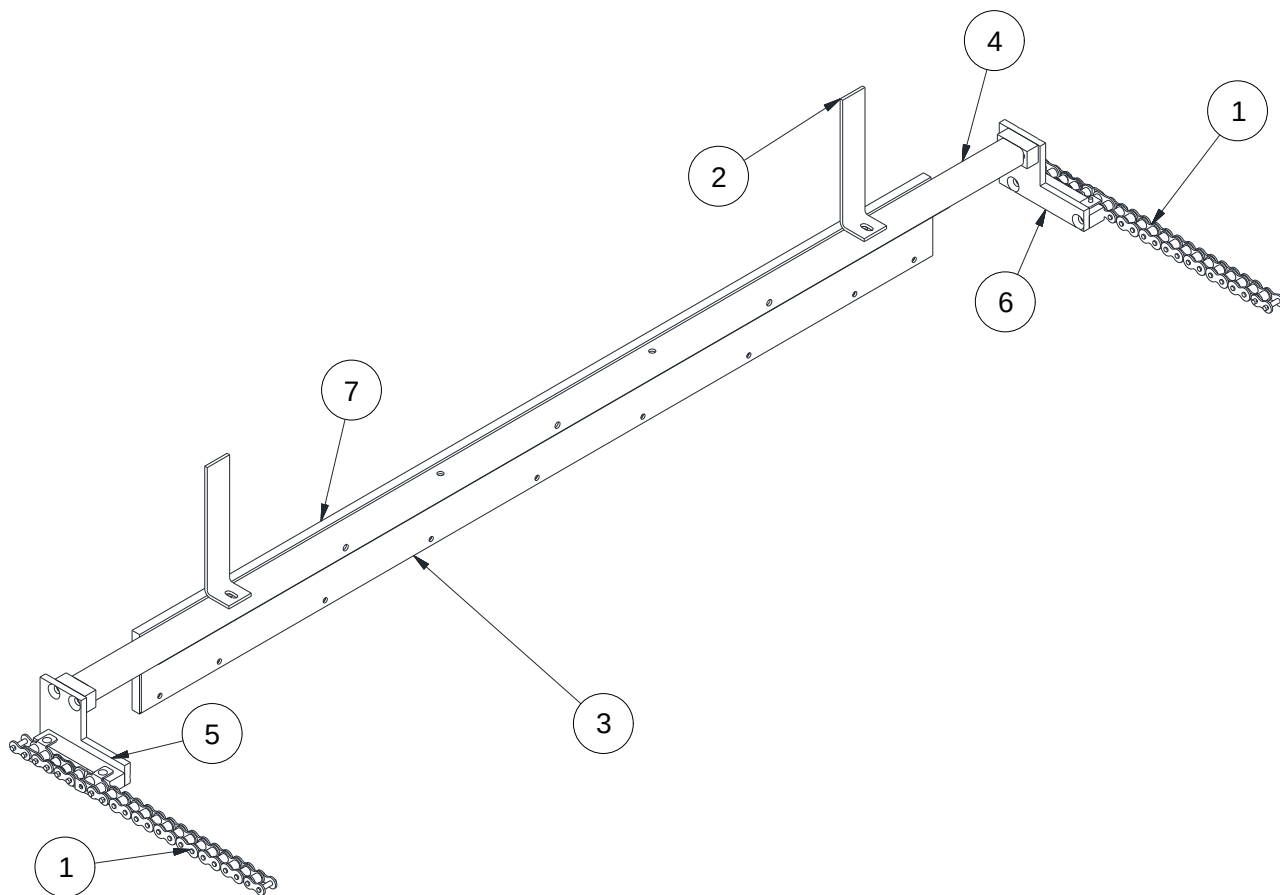
Product Guides Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	15B10065	PUSHER BAR ASSY PHD GRIPPERSR
2	6	60A57142	TIER SHEET GRIPPER SPRING
3	2	60B57797	SQUARING PLATE BRACKET
4	1	60B58578	SQUARING SUPPORT PLATE LH
5	1	60B58579	SQUARING SUPPORT PLATE RH
6	1	60C51227	SIDE GUIDE BRACKET RH
7	1	60C51544	SIDE GUIDE BRACKET LH
8	1	60C73087	SUPPORT BAR PAD
9	2	60C73502	SIDE GUIDE WEARSTRIP
10	2	60C73503	SIDE WEAR STRIP MEDIUM HEIGHT
11	6	62A36820	GRIPPER PLATE EXTENDED
12	1	62B36678	SWEEP BAR PAD LOW PRODUCT
13	8	63A11369	SQUARING SUPPORT RETAINING WASHER

SERIAL NUMBER **24464**



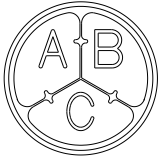
TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



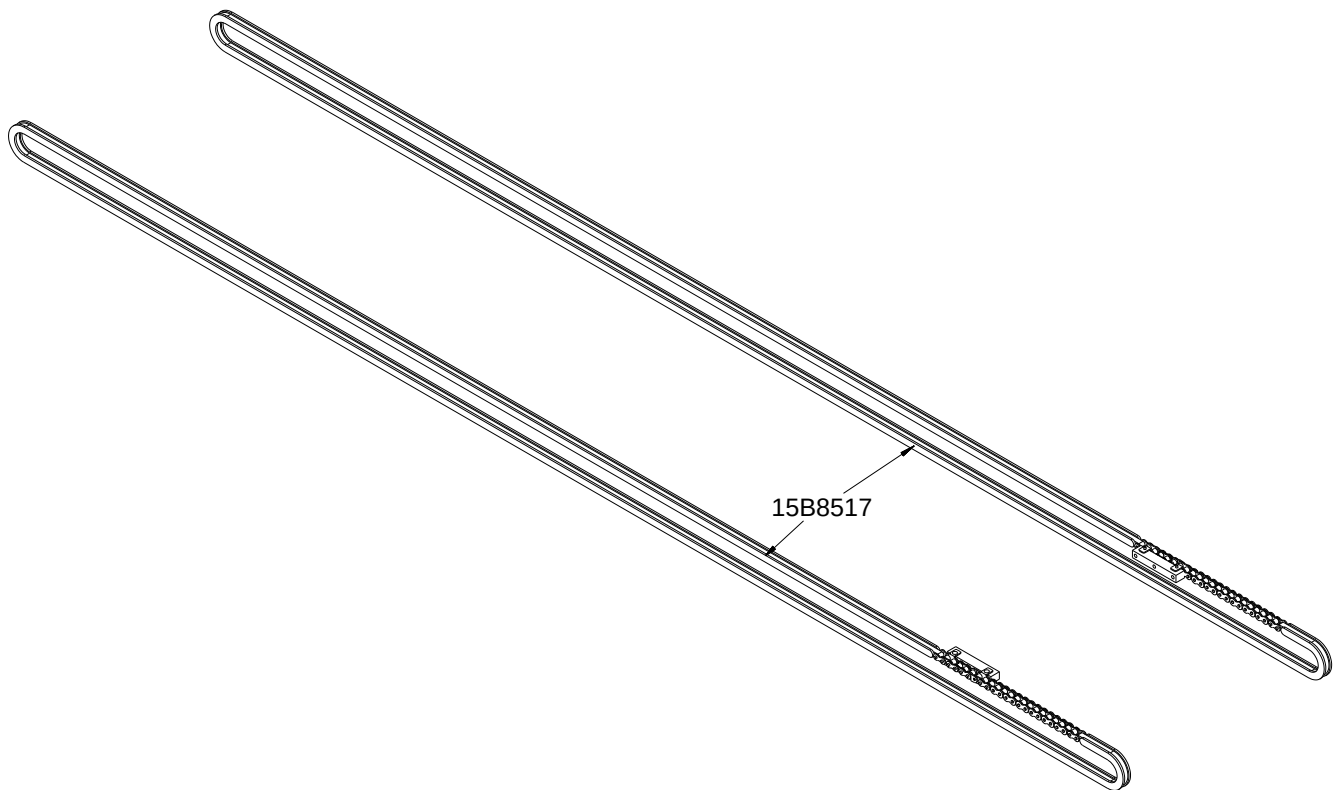
Pusher Bar Assembly & Parts List (15B10065)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	48A514	PUSHER BAR CHAIN, #60 ROLLER
2	2	60A45642	SWEEP BAR POST
3	1	60C34601	PUSHER SUPPORT ANGLE
4	1	61C2989	CROSS PUSHER TUBE
5	1	62A20811	PUSHER CONNECTOR LH
6	1	62A28931	PUSHER CONNECTOR RH
7	1	62B26240	BOTTLE PUSHER PAD

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



Sweep Bar Chain Assembly (15B8517)

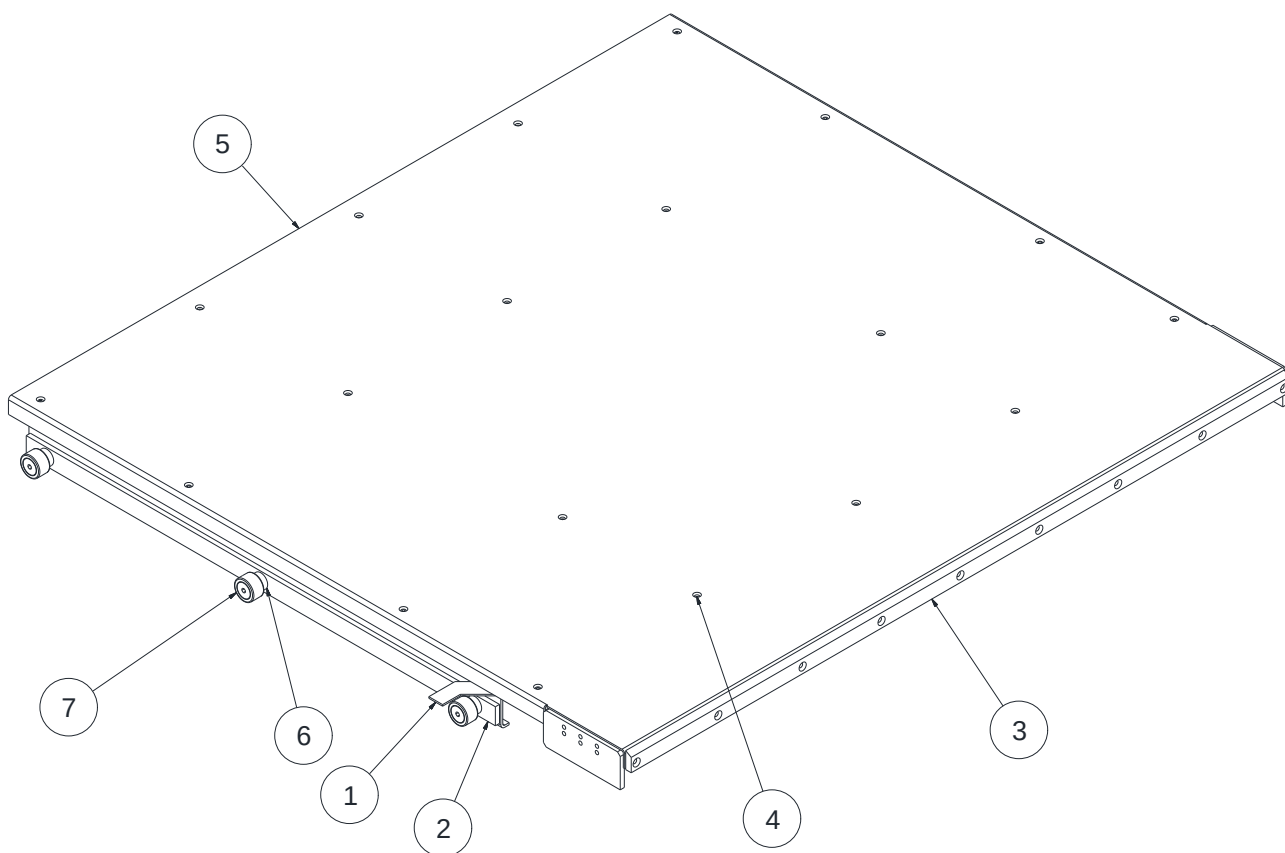
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TECHNICAL MANUAL

MODEL "108"

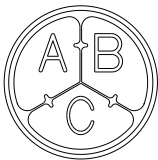
Sweep Off Bulk Depalletizer



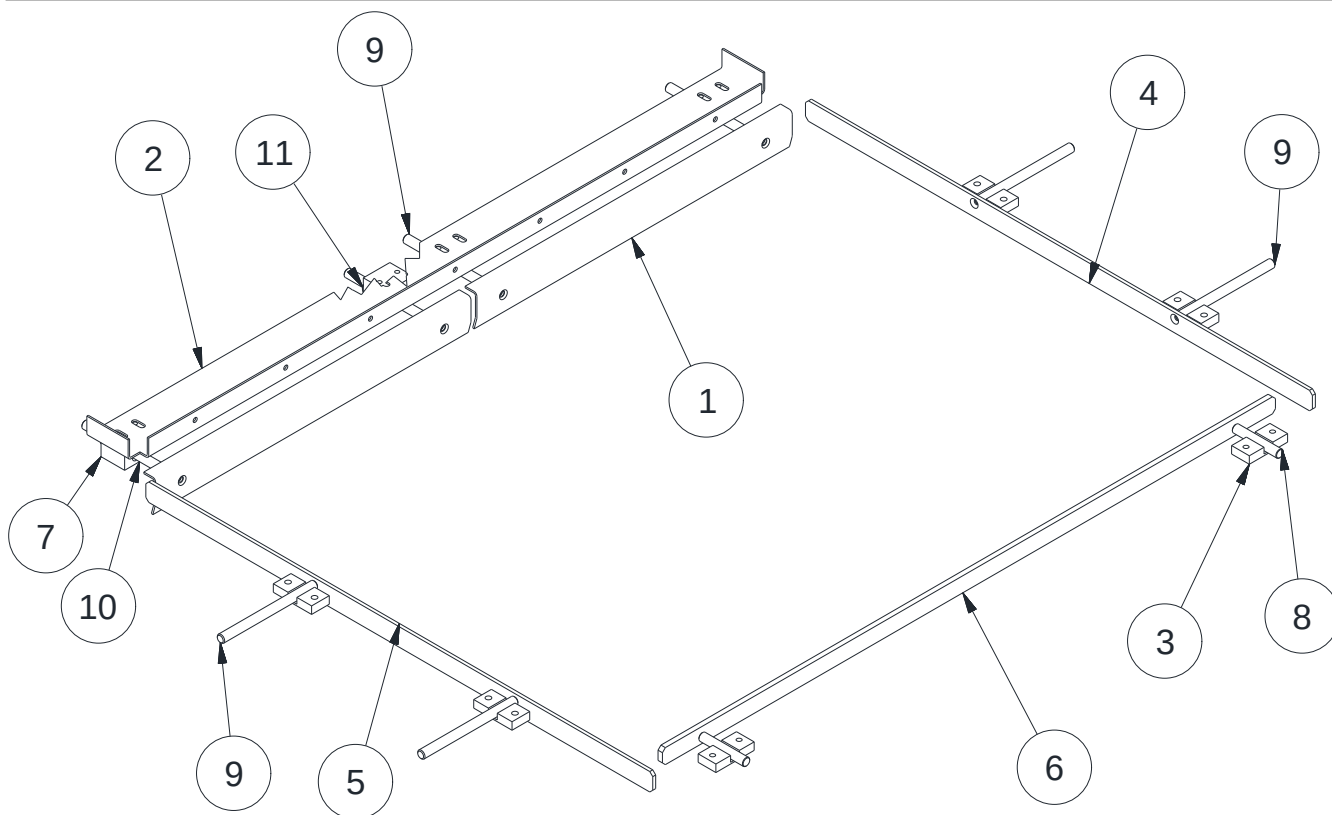
Transfer Table Top View Assembly

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	60A54336	PROX FLAG TABLE
2	2	60B29324	CAM ROLL SUPPORT WELDMENT
3	1	60B58529	FRONT WEAR STRIP
4	1	60C60444	TABLE SUPPORT FRAME WELDMENT
5	1	60C60446	TABLE TOP WELDMENT
6	6	63A6373	CAM FOLLOWER SPACER
7	6	P106-099	CAM FOLLOWER

SERIAL NUMBER **24464**



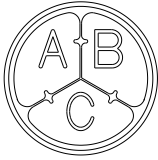
TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



Lower Tier Centering Unit 56x44 Assembly

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	60B50383	TIER CENTERING FRONT GUIDE PLATE
2	1	60C50384	TIER CENTERING UNIT BRACKET
3	6	62A28295	CLAMP BLOCK
4	1	62A31119	SIDE GUIDE BAR LH
5	1	62A31115	SIDE GUIDE BAR RH
6	1	62A31636	REAR TIER CENTERING BAR
7	4	62B28276	TIER CENTERING SUPPORT BLOCK
8	2	63A11372	TIER CENTERING ROD
9	8	63A9943	TIER CENTERING ROD
10	4	P59-120	COMPRESSION SPRING
11	4	P110-013	.625" STD. COLLAR W/SET SCREW

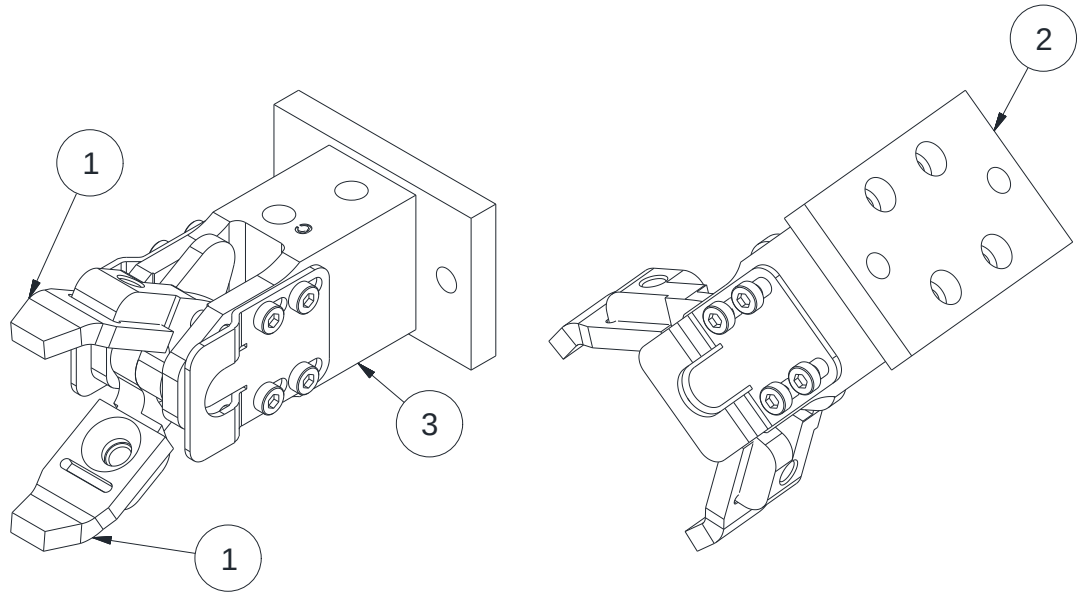
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Tier Sheet Finger Gripper Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	60A70584	GRIPPER FINGER
2	1	62A35475	GRIPPER MOUNT PLATE PHD
3	2	P67-227	PHD CLAMP CYLINDER

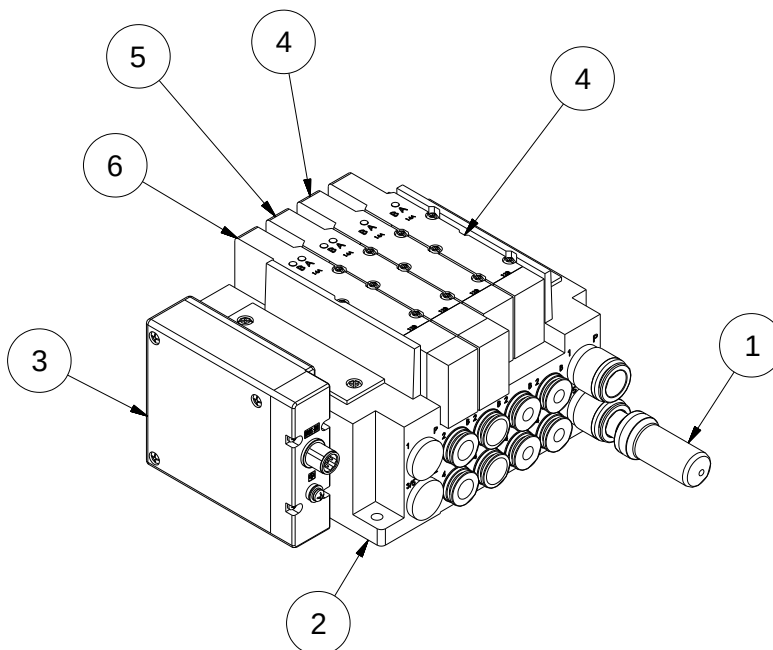
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Upper Elevator Valve Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	P128-040	SILENCER, ONE-TOUCH FITTING
2	1	P69-1148	SMC 4STA MANIFOLD BASE
3	1	P69-1149	SMC I/O LINK COMM MODULE
4	2	P69-4143	SMC 3POS SINGLE SOLENOID VALVE
5	1	P69-4144	SMC VALVE 3 POS CLOSED CENTER
6	1	P69-4145	SMC VALVE 3 POS EXH CENTER

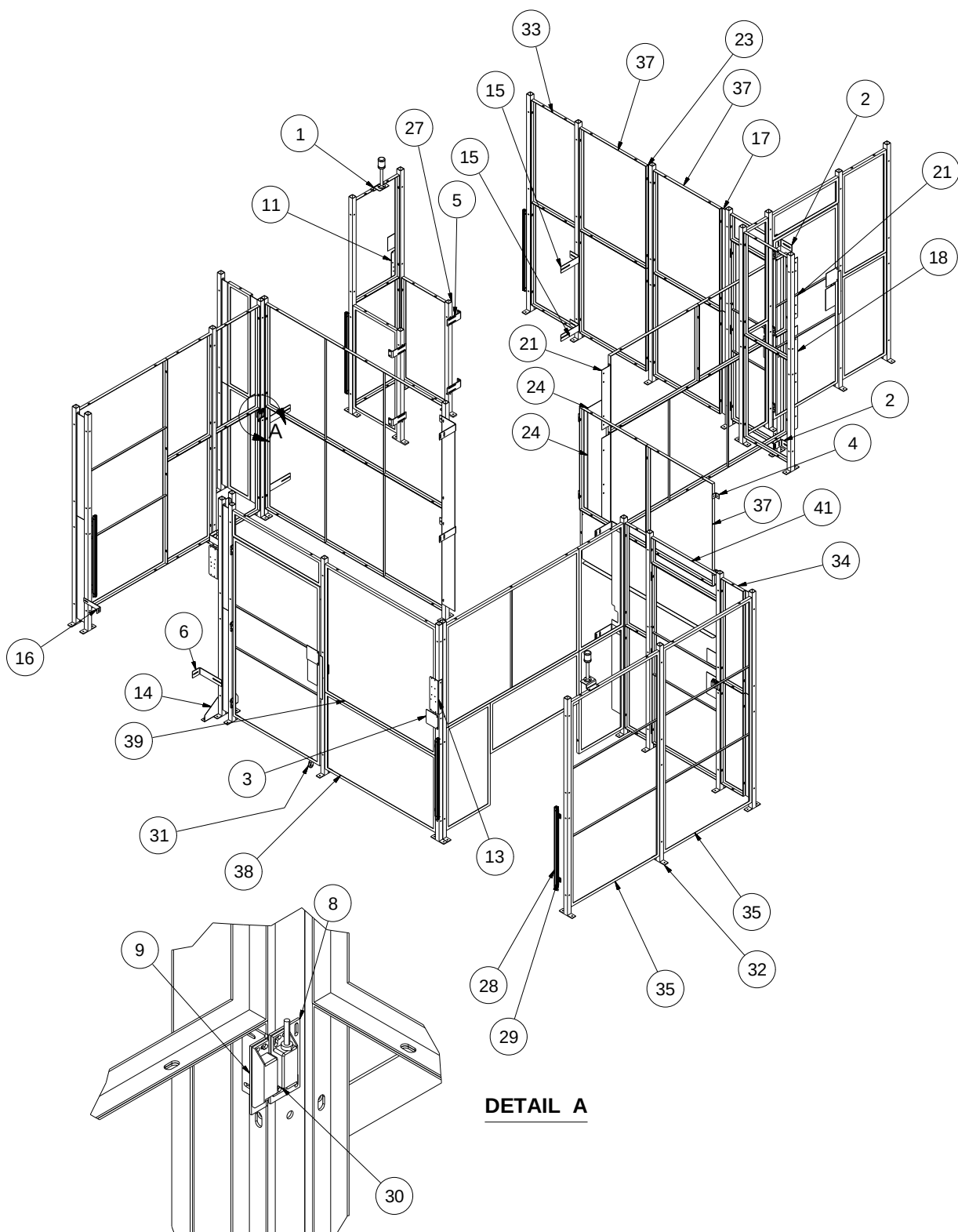
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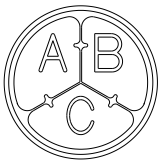
MODEL "108"

Sweep Off Bulk Depalletizer



Guarding Assembly

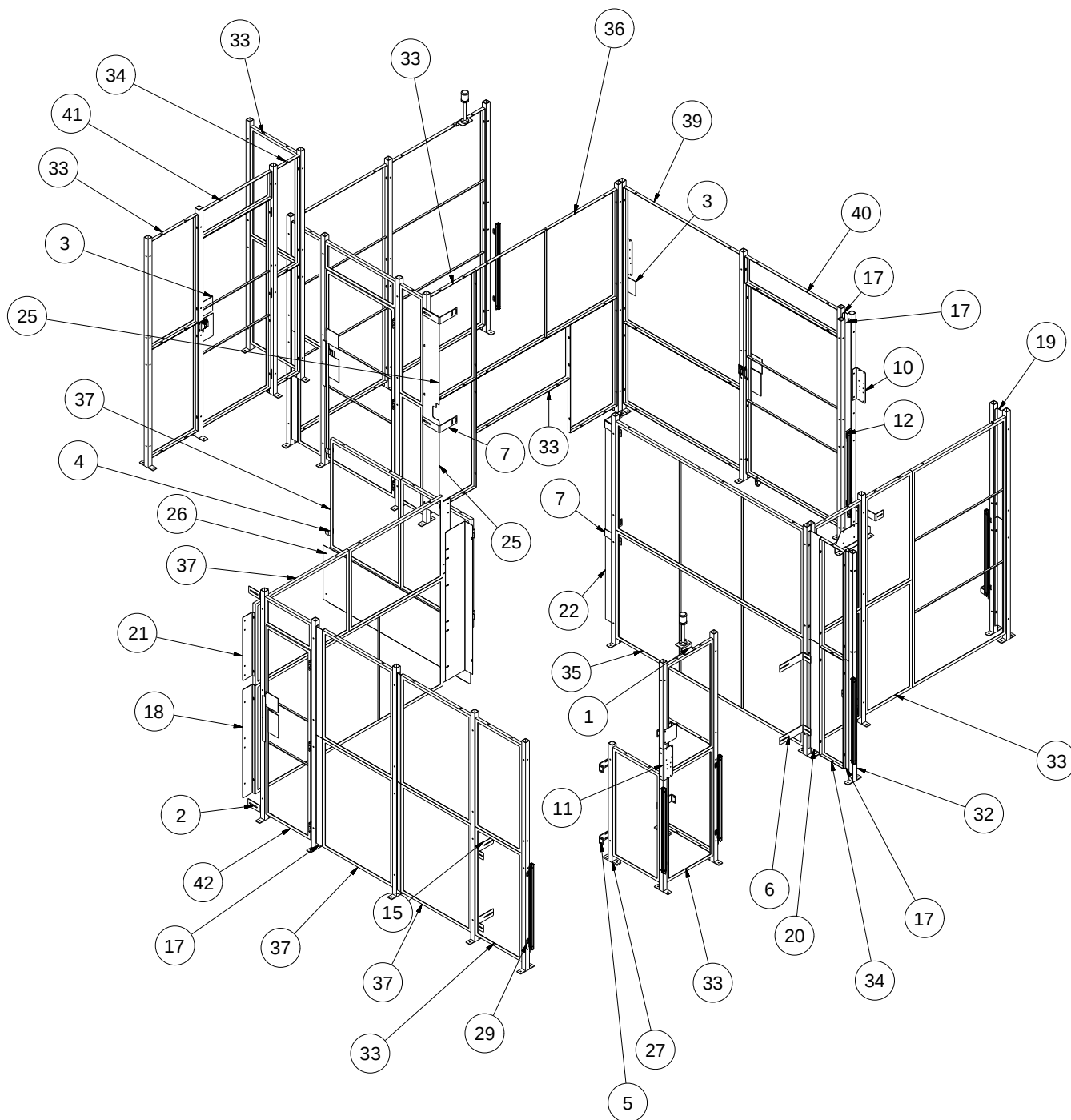
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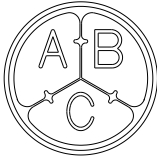
MODEL "108"

Sweep Off Bulk Depalletizer



Guarding Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

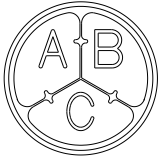
MODEL "108"

Sweep Off Bulk Depalletizer

Guarding Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	60A52786	BEACON LIGHT MTG. PLATE
2	2	60A57730	MESH GUARD SUPPORT ANGLE
3	7	60A59149	GUARD STICKER PLATE
4	4	60A59792	GUARD MTG. ANGLE
5	4	60A64736	PALLET DISPENSER LOCATING ANGLE
6	4	60A71671	GUARD MOUNTING BRACKET
7	4	60A77264	MESH GUARD SUPPORT, LG
8	5	60A80670	DOOR SENSOR MTG PLATE
9	5	60A80671	DOOR MAGNET MOUNTING ANGLE
10	1	60A82014	PB BOX MTG PLATE
11	1	60A82021	PB BOX MTG PLATE RH
12	2	60A82428	LIGHT CURTAIN MTG BRKT KEYENCE
13	1	60A83327	PB BOX MTG PLATE
14	1	60A83334	DOOR POST SUPPORT GUSSET
15	2	60A83340	GUARD MOUNTING BRACKET
16	1	60B71832	GUARD TIE
17	10	60B74082	GUARD FILLER CHANNEL
18	2	60B74415	GUARD MTG ANGLE
19	2	60B75967	GUARD FILLER CHANNEL
20	2	60B78928	GUARD FILLER CHANNEL 6"
21	2	60B82392	GUARD MTG ANGLE
22	1	60B82401	COLUMN FILL GUARD, WIDE
23	2	60B82416	GUARD FILLER CHANNEL 2"
24	1	60B82422	GUARD MTG ANGLE
25	1	60B82423	COLUMN FILL GUARD AIR SUPPLY
26	1	60B83341	LOWER BASE MACHINE GUARDING RH
27	2	111B124	GUARD POST
28	8	P66-7166	KEYENCE LIGHT CURTAIN
29	14	P66-7167	LIGHT CURTAIN MTG BRACKET
30	5	P66-27087	GUARD SWITCH SENSOR
31	1	P76-020	SWIVEL CASTER
32	23	P111-016	GUARD POST
33	18	P111-017	MESH GUARD PANEL
34	8	P111-018	MESH GUARD PANEL
35	6	P111-019	MESH GUARD PANEL
36	1	P111-075	MESH GUARD PANEL
37	8	P111-084	MESH GUARD PANEL
38	1	P111-091	MESH GUARD PANEL
39	1	P111-112	MESH GUARD PANEL
40	1	P111-174	4FT WIRE MESH DOOR KIT
41	2	P111-175	3FT DOOR KIT ASSEMBLY
42	1	P111-176	2FT DOOR KIT ASSEMBLY

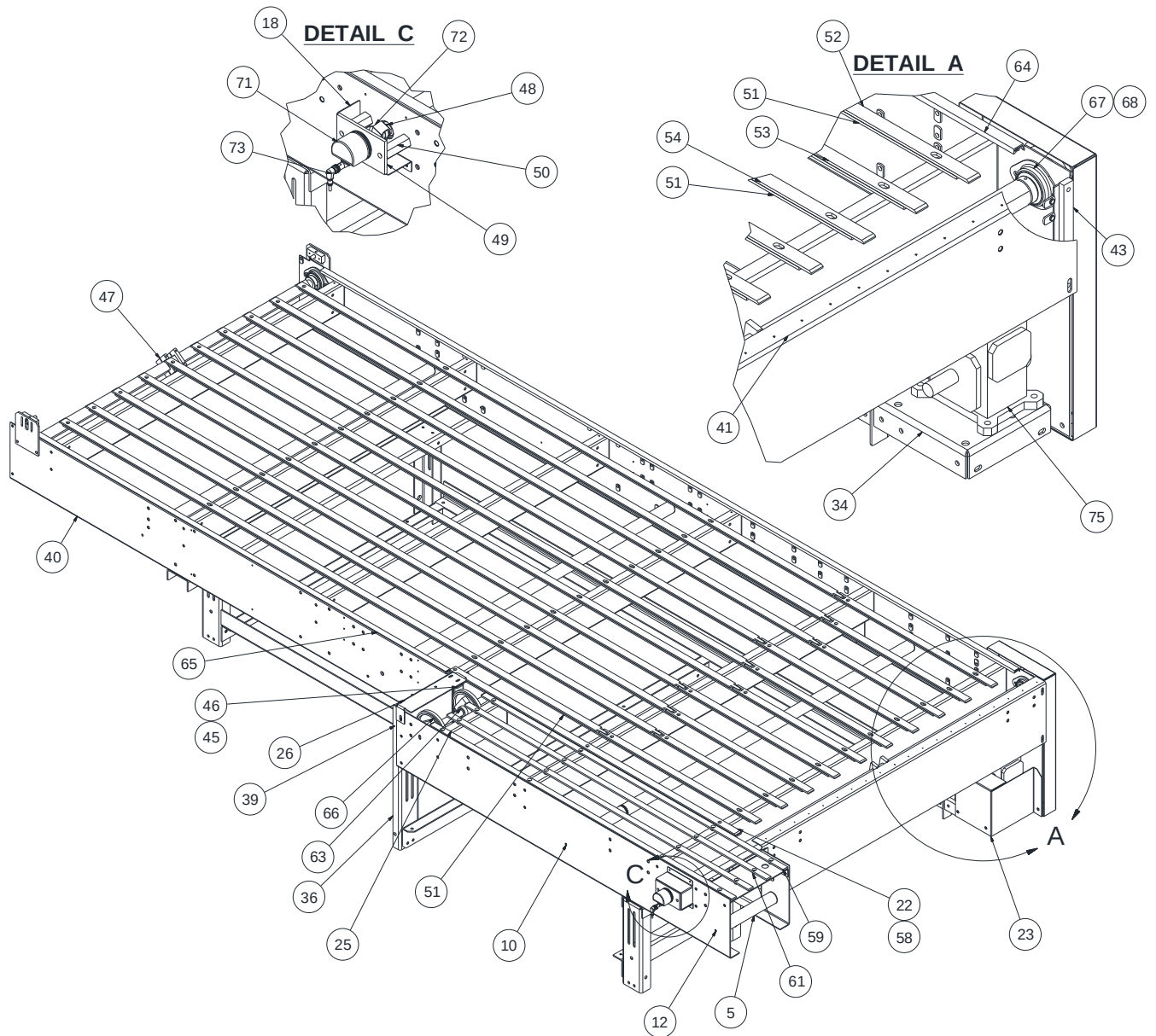
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TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Bottle Discharge Conveyor Assembly

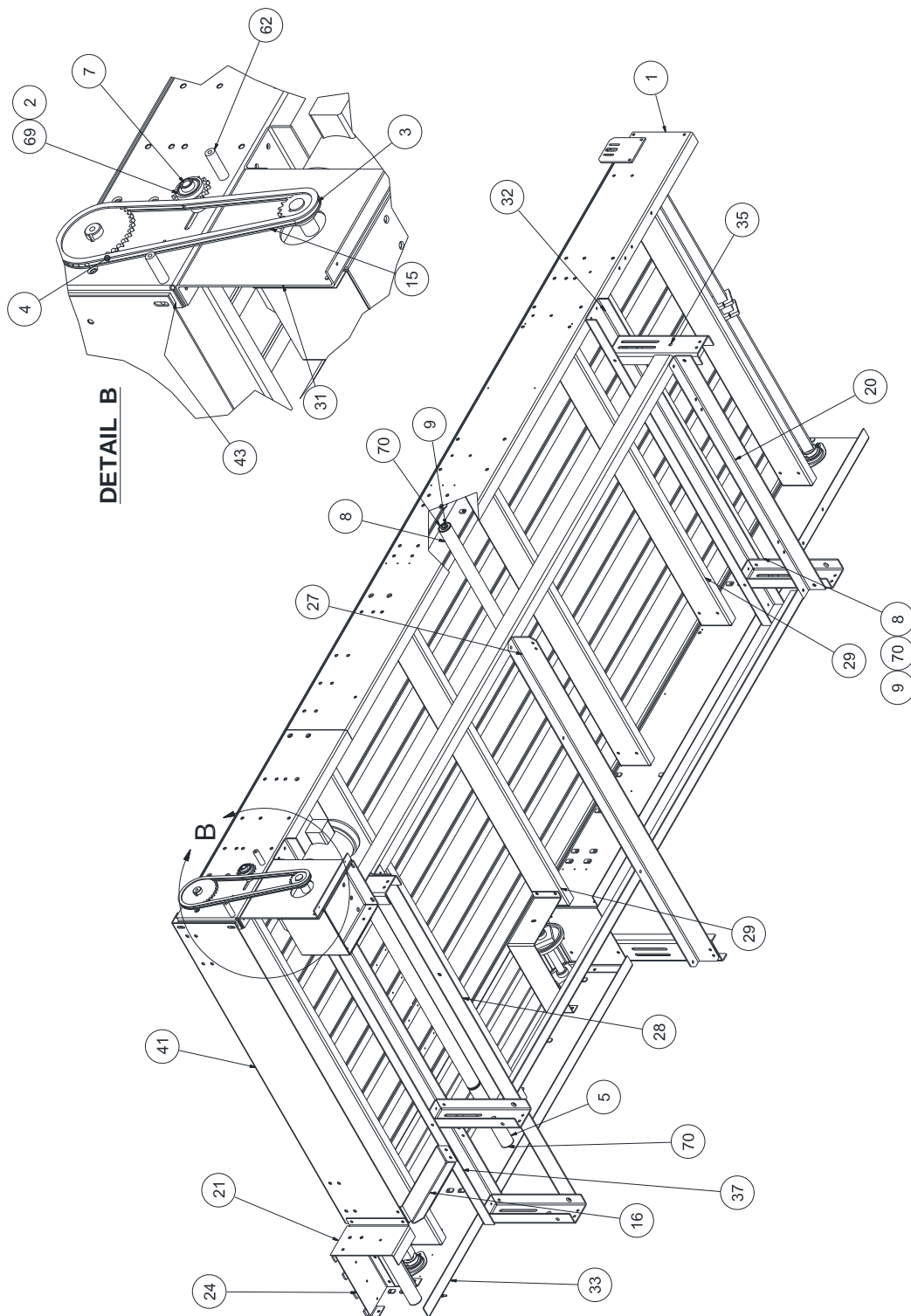
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TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Bottle Discharge Conveyor Assembly

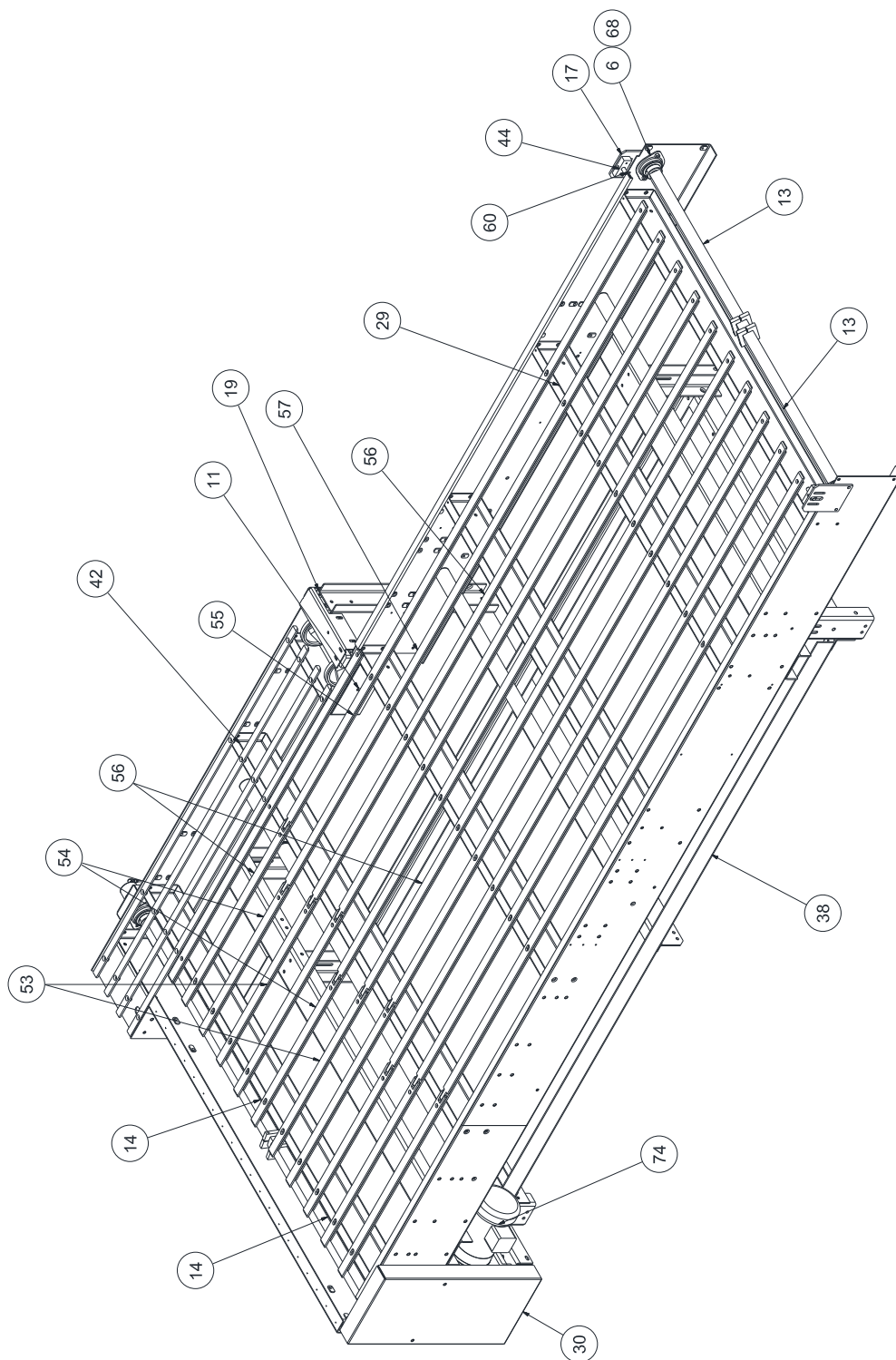
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TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Bottle Discharge Conveyor Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

Bottle Discharge Conveyor Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	20D0632	SIDE CHANNEL FRAME WELDMENT LH
2	1	40A2162-921	IDLER SPROCKET 40BS16
3	1	40BS17-1.125	SPROCKET 1/2P, 17T, 1.125"B
4	1	40BS35-1.25	SPROCKET 1/2P, 35T, 1.25B, 1/4KW
5	2	42A1329	ROLLER TUBE
6	2	43A076	BEARING ADAPTER W/ HEX NUTS
7	1	46A1414	TIGHTENER SPROCKET STUD
8	3	47A4904	ROLLER TUBE
9	2	47A5344	ROLLER SHAFT
10	1	47A6970	ROLLER SHAFT
11	1	47A6972	IDLER SHAFT
12	1	47A6973	ROLLER SHAFT
13	1	47C3946	IDLER SHAFT
14	1	47C6971	DRIVE SHAFT
15	1	48A241	DRIVE CHAIN
16	1	60A57936	DDEAD PLATE SUPPORT BRACE RH
17	2	60A71874	RAIL CLAMP SUPPORT PLATE SHORT
18	2	60A79242	ENCODER GUARD
19	1	60A82388	CHAIN-WAY END SUPPORT BRACKET
20	1	60B50254	CROSS BRACE DISCHARGE END
21	1	60B57938	CHAIN WAY EXTENSION CHANNEL RH
22	1	60B57940	WEAR STRIP
23	1	60B61681	GEARBOX COVER LH
24	1	60B82384	EXTENSION WAY SUPPORT BRACKET
25	1	60B82387	IDLER SUPPORT BRACKET RH
26	1	60B82389	IDLER COVER
27	1	60B83298	CROSS BRACE DISCHARGE END
28	1	60B83299	CROSS BRACE DISCHARGE END
29	4	60C50252	OUTGOING CROSS BRACE
30	1	60C50257	CONVEYOR GUARD DRIVE CHAIN
31	1	60C50258	REAR GUARD DRIVE CHAIN
32	1	60C50280	BOTTLE DISCHARGE END SUPPORT
33	1	60C57931	CHAIN WAY SIDE CHANNEL RH
34	1	60C59209	REDUCER MTG. BASE
35	5	60C73231	UPPER BOTTLE CONVEYOR LEG
36	1	60C73394	DISCHARGE LEG NARROW
37	1	60C82390	BOTTLE DISCHARGE END SUPPORT
38	1	60D78029	LH LEG BRACE HIGH LEVEL DISCHARGE
39	1	60D78030	RH LEG BRACE HIGH LEVEL DISCHARGE
40	1	60D81262	RH SIDE CHANNEL

SERIAL NUMBER **24464**



TECHNICAL MANUAL

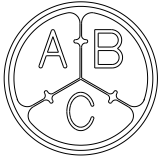
MODEL "108"

Sweep Off Bulk Depalletizer

Bottle Discharge Conveyor Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
41	1	60D82385	DISCHARGE DEAD PLATE SUPPORT
42	2	60D82386	OUTGOING CROSS BRACE RH
43	1	62A28233	DEAD PLATE SUPPORT SPACER
44	2	62A31554	RAIL CLAMP
45	1	62A31555	CHAIN GUIDE NUT PLATE
46	1	62A31556	GUIDE
47	8	62A32020	SQUARE SET COLLAR
48	1	62A35207	ENCODER ADAPTER SHAFT
49	1	62A38496	ENCODER MOUNTING PLATE (BOTTLE CONV)
50	2	62A38497	ENCODER STAND OFF
51	10	62B23028	BELT SUPPORT
52	4	62B23029	WEAR STRIP
53	3	62B23030	WEAR STRIP
54	3	62B23031	WEAR STRIP
55	4	62B24038	WEAR STRIP
56	3	62B24039	WEAR STRIP
57	3	62B24040	WEAR STRIP
58	1	62B31423	WEAR STRIP SUPPORT
59	4	62B31424	CENTER CHAIN RAIL
60	2	63A11349	ADJUSTMENT ROD
61	16	63A11393	RAIL SPACER
62	2	63A7635	GUARD SPACER
63	4	P110-007	COLLAR, 1" ID
64	1	P133-167	WEAR STRIP
65	1	P133-167-86	WEAR STRIP
66	2	P40-5085	REX IDLER SPROCKET NS8505
67	2	P43-040	2 HOLE BEARING ADAPTER
68	4	P44-016	BALL BEARING 1-1/4 ID
69	1	P44-058	BEARING 3/4 ID
70	10	P44-1031	CONVEYOR ROLLER BEARING 3/4 ID
71	1	P66-43015	ENCODER
72	1	P66-43020	HI-FLEX COUPLING
73	1	P66-6966	CABLE
74	1	P71-062	BALDOR #VM3542 .75HP MOTOR
75	1	P72-249	GROVE SPEED REDUCER

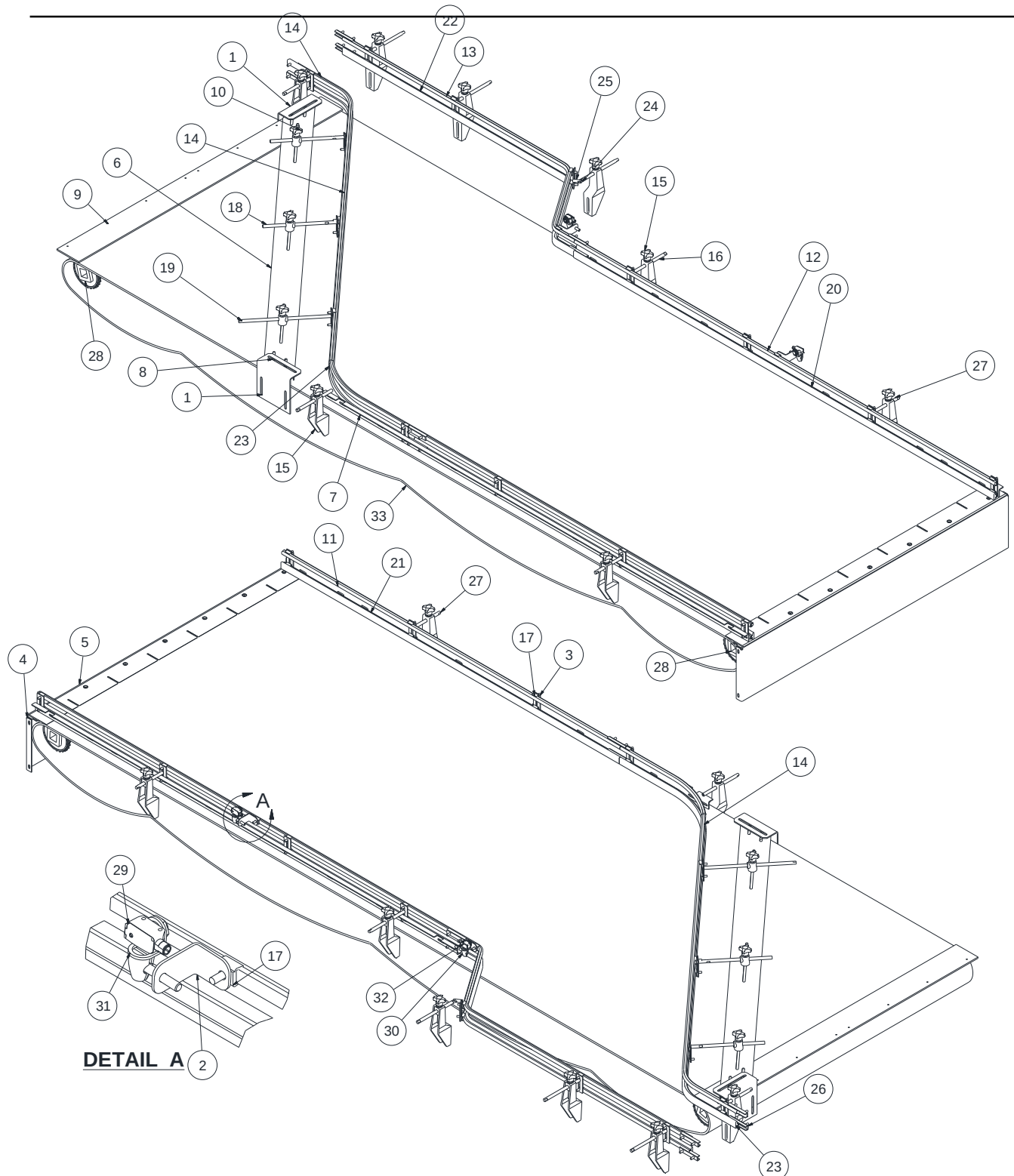
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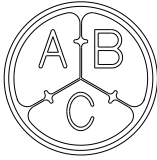
MODEL "108"

Sweep Off Bulk Depalletizer



Bottle Discharge Conveyor Rails Assembly

SERIAL NUMBER **24464**



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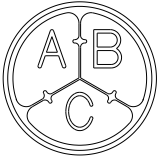
MODEL "108"

Sweep Off Bulk Depalletizer

Bottle Discharge Conveyor Rails Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	60A51317	CHANNEL BRACKET
2	2	60A57296	EYE BRACKET
3	15	60A82421	RAIL SUPPORT PLATE
4	1	60B36806	SUPPORT-DEAD PLATE
5	1	60B36811	FRONT DEAD PLATE
6	1	60D51844	SUPPORT CHANNEL RH DISCHARGE
7	2	60D59550	RAIL SUPPORT ANGLE LONG
8	4	62A32118	NUT PLATE
9	1	74C231	CONVEYOR END COVER
10	3	P139-005	TRANSITION CAP
11	1	P139-013	GUIDE RAIL FLAT
12	1	P139-013	GUIDE RAIL FLAT
13	1	P139-013	GUIDE RAIL WIDE
14	1	P139-013IN	GUIDE RAIL FLAT
15	8	P139-016	GUIDE RAIL BRACKET
16	5	P139-017	ADJ. ROD 8INCHES
17	32	P139-023	RAIL CLIP
18	2	P139-027	ADJ. ROD 12INCHES
19	1	P139-035	ADJUSTING ROD 15"
20	1	P139-058	GUIDE RAIL WIDE
21	1	P139-058	GUIDE RAIL WIDE
22	1	P139-058	GUIDE RAIL WIDE
23	1	P139-058IN	GUIDE RAIL WIDE
24	1	P139-099	JOINT ROD ADAPTOR
25	1	P139-099	JOINT ROD ADAPTOR
26	8	P139-122	RAIL SPLICE CLAMP
27	3	P139-123	ADJ. ROD 6 INCHES
28	22	P40-5136	REGINA DRIVE SPROCKET SERIES 7300
29	1	P66-26032 (EE2)	ULTRASONIC SENSOR
30	1	P66-6932	PHOTO-EYE BRACKET
31	1	P66-6932	PHOTO-EYE BRACKET
32	1	P66-7306	RETRO REFLECTIVE SENSOR
33	1	P74-808	REGINA 7300 D2K 60" WIDE BELT

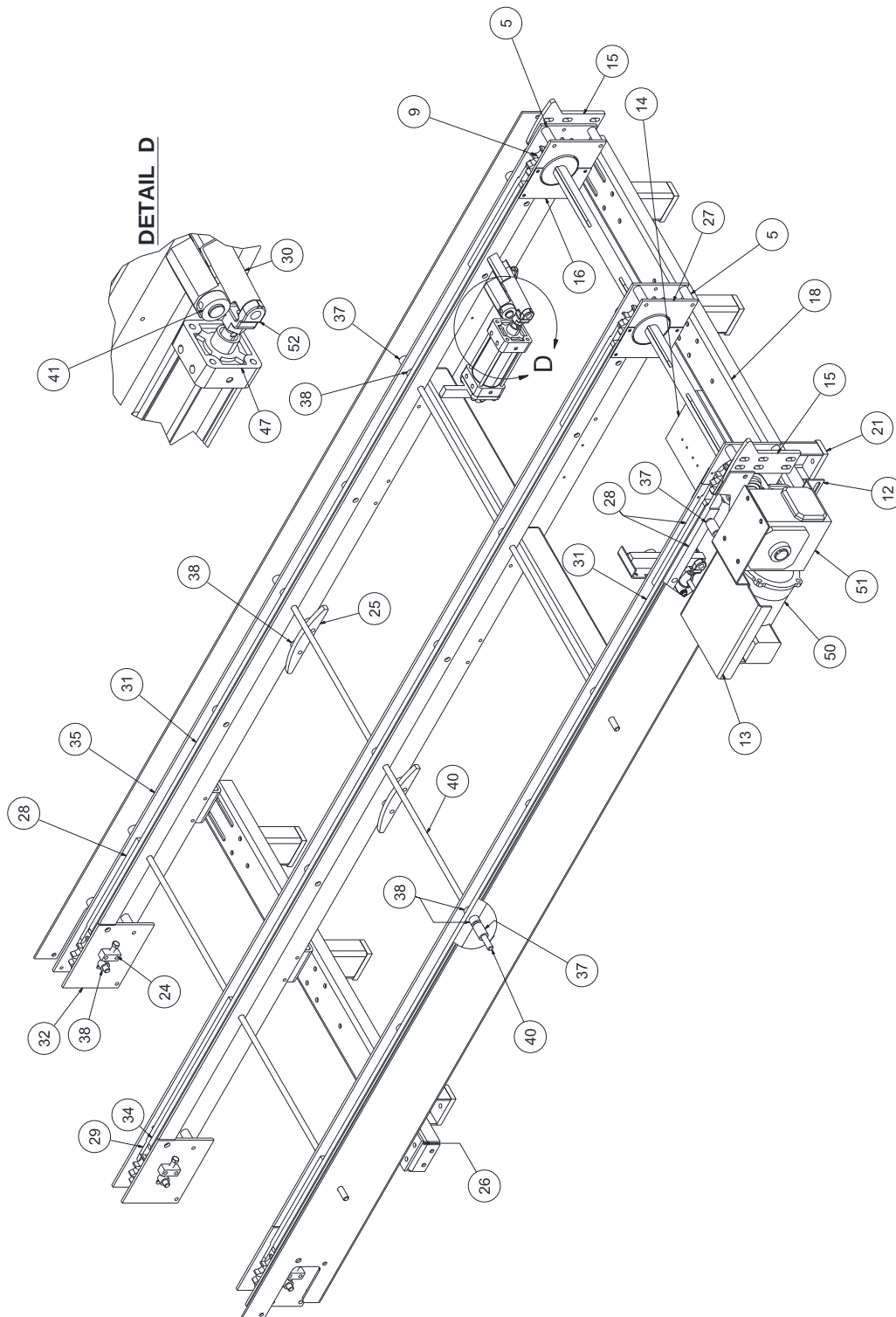
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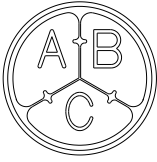
MODEL "108"

Sweep Off Bulk Depalletizer



Depalletizing Conveyor Assembly

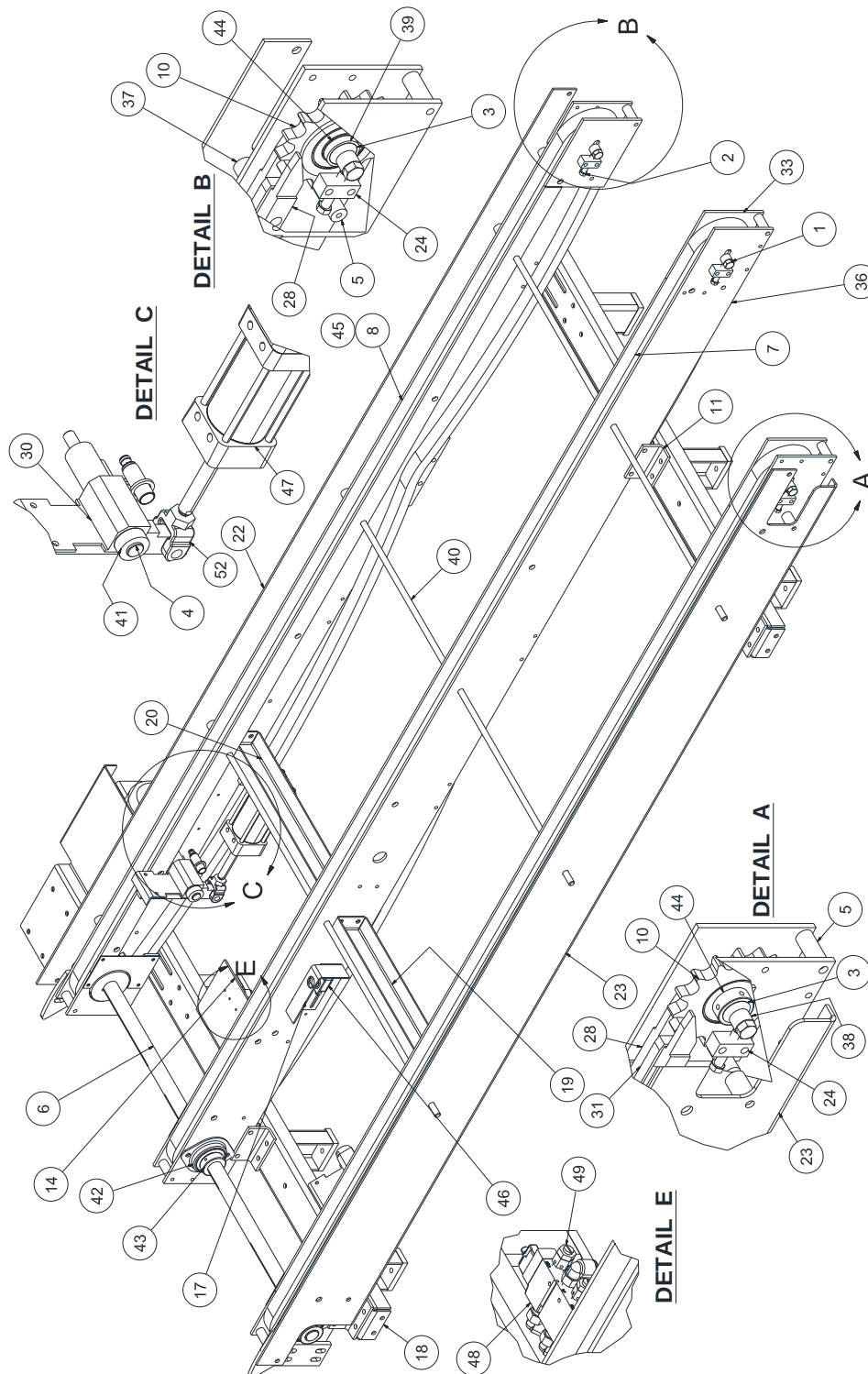
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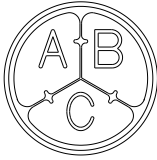
MODEL "108"

Sweep Off Bulk Depalletizer



Depalletizing Conveyor Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

Depalletizing Conveyor Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	3	1/2-13 UNC - 4	Hex Bolt - UNC (Regular Thread - Inch)
2	6	3/8-16 UNC - 2	Hex Bolt - UNC (Regular Thread - Inch)
3	3	46A1222	IDLER SHAFT
4	2	46A1296	PIVOT SHAFT
5	12	46A1370	GUARD SPACER
6	1	47B5009	DRIVE SHAFT
7	1	48A1131	ROLLER CHAIN
8	2	48A239	ROLLER CHAIN
9	3	4A5152-1210	SPROCKET 15T 1" PITCH 1.25 BORE
10	3	4A5152-2200	SPROCKET #80, 15T, 2.561 BORE
11	6	60A41322	MOUNTING BRACKET
12	1	60A57897	MOTOR BRACKET
13	1	60A59662	MOTOR GUARD RH
14	1	60A59894	VALVE COVER
15	2	60A61656	SPLICE PLATE
16	3	60A72644	SPROCKET GUARD PLATE, INFEED CONV
17	1	60A78462	INFEED CONV. PROX BRACKET
18	2	60B52752	CROSS BRACE
19	1	60B69770	RH CYLINDER SUPPORT
20	1	60B69771	LH CYLINDER SUPPORT
21	6	60B74495	CONVEYOR LEG
22	1	60D74493	9FT MIDDLE INFEED GUIDE PLATE RH
23	1	60D74494	9FT MIDDLE INFEED GUIDE PLATE LH
24	6	62A23018	IDLER BLOCK
25	3	62A23070	CHAIN TAKE UP CAM
26	6	62A28828	NUT PLATE
27	3	62A36308	REAR SPROCKET GUARD
28	10	62A37090	PALLET CONVEYOR CHAIN SUPPORT
29	2	62A39425	PALLET CONVEYOR CHAIN SUPPORT
30	2	62B24297	PALLET STOP
31	2	62C37012	9FT CHAIN GUIDE
32	2	62C37013	INNER CHAIN GUARD 6FT
33	1	62C39424	INNER CHAIN GUARD 9FT CENTER
34	1	62C39426	9FT CHAIN GUIDE
35	2	62D37009	9FT CONVEYOR SIDE PLATE
36	1	62D39423	9FT CONVEYOR SIDE PLATE
37	14	63A7404-18	SPACER
38	36	63A7404-2	PALLET CONVEYOR SPACER
39	3	63A8005	SPACER
40	3	63A8007-5	CONNECTING ROD 47.75" LG.

SERIAL NUMBER **24464**

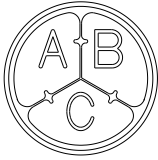


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

Depalletizing Conveyor Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
41	2	P110-005	3/4" STD. COLLAR
42	3	P43-040	2 HOLE BEARING ADAPTER
43	3	P44-016	BALL BEARING 1-1/4 ID
44	3	P44-165	BALL BEARING
45	1	P48-621	CONNECTING LINK
46	1	P66-26032 (EE31)	ULTRASONIC SENSOR
47	2	P67-1085	SMC AIR CYLINDER 2.5 B X 3 S
	1	P79-128	REPAIR KIT FOR P67-1085
48	1	P69-4140	SMC 2POS SINGLE SOLENOID VALVE
49	2	P69-705	METERING VALVE
50	1	P71-062	BALDOR #VM3542 .75HP MOTOR
51	1	P72-246	GEAR REDUCER
52	2	P79-226	CLEVIS W/ PIN

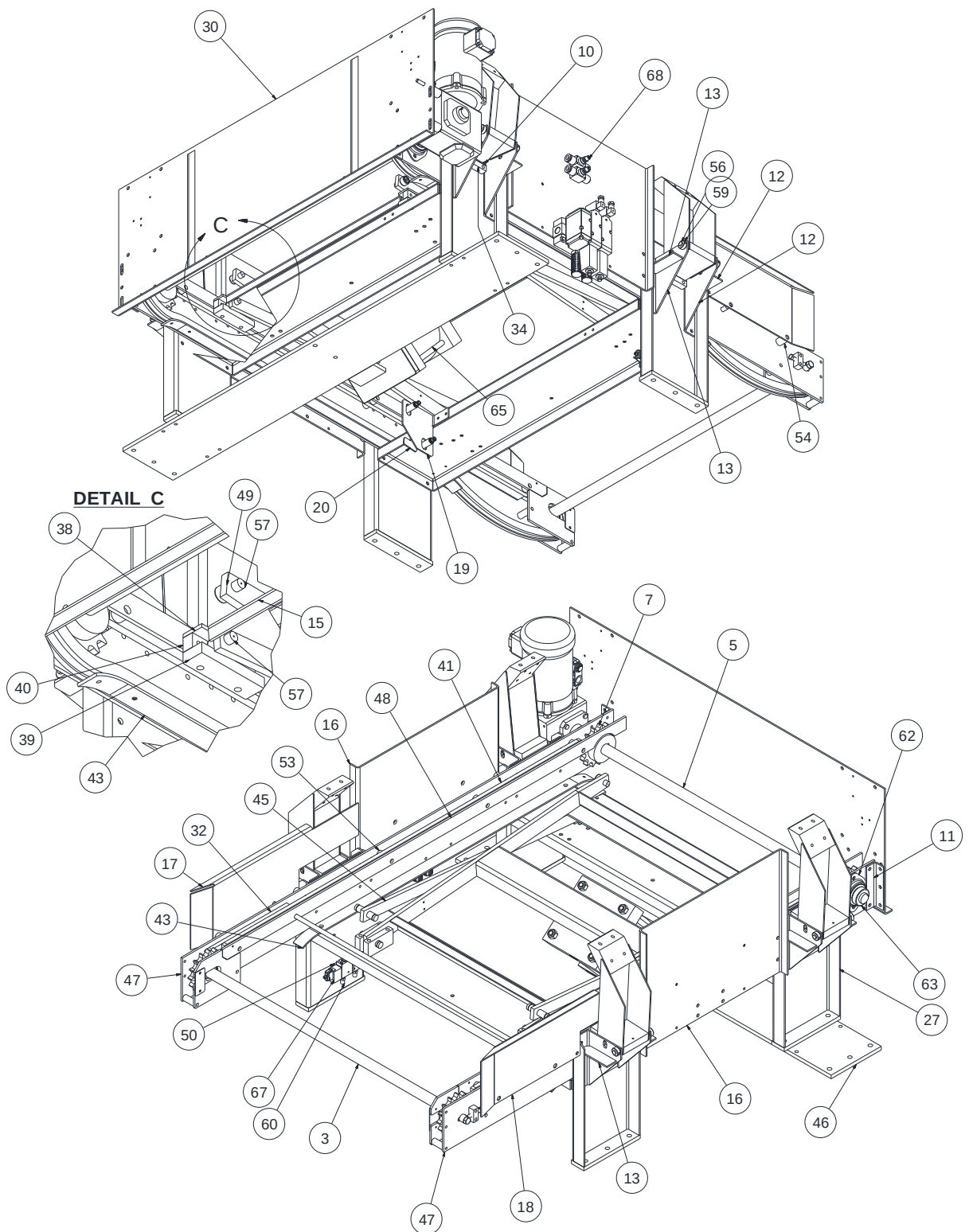
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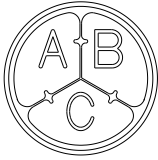
MODEL "108"

Sweep Off Bulk Depalletizer



Pallet Stacker Assembly

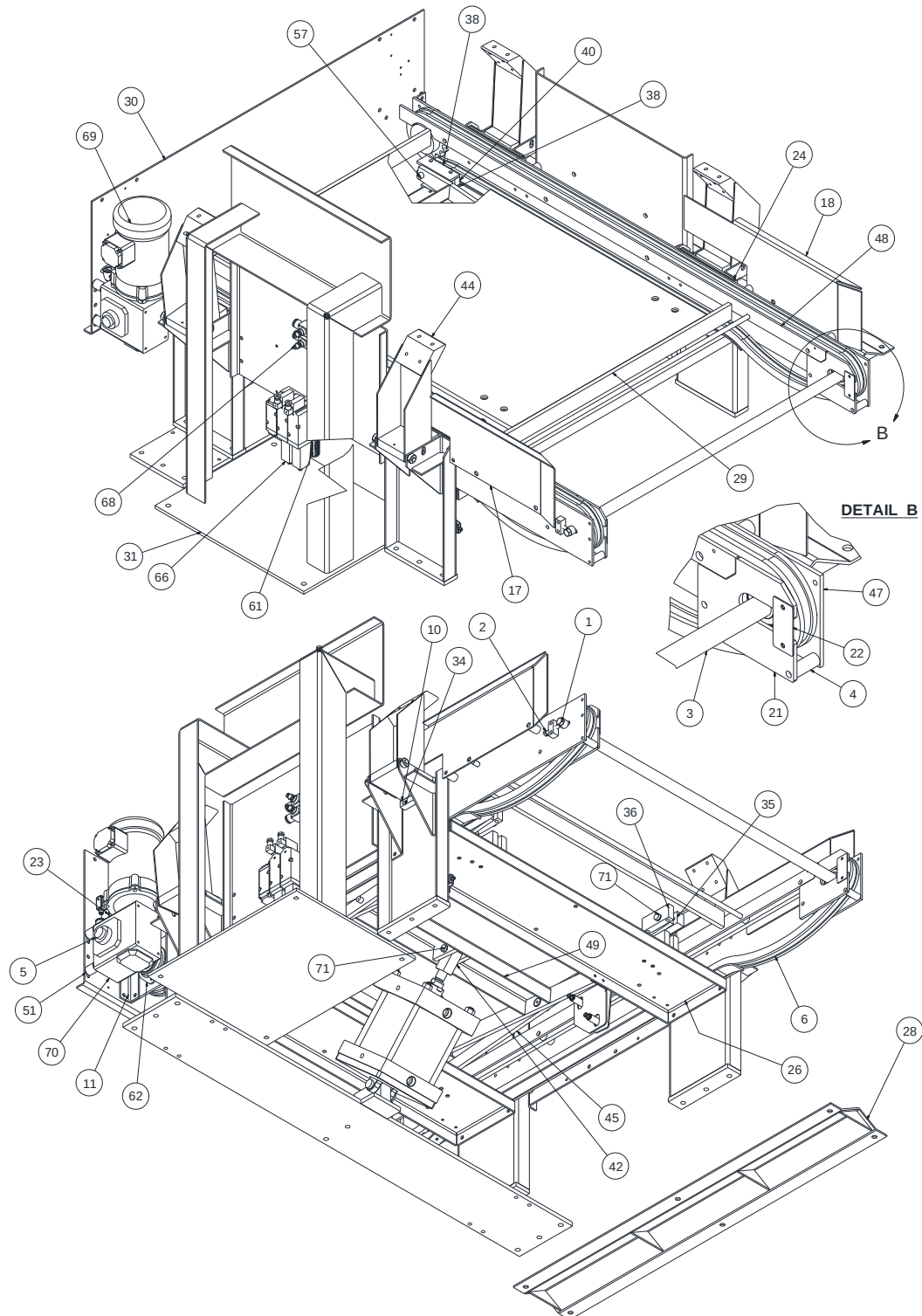
SERIAL NUMBER **24464**



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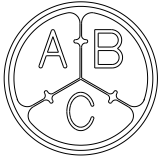
MODEL "108"

Sweep Off Bulk Depalletizer



Pallet Stacker Assembly

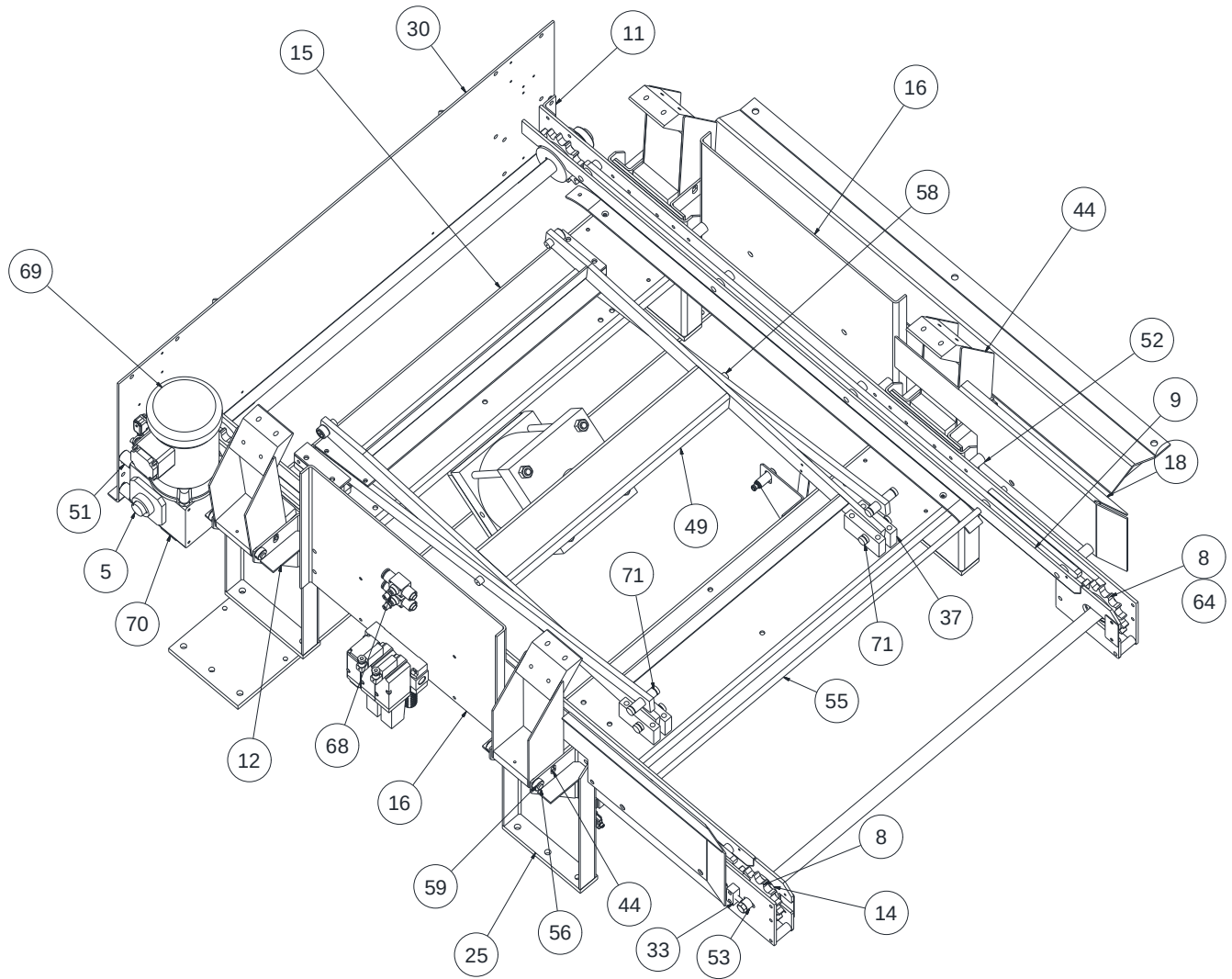
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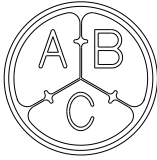
MODEL "108"

Sweep Off Bulk Depalletizer



Pallet Stacker Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

Pallet Stacker Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	1/2-13 X 1.25	Hex Bolt
2	2	3/8-16 UNC - 2	Hex Bolt - UNC (Regular Thread - Inch)
3	1	46A1301	IDLER SHAFT
4	4	46A1370	GUARD SPACER
5	1	47A5310	DRIVE SHAFT
6	2	48A238	EMPTY PALLET STACKER ROLLER CHAIN
7	2	4A5152-1210	SPROCKET 15T 1" PITCH 1.25 BORE
8	2	4A5152-2200	SPROCKET #80, 15T, 2.561 BORE
9	2	60A38444	SHIM PLATE
10	4	60A39817	CUSHION PAD
11	2	60A40558	MTG. BRACKET PALLET STOP
12	4	60A40562LH	PIVOT SHAFT SUPPORT
13	4	60A40562RH	PIVOT SHAFT SUPPORT
14	1	60A41329	SHIM PLATE SPROCKET
15	1	60A41428	CROSS BRACE
16	2	60A47475	PALLET GUIDE GUARD
17	1	60A51020	SIDE PALLET GUIDE
18	1	60A51020RH	SIDE PALLET GUIDE
19	1	60A58034	STACKER PROX BRACKET
20	1	60A58035	STACKER PROX FLAG
21	2	60A72679	GUARD PLATE
22	2	60A72680	SPROCKET SHIELD
23	1	60A77564	SWIVEL MOUNT EYE BRACKET
24	2	60A78091	SPACER PLATE
25	2	60B40563	PALLET CONVEYOR LEG
26	2	60B40564	SUPPORT CHANNEL
27	2	60B41528	PALLET CONVEYOR LEG
28	1	60B70146	WHEEL STOP
29	1	60C40566	PALLET LIFT PLATE
30	1	60C40567	PALLET STOP
31	1	60C40568	FORK LIFT PALLET STOP
32	2	62A23016	CHAIN SUPPORT
33	2	62A23018	IDLER BLOCK
34	4	62A23400	STOP BLOCK LATCH
35	2	62A24201	PIVOT BLOCK
36	2	62A24202	PIVOT BLOCK
37	4	62A24203	PIVOT BLOCK
38	6	62A24204	WEAR PLATE TOP AND BOTTOM
39	2	62A24205	BOTTOM WEAR PLATE
40	4	62A24206	SPACER PLATE

SERIAL NUMBER **24464**



TECHNICAL MANUAL

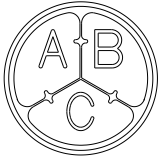
MODEL "108"

Sweep Off Bulk Depalletizer

Pallet Stacker Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
41	2	62A24208	CHAIN GUIDE
42	1	62A27716	ROD END
43	2	62B24207	CHAIN SUPPORT
44	4	62B24211	PIVOTING LATCH BLOCK WELDMENT
45	2	62B24214	PALLET LIFT BAR
46	1	62B31414	BASE PLATE AND PIVOT
47	2	62B36174	STACKER CONVEYOR SIDE PLATE
48	2	62B36310	INNER CHAIN GUARD
49	1	62C24215	PALLET LIFT FRAME
50	2	63A10212	TAPE HEAD MTG SPACER
51	2	63A11274	GEARBOX SPACER
52	6	63A7404-13	SPACER
53	18	63A7404-2	PALLET CONVEYOR SPACER
54	6	63A7404-7	PALLET CONVEYOR SPACER
55	1	63A8007-1	CONNECTING ROD
56	4	63A8389	PIVOT SHAFT
57	4	P106-064	CAM FOLLOWER
58	2	P106-078	CAM FOLLOWER
59	8	P110-004	SET COLLAR
60	2	P128-021	1/4" NPT MUFFLER
61	2	P128-031	SMC SILENCER 1/2NPT PLASTIC
62	2	P43-040	2 HOLE BEARING ADAPTER
63	2	P44-016	BALL BEARING 1-1/4 ID
64	2	P44-165	BALL BEARING
65	1	P67-1618	SMC AIR CYLINDER 8B X 5S (STACKER)
	1	P79-10103	REPAIR KIT FOR P67-1618
66	1	P69-1505	DUAL PRESS. VALVE W/ SOFT START
67	1	P69-4139	SMC 3POS SOLENOID VALVE
68	2	P69-738	LEGRIS 7770-62-00 FLOW CONTROL VALVE
69	1	P71-048	MOTOR 1/2 HP
70	1	P72-247	SPEED REDUCER
71	5	P79-305	PIVOT PIN

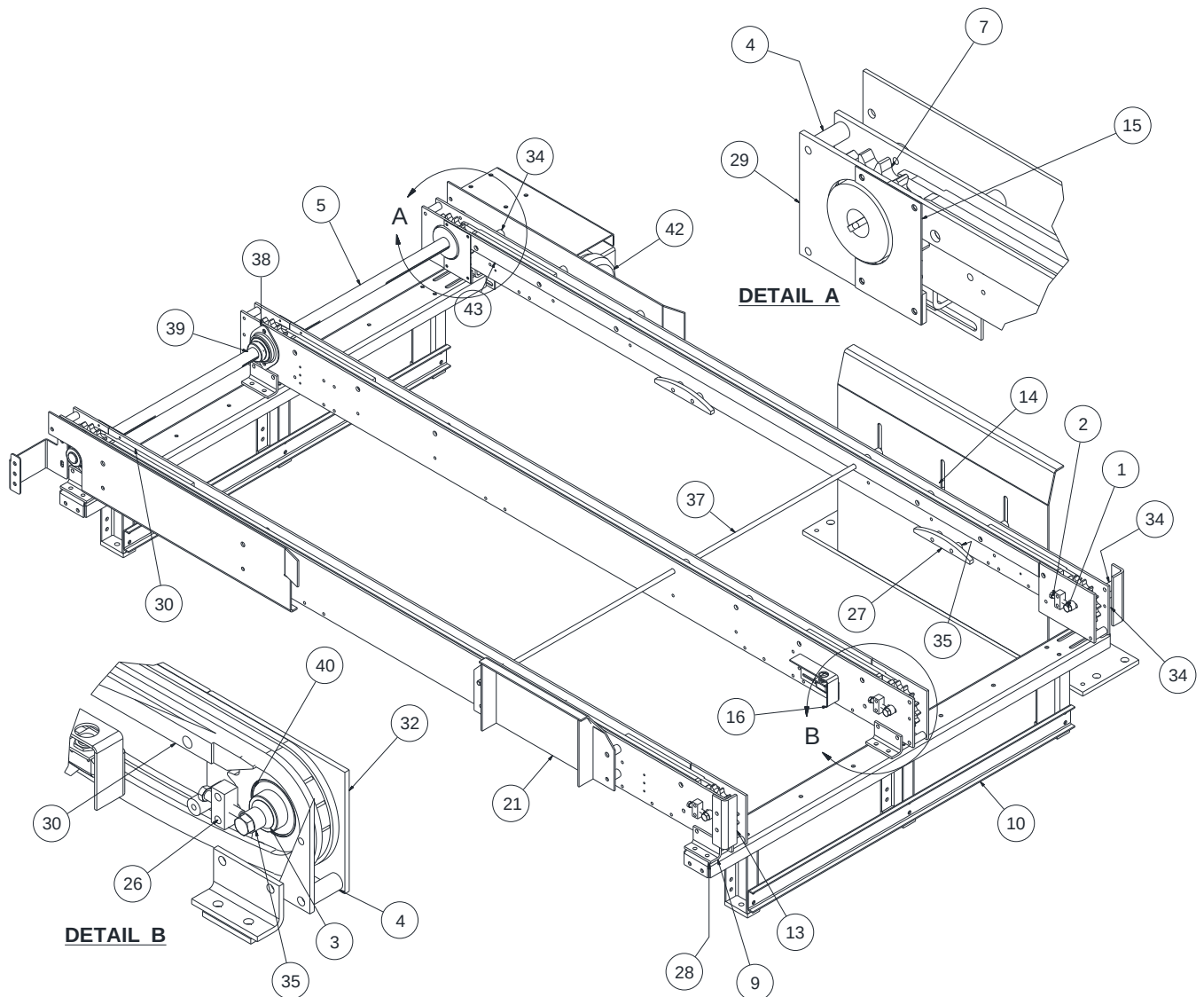
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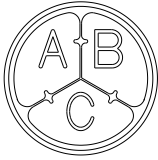
MODEL "108"

Sweep Off Bulk Depalletizer

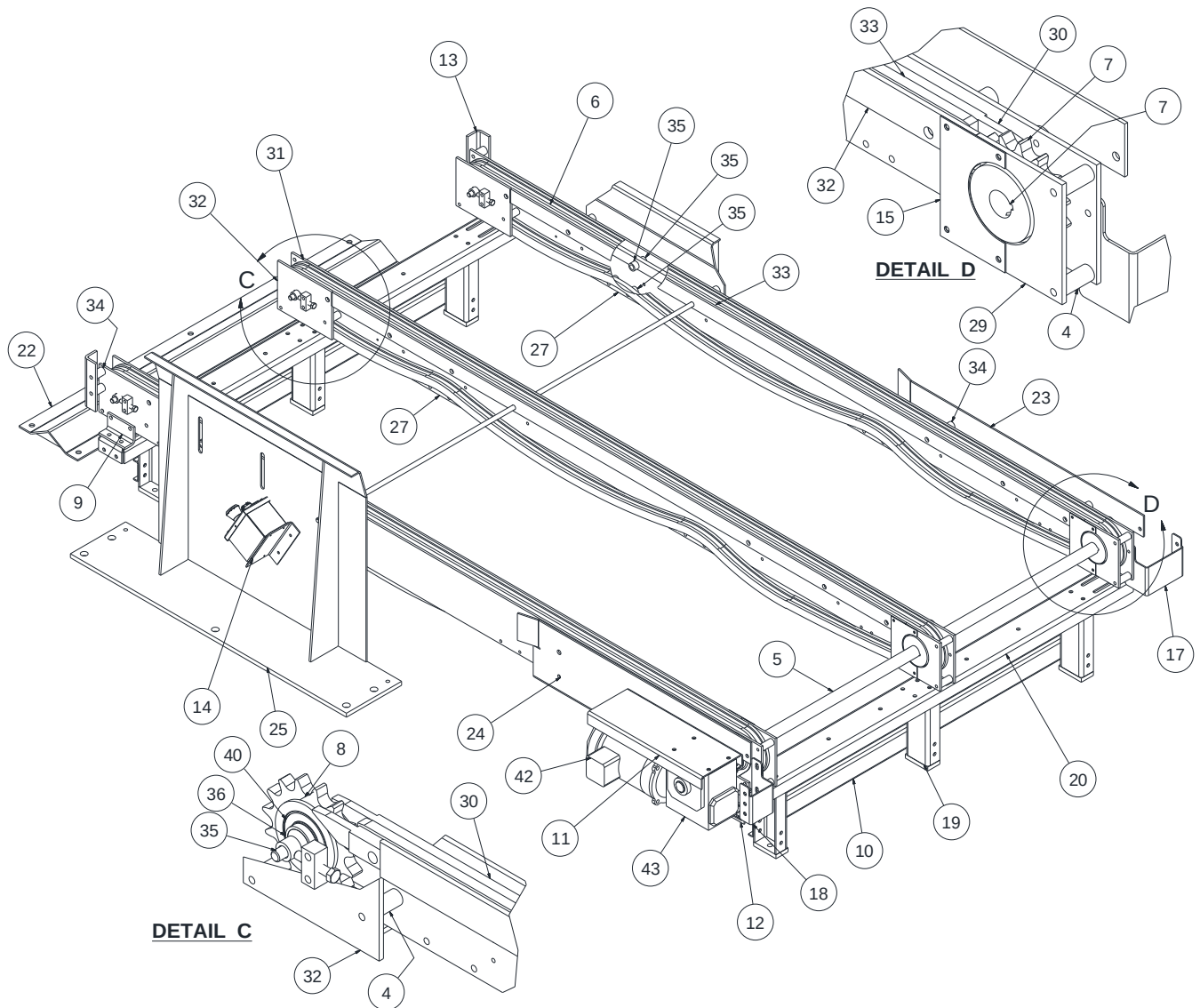


6FT Pallet Infeed Conveyor Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



6FT Pallet Infeed Conveyor Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

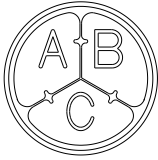
MODEL "108"

Sweep Off Bulk Depalletizer

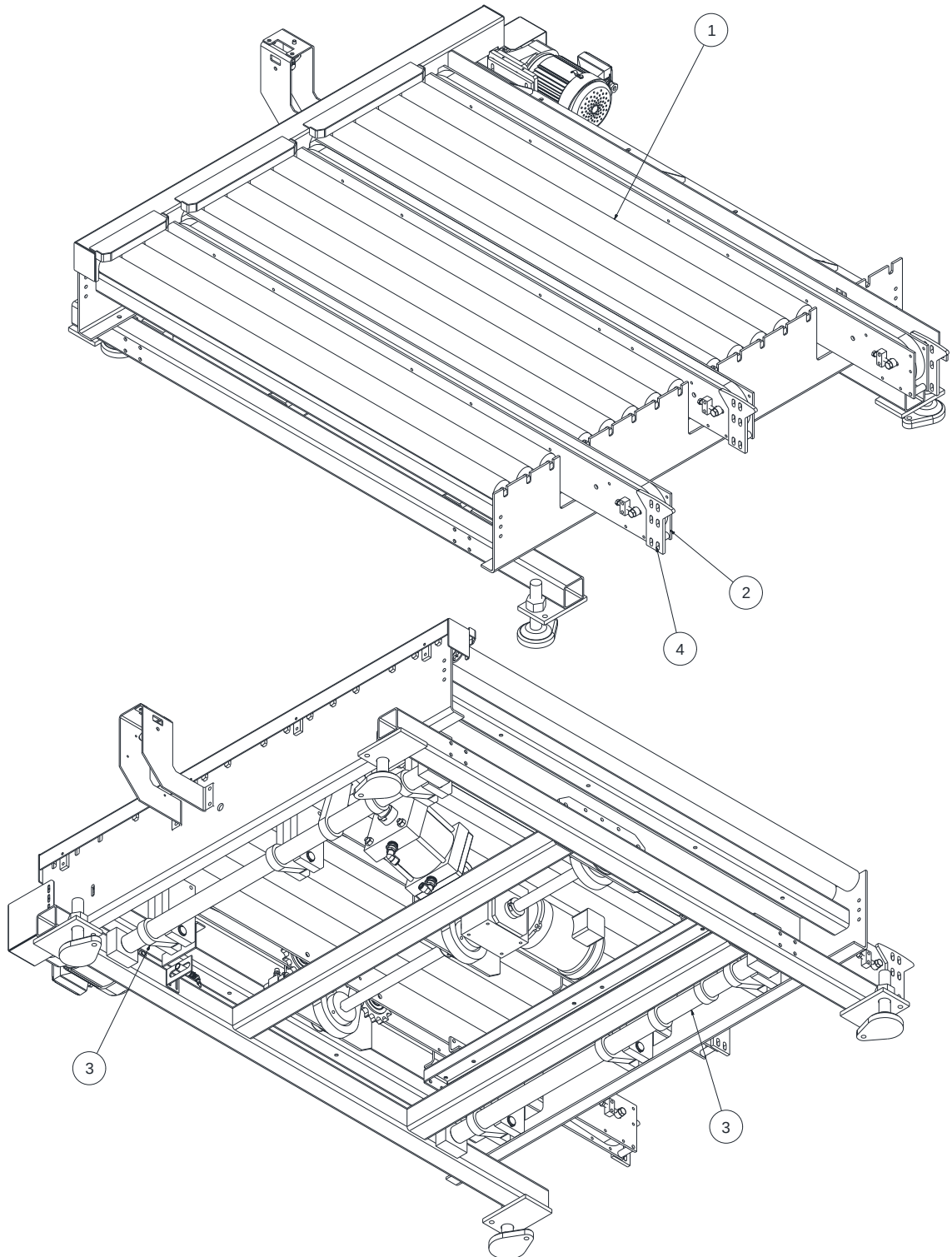
6FT Pallet Infeed Conveyor Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	3	1/2-13 UNC - 4	Hex Bolt - UNC (Regular Thread - Inch)
2	6	3/8-16 UNC - 2	Hex Bolt - UNC (Regular Thread - Inch)
3	3	46A1222	IDLER SHAFT
4	12	46A1370	GUARD SPACER
5	1	47A4237	DRIVE SHAFT
6	3	48A1132	ROLLER CHAIN #80 X 195"
7	3	4A5152-1210	SPROCKET 15T 1" PITCH 1.25 BORE
8	3	4A5152-2200	SPROCKET #80, 15T, 2.561 BORE
9	6	60A41322	MOUNTING BRACKET
10	2	60A51173	LEG BRACE
11	1	60A57895	MOTOR GUARD
12	1	60A57897	MOTOR BRACKET
13	2	60A58563	PALLET STOP
14	1	60A60578	P.B. MOUNTING BRACKET
15	3	60A72644	SPROCKET GUARD PLATE, INFEED CONV
16	1	60A78462	INFEED CONV. PROX BRACKET
17	1	60A82370	90° TIE BRACKET
18	1	60A82371	90° TIE BRACKET
19	6	60A82405	CONVEYOR LEG
20	2	60B51165	CROSS BRACE
21	1	60B60001	PALLET GUIDE SIDE LOAD
22	1	60B70146	WHEEL STOP
23	1	60B75679	7' FRONT INFEED GUIDE, LH
24	1	60B79297	7FT FRONT INFEED PALLET GUIDE, RH
25	1	60D41514	PALLET GUIDE LOAD STATION
26	6	62A23018	IDLER BLOCK
27	6	62A23070	CHAIN TAKE UP CAM
28	6	62A28828	NUT PLATE
29	3	62A36308	REAR SPROCKET GUARD
30	12	62A37090	PALLET CONVEYOR CHAIN SUPPORT
31	3	62B39427	SIDE PLATE 8FT
32	3	62B39428	INNER CHAIN GUARD 8FT
33	3	62B39429	CHAIN GUIDE
34	20	63A7404-18	SPACER
35	30	63A7404-2	PALLET CONVEYOR SPACER
36	3	63A8005	SPACER
37	1	63A8007-9	CONNECTING ROD
38	3	P43-040	2 HOLE BEARING ADAPTER
39	3	P44-016	BALL BEARING 1-1/4 ID
40	3	P44-165	BALL BEARING
41	1	P66-948	2 PB BOX
42	1	P71-062	BALDOR #VM3542 .75HP MOTOR
43	1	P72-246	GEAR REDUCER

SERIAL NUMBER **24464**

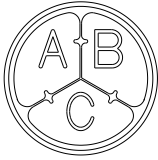


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

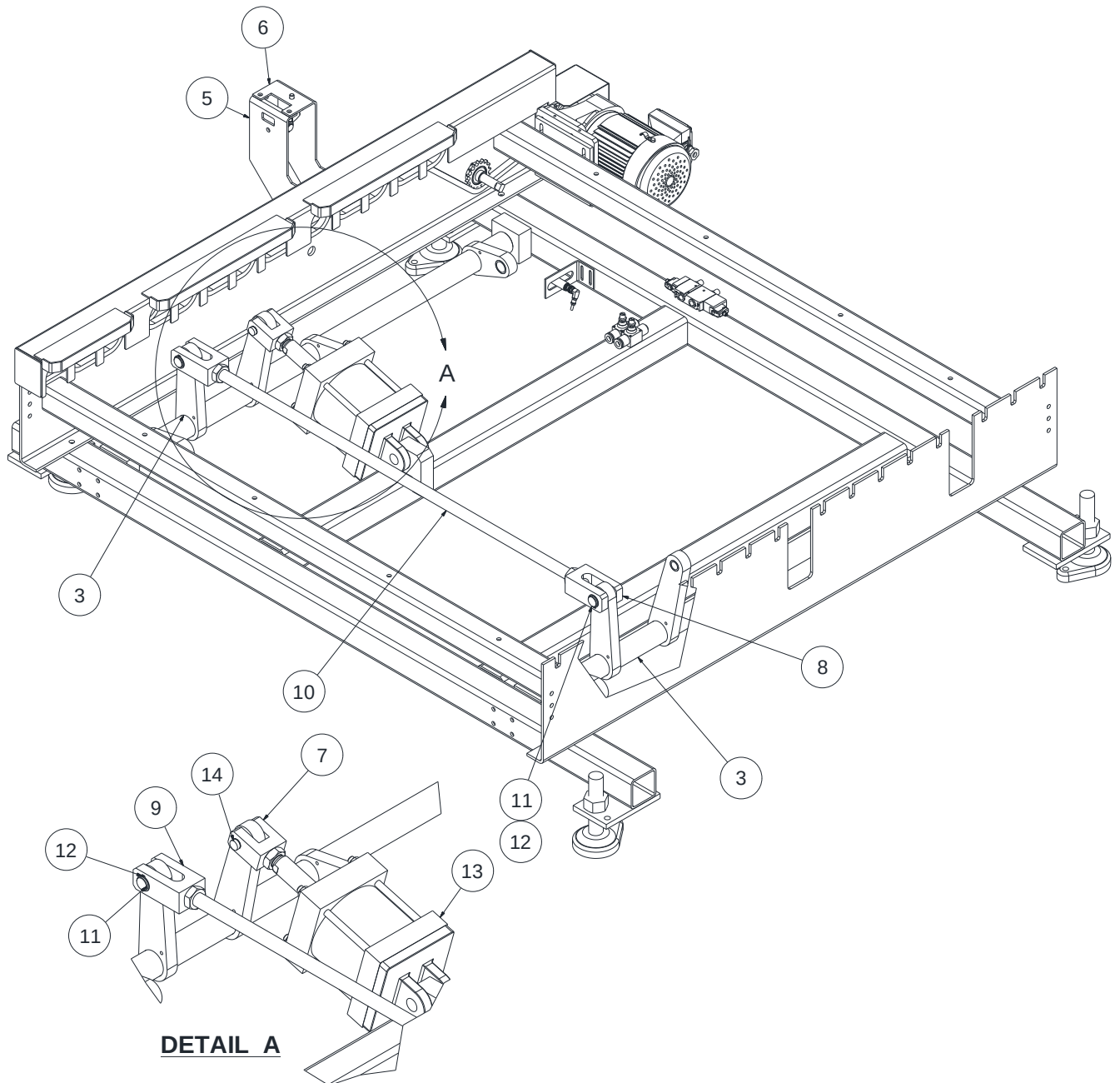


90° Pallet Staging Conveyor Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



90° Pallet Staging Conveyor Assembly

SERIAL NUMBER **24464**

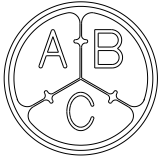


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

90° Pallet Staging Conveyor Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	15E16280	TRANSFER ROLLER CONVEYOR ASSY
2	1	15E16320	INFEED CONVEYOR
3	2	20C0829	PIVOT ARM
4	3	60A61656	SPLICE PLATE
5	1	60B54618	PHOTO EYE GUARD RH
6	1	60B54619	PHOTO EYE GUARD LH
7	1	62A37367	CYLINDER CLEVIS
8	1	62A37374	ROD END
9	1	62A37380	ROD END LH
10	1	63A13617	TIE BAR
11	2	63A13618	PIVOT PIN
12	4	P55-014	RETAINING RING, 1.0 SHAFT
13	1	P67-1616	SMC AIR CYLINDER 6B X 3S
	1	P79-198	REPAIR KIT FOR P67-1616
14	1	P79-305	PIVOT PIN

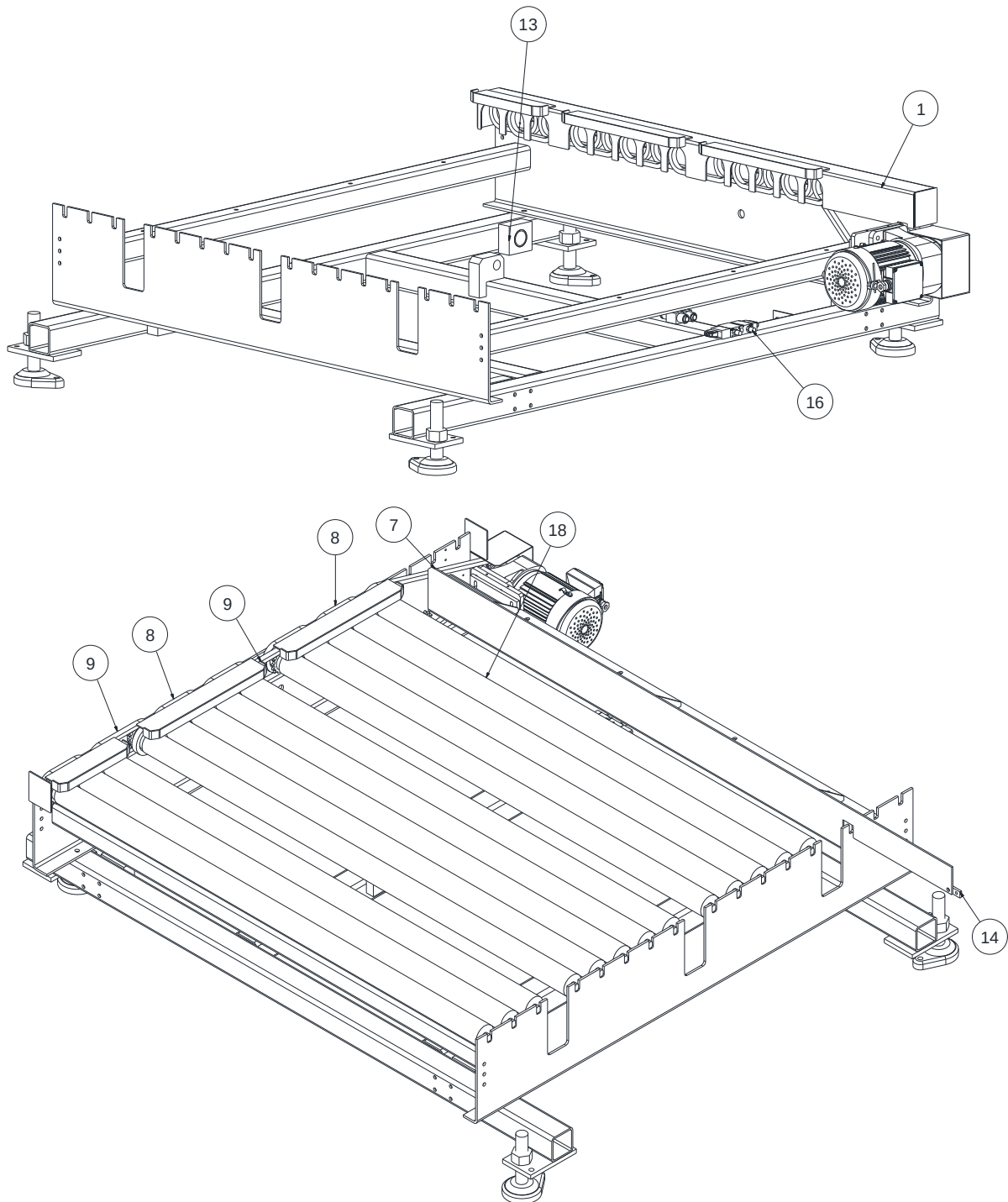
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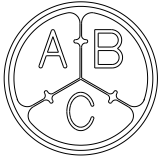
MODEL "108"

Sweep Off Bulk Depalletizer



Transfer Roller Conveyor Assembly

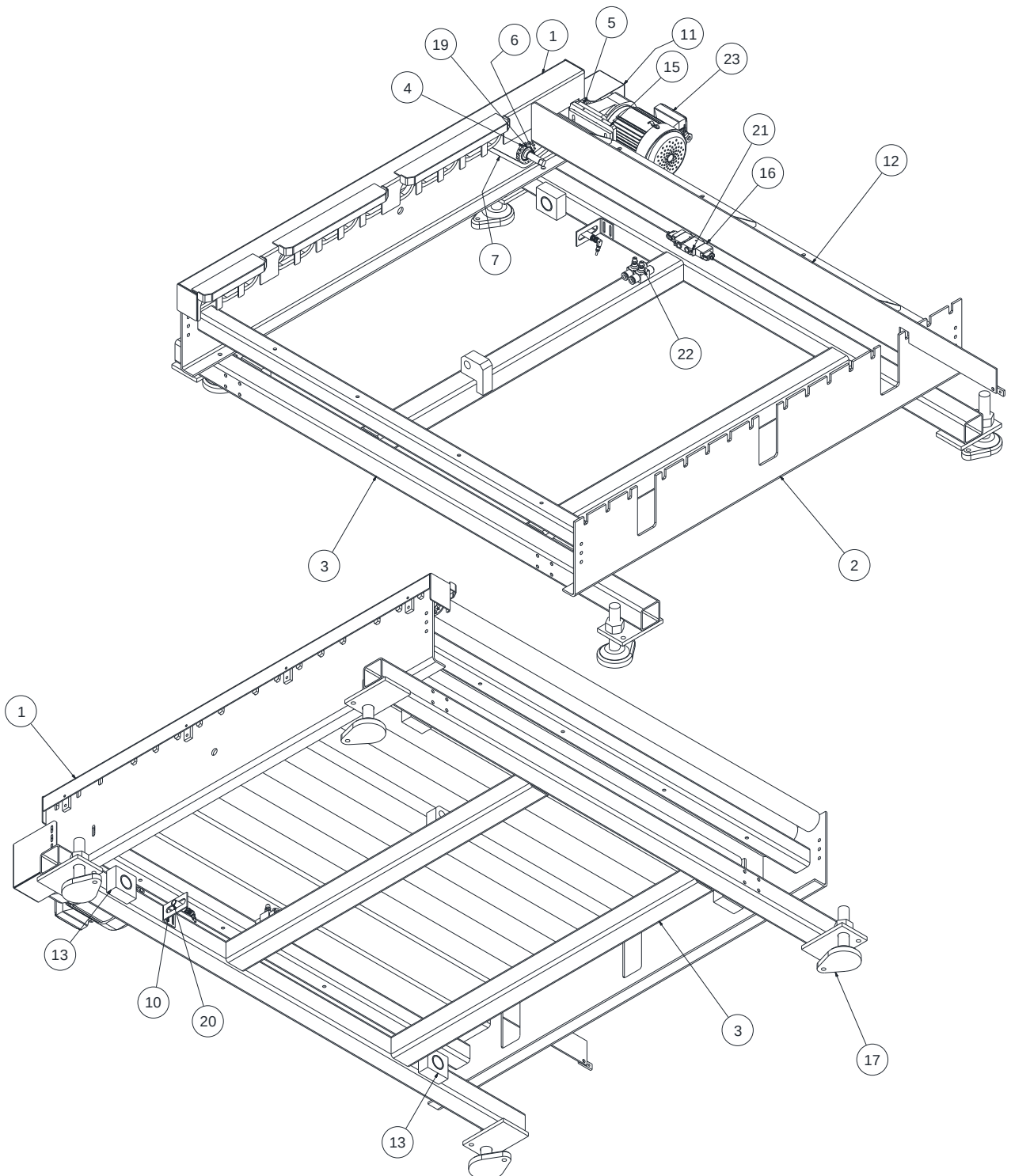
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TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Transfer Roller Conveyor Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

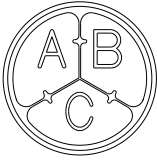
MODEL "108"

Sweep Off Bulk Depalletizer

Transfer Roller Conveyor Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	20C1338	CHAIN GUARD, END STOP WELDMENT
2	1	20D1337	PALLET TRANSFER FRAME WELDMENT
3	1	20D1346	BASE FRAME WELDMENT
4	1	40A2162-921	IDLER SPROCKET 40BS16
5	1	40BS16-1.125	SPROCKET 16T, 1/2P, 1.125"B, 3/16K
6	1	46A838	IDLER STUD
7	1	48A1130	CHAIN
8	10	48A327	CHAIN LOOP 15.5" LG
9	2	48A328	CHAIN LOOP 19.5" LG
10	1	60A52200	PHOTO EYE MOUNTING PLATE
11	1	60B82363	MOTOR GUARD
12	1	60C82361	PALLET END STOP
13	4	62A30226	PIVOT BLOCK
14	1	62A31345	SPLICE PLATE
15	1	62A38802	MOTOR ADAPTOR PLATE - BROTHER
16	2	P128-021	1/4" NPT MUFFLER
17	4	P139-172	SUPPORT LEVELER
18	13	P42-1250	PALLET CONVEYOR ROLLER PLAIN 60"
19	1	P44-058	BEARING 3/4 ID
20	1	P66-27093	PROXIMITY SENSOR
21	1	P69-4139	SMC 3POS SOLENOID VALVE
22	2	P69-738	LEGRIS 7770-62-00 FLOW CONTROL VALVE
23	1	P71-1427	BROTHER BRAKEMOTOR INLINE 3/4HP

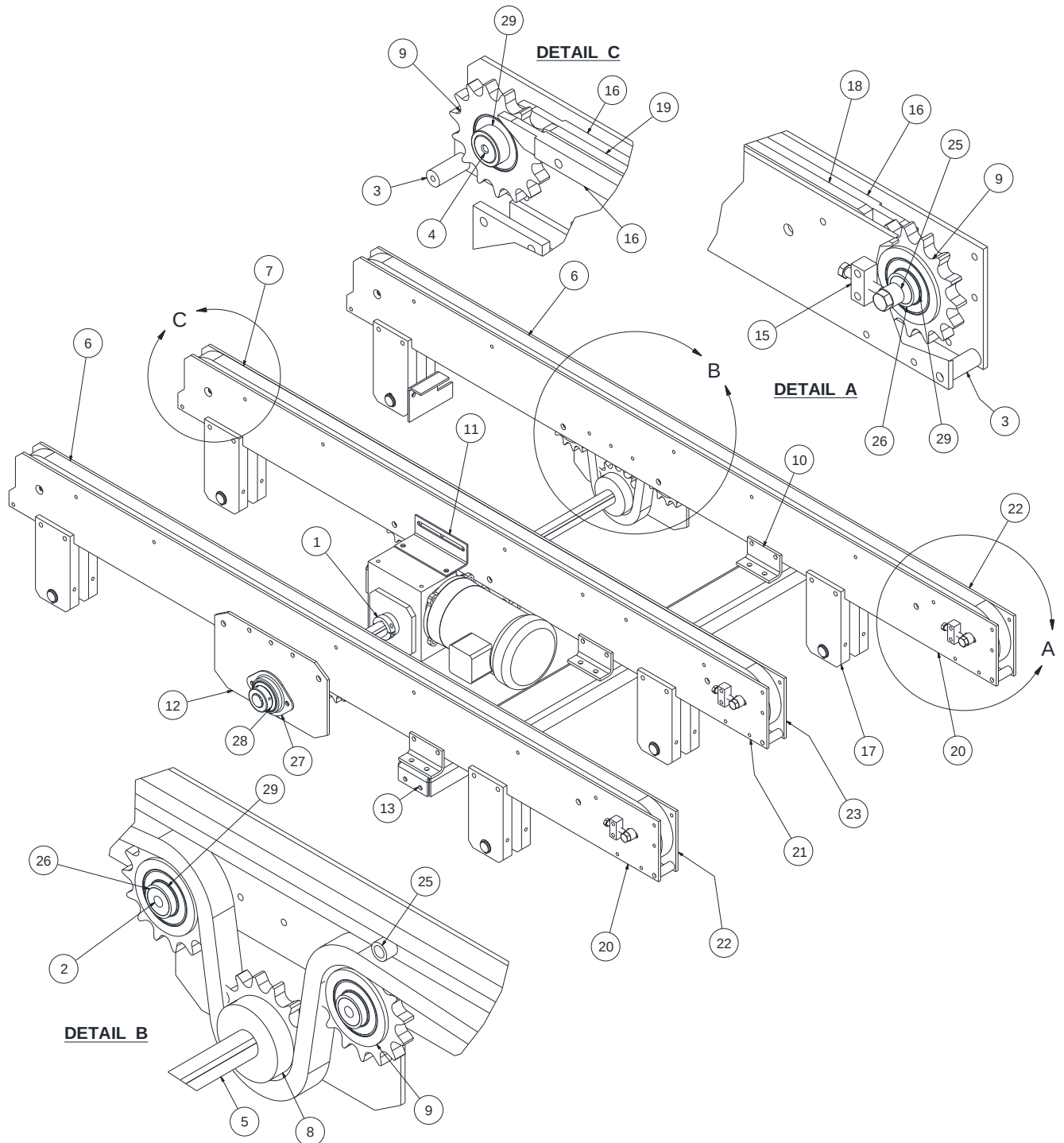
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TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

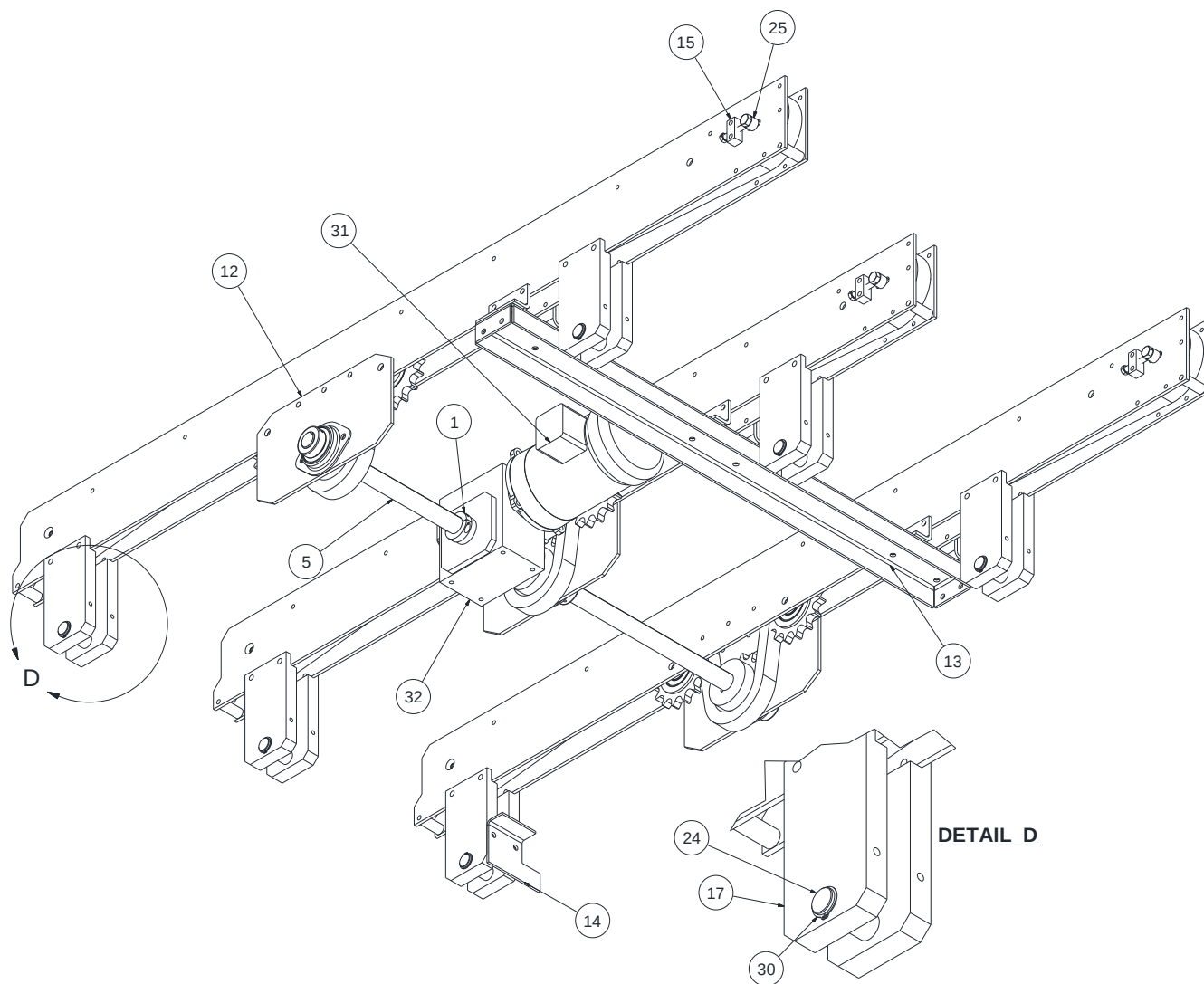


Transfer Chain Conveyor Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



Transfer Chain Conveyor Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

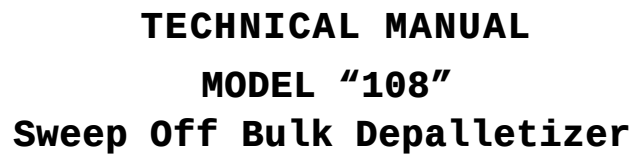
MODEL "108"

Sweep Off Bulk Depalletizer

Transfer Chain Conveyor Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	110A059	SPLIT COLLAR KEYED
2	9	46A1222	IDLER SHAFT
3	6	46A1370	GUARD SPACER
4	3	46A1576	IDLER SHAFT
5	1	47A6657	DRIVE SHAFT
6	2	48A329	PALLET CONVEYOR CHAIN
7	1	48A330	PALLET CONVEYOR CHAIN
8	3	4A5152-1210	SPROCKET 15T 1" PITCH 1.25 BORE
9	12	4A5152-2200	SPROCKET #80, 15T, 2.561 BORE
10	6	60A41322	MOUNTING BRACKET
11	1	60A75792	MOTOR BRACKET
12	3	60A75839	BEARING MOUNTING PLATE
13	1	60B75841	CROSS CHANNEL
14	1	60B82425	TIE CHANNEL
15	6	62A23018	IDLER BLOCK
16	12	62A37362	PALLET CONVEYOR CHAIN SUPPORT
17	12	62A37366	LIFT BLOCK
18	2	62B37363	CHAIN GUIDE
19	1	62B37364	CHAIN GUIDE MIDDLE
20	2	62C37356	OUTER SIDE PLATE
21	1	62C37357	OUTER SIDE PLATE MIDDLE
22	2	62C37358	INNER SIDE PLATE
23	1	62C37359	INNER SIDE PLATE MIDDLE
24	6	63A13616	PIVOT PIN
25	18	63A7404-2	PALLET CONVEYOR SPACER
26	12	63A8005	SPACER
27	3	P43-040	2 HOLE BEARING ADAPTER
28	3	P44-016	BALL BEARING 1-1/4 ID
29	12	P44-165	BALL BEARING
30	12	P55-014	RETAINING RING, 1.0 SHAFT
31	1	P71-062	BALDOR #VM3542 .75HP MOTOR
32	1	P72-246	GEAR REDUCER

SERIAL NUMBER **24464**



Print date: 10/08/2021 DH

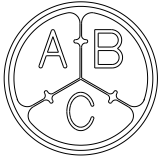


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

Rotary Pick Up Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	15D16304	TIER SHEET REMOVER GRIPPER HEAD
2	1	15D16306	SWING ARM ASSY
3	1	15E16311	ROTARY BASE FRAME
4	1	15E16319	ROTATING MAST ASSEMBLY
5	1	60A71983	EYE MTG. BRACKET
6	2	62A37985	BASE OUTRIGGER
7	4	62A38094	BASE OUTRIGGER
8	6	P139-206	LEVELING PAD, ARTICULATING
9	1	P66-26032	ULTRASONIC SENSOR
10	1	P75-6049	CARRIER ASSEMBLY - 48 LINKS (4.75FT)
11	1	P75-6050	IGUS MTG BRACKET FOR E332 (PAIR)

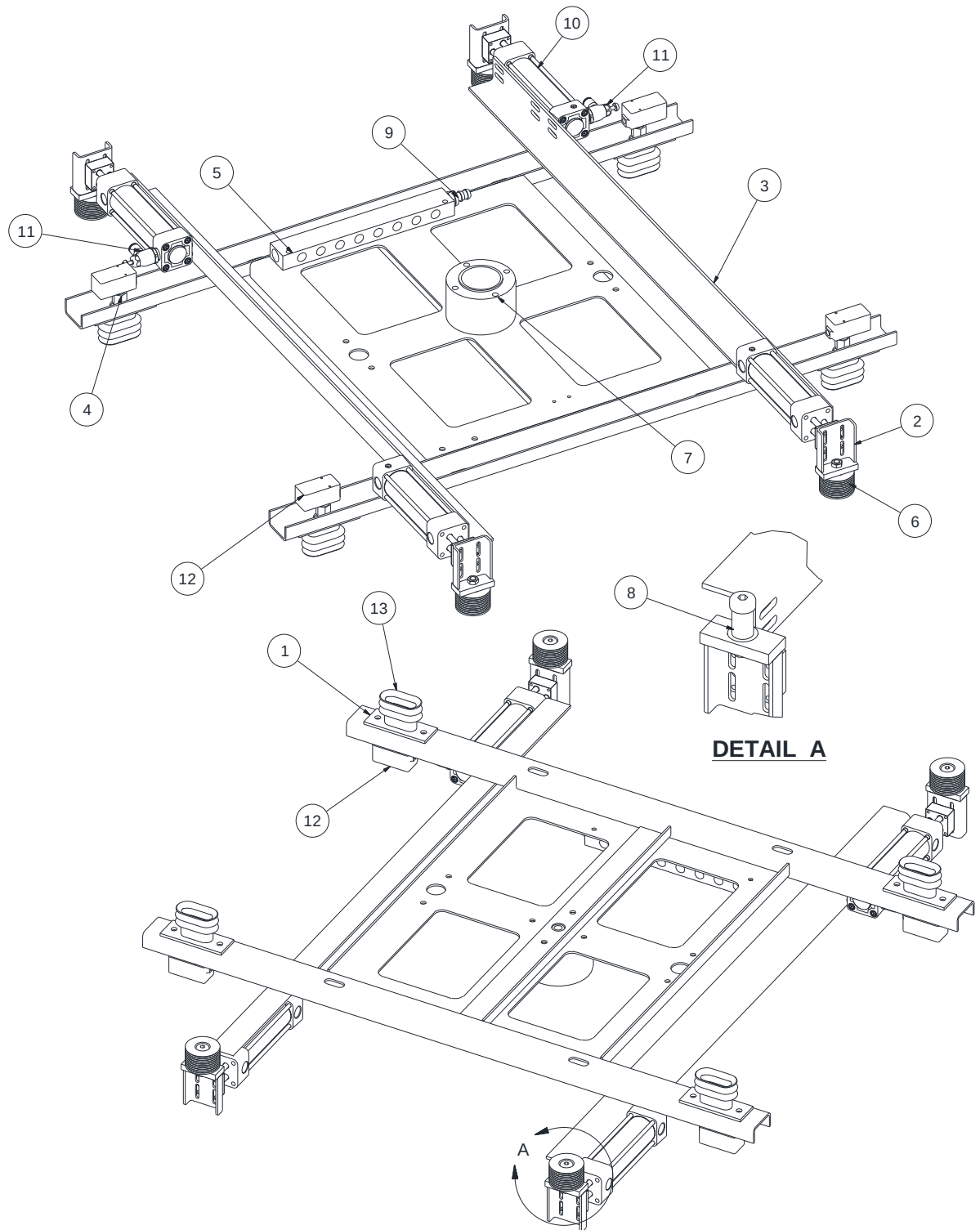
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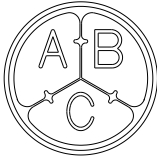
MODEL "108"

Sweep Off Bulk Depalletizer



Tier Sheet Remover Gripper Head Assembly

SERIAL NUMBER **24464**

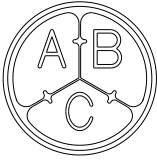


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

Tier Sheet Remover Gripper Head Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	60A83350	VACUUM CUP MTG PLATE
2	4	60B74597	CLAMP MTG BRACKET
3	1	60D82398	VACUUM CUP MTG BAR
4	4	62A39703	PIPE ADAPTOR 1/8 TO 3/8
5	1	62B8313	MANIFOLD
6	4	63A13504	CLAMP WHEEL
7	1	63A14360	HEAD ADAPTER
8	4	P44-848	OILITE FLANGE BUSHING
9	1	P56-015	AERO QUIP #4738-8-8B SOCKETLESS FITTING
10	4	P67-2349	TRIPLE ROD CYLINDER SMC
	1	P79-10114	REPAIR KIT FOR P67-2349
11	2	P69-732	FLOW CONTROL 3/8P X 3/8T
12	4	P70-223	VACUUM PUMP
13	4	P70-696	VICAS CUP 1-1/4 X 2-1/2

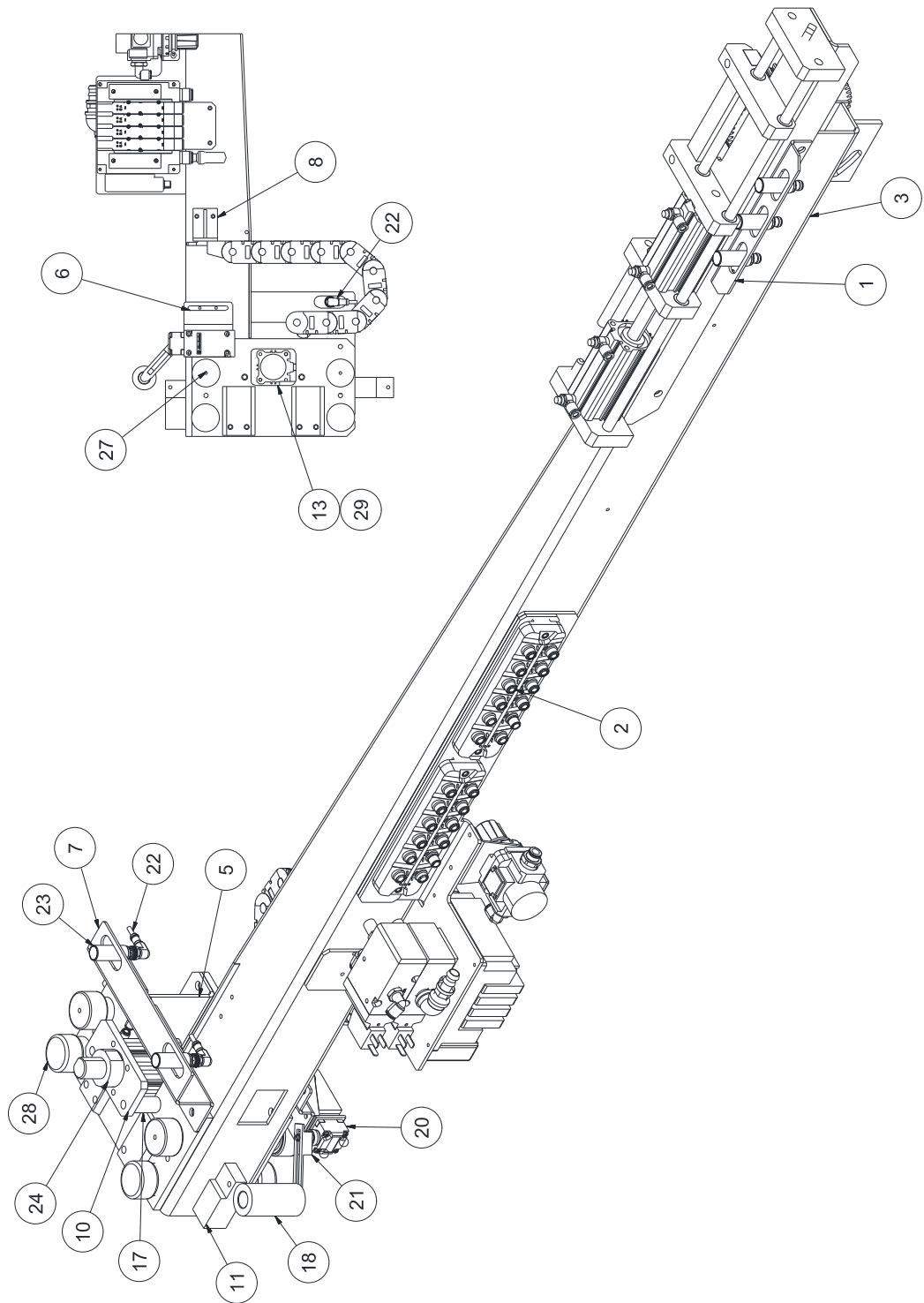
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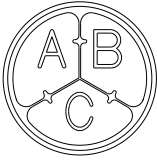
MODEL "108"

Sweep Off Bulk Depalletizer



Swing Arm Assembly

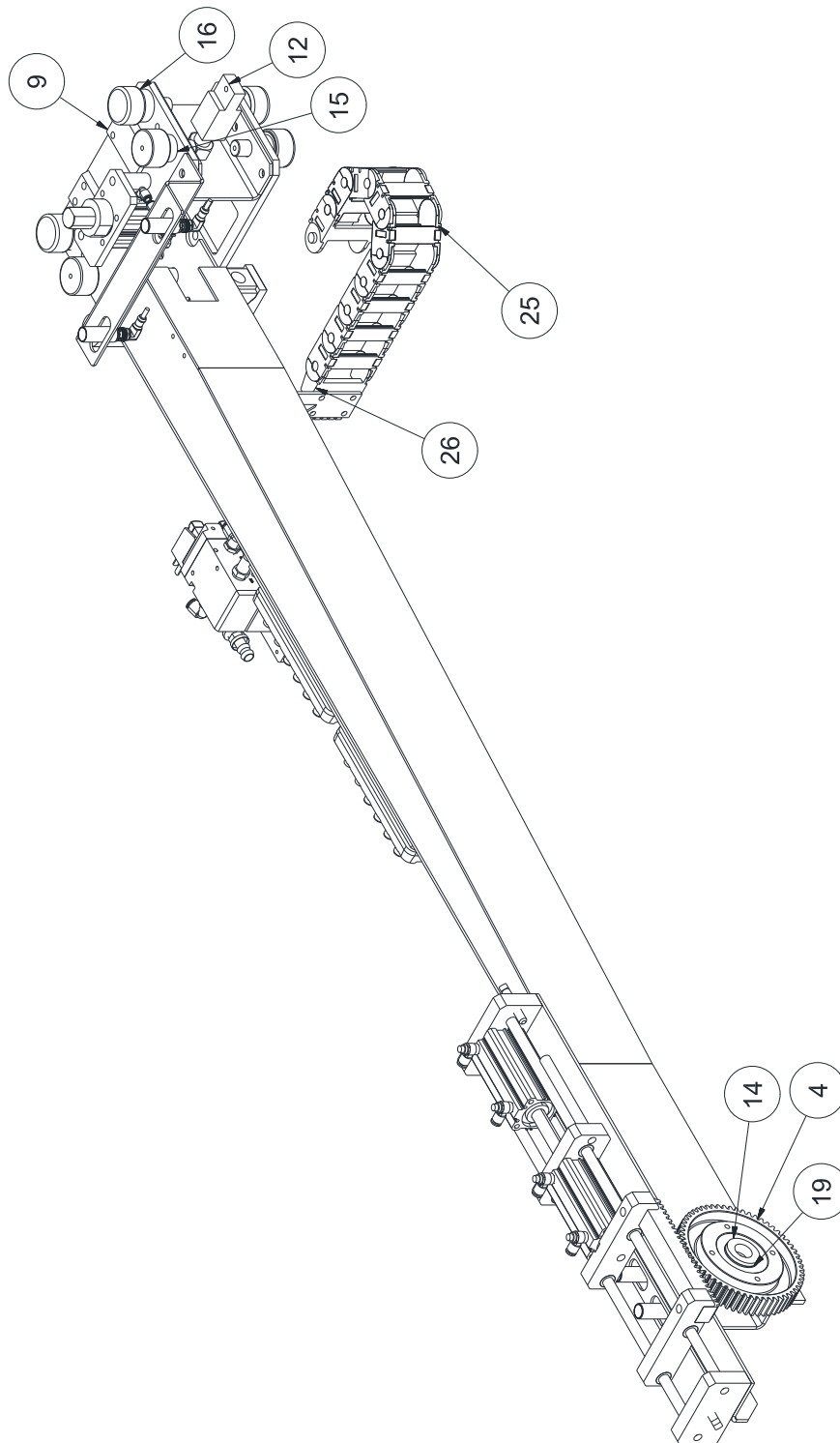
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TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Swing Arm Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

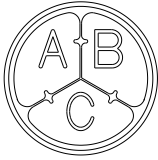
MODEL "108"

Sweep Off Bulk Depalletizer

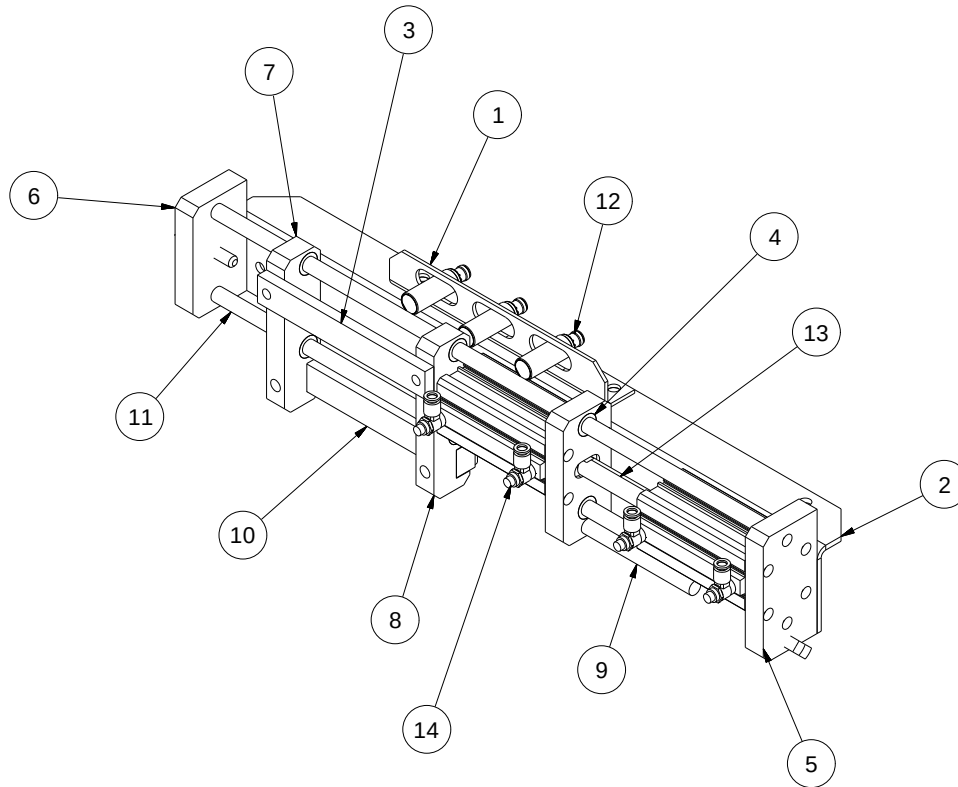
Swing Arm Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	15B16308	3 POSITION TIER HEAD ROTATION ASSY
2	1	15C16303	TIER SHEET ARM I/O ASSEMBLY
3	1	20D1343	OUTRIGGER ARM WELDMENT
4	1	41A3601-256	SPUR GEAR 60T 10DP 14.5°
5	1	60A77995	SWING ARM LOWER CHANNEL
6	1	60A78015	LIMIT SWITCH MTG BRACKET
7	1	60A78214	SENSOR MTG BRACKET
8	1	60B77989	CABLE CARRIER BRACKET
9	4	62A15981	HEAD WEAR BLOCK
10	1	62A37980	STOP CYLINDER MOUNT
11	1	62A37981	UPPER CHAIN BLOCK
12	1	62A38074	CHAIN CLEVIS #60
13	2	62B37978	CARRIAGE SIDE PLATE
14	1	63A4462	INNER SUPPORT
15	4	63A10676	SPACER
16	4	63A10677	SPACER
17	2	63A13868	STOP MOUNT STAND OFF
18	1	63A13889	ROLLER ARM EXTENSION
19	1	P44-099	1-1/4" ID SINGLE ROW RADIAL BEARING
20	1	P66-2601 OPP ARM	
21	1	P66-3231	LIMIT SWITCH ARM
22	2	P66-6966	CABLE
23	2	P66-27093	PROXIMITY SENSOR
24	1	P67-2273	SMC STOPPER CYL. SPRING EXTEND
25	1	P75-504	IGUS ENERGY CHAIN #250 45 LINKS
26	1	P75-505	IGUS TRACK MTG BRACKET (PAIR)
27	4	P106-059	CAM FOLLOWER
28	4	P106-087	ECCENTRIC CAM FOLLOWER
29	1	P128-019	.125 B.S.P. SINTERED BRZ. MUFFLER

SERIAL NUMBER **24464**



TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



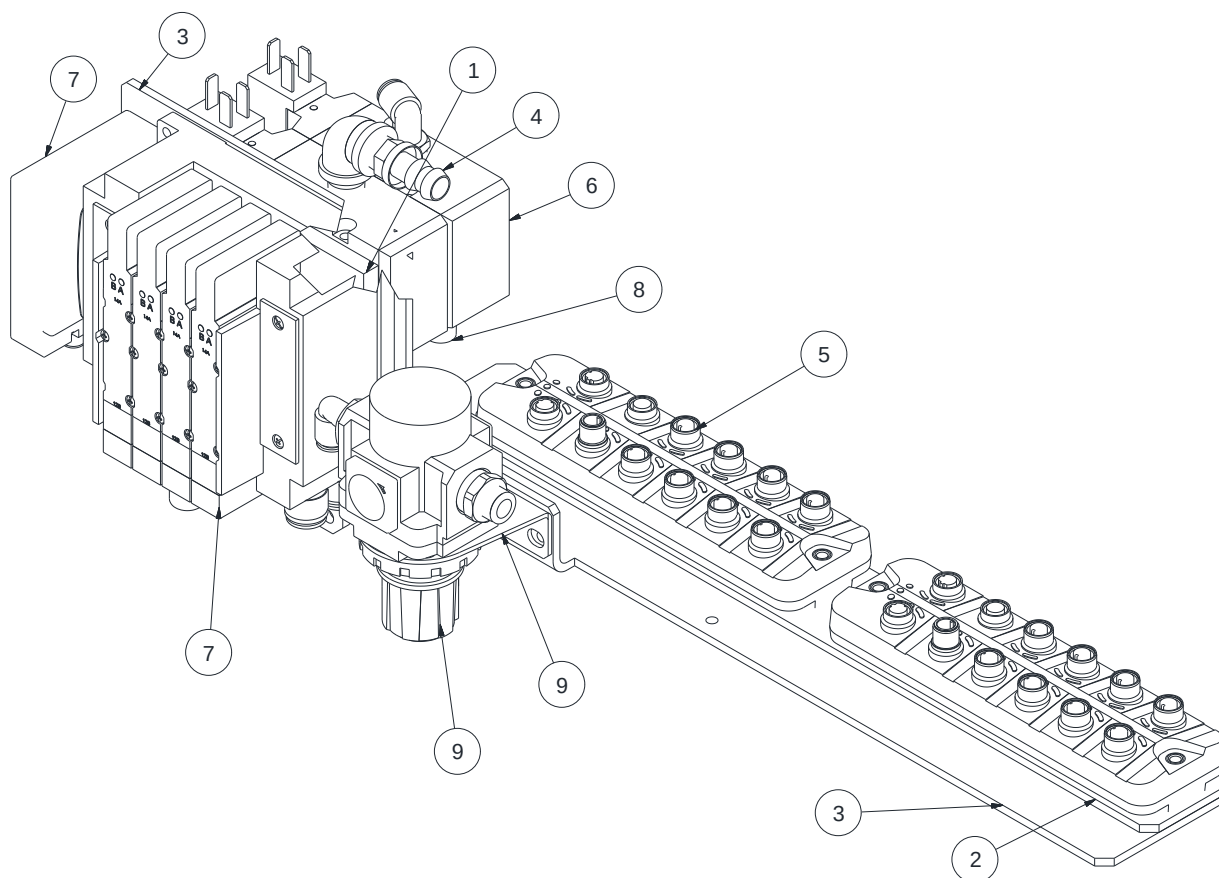
3 Position Tier Head Rotation Assembly

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	60A82402	ROTATION DRIVE MOUNTING BRACKET
2	1	60A82407	ROTATION DRIVE MOUNTING BRACKET
3	1	60A83413	SPAN BAR
4	1	62A39431	CYLINDER ATTACH PLATE
5	1	62A39432	CYLINDER MOUNT PLATE
6	1	62A39433	GUIDE ROD END PLATE
7	1	62A39435	RACK ATTACH PLATE
8	1	62A39436	RACK ATTACH BLOCK
9	1	63A14362	TRAVEL STOP
10	1	107A164	HEAD TURN RACK
11	2	P63-14361	GUIDE ROD
12	3	P66-27093	PROXIMITY SENSOR
13	2	P67-2267	SMC COMPACT CYLINDER 40MM X 75MM
	1	P79-115	REPAIR KIT FOR P67-2267
14	4	P69-757	SPEED CONTROL 1/8 PIPE - 1/4 TUBE

SERIAL NUMBER **24464**



TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



Tier Sheet Arm I/O Assembly

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	60A82400	VALVE SPACER
2	1	60B82396	PORT BLOCK SPACER
3	1	60C82399	VALVE MOUNTING BRACKET
4	1	P56-004	AERO QUIP #4738-6-8B SOCKETLESS FITTING
5	2	P66-7237	SENSOR BLOCK IO LINK
6	2	P69-4118	SMC 2POS SINGLE SOLENOIOD VALVE
7	1	P69-4148-4	SMC 4 STATION VALVE BANK I/O LINK
8	2	P128-022	3/8" EXHAUST MUFFLER EM-3
9	1	P129-323	AIR REGULATOR

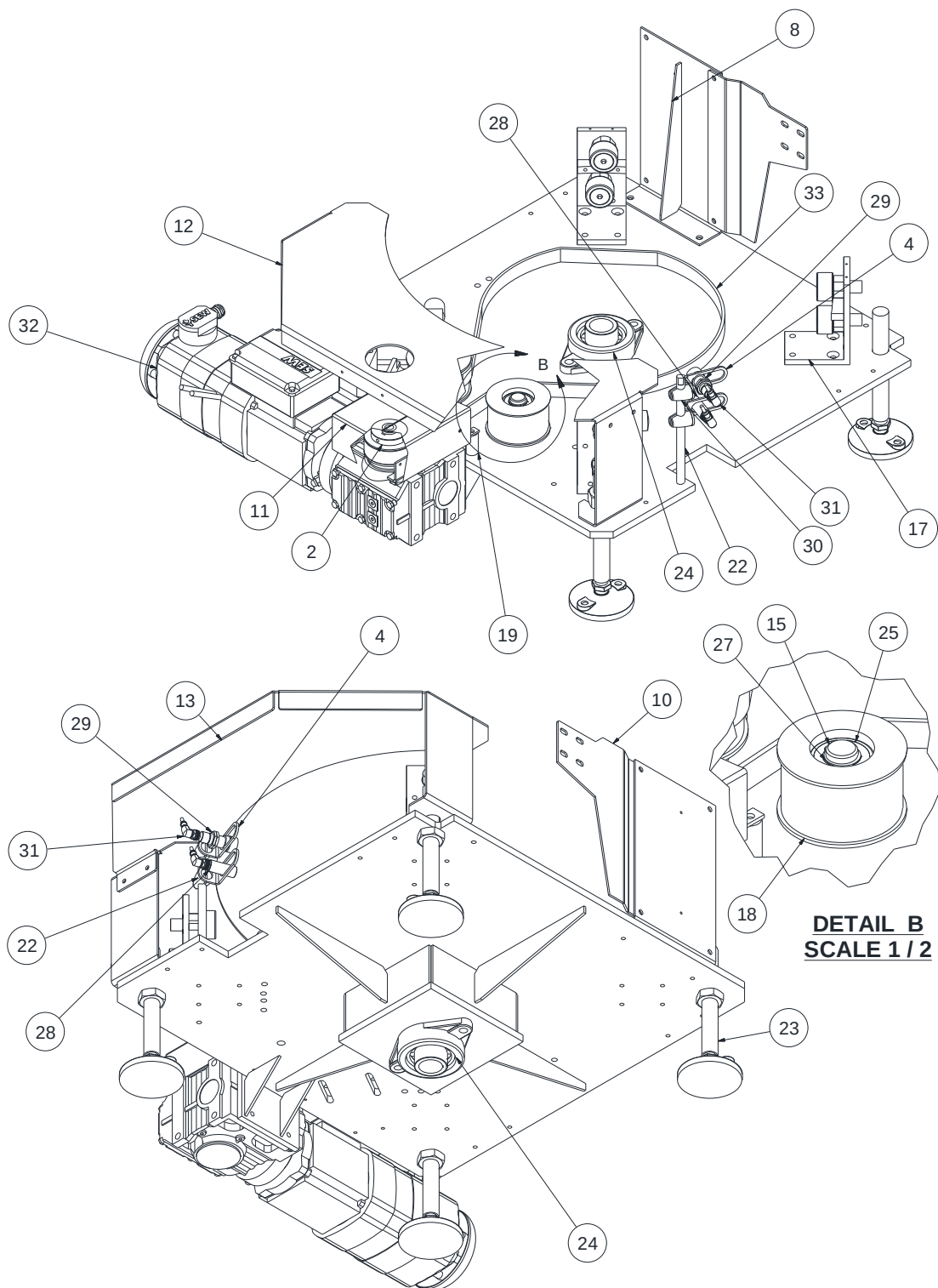
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

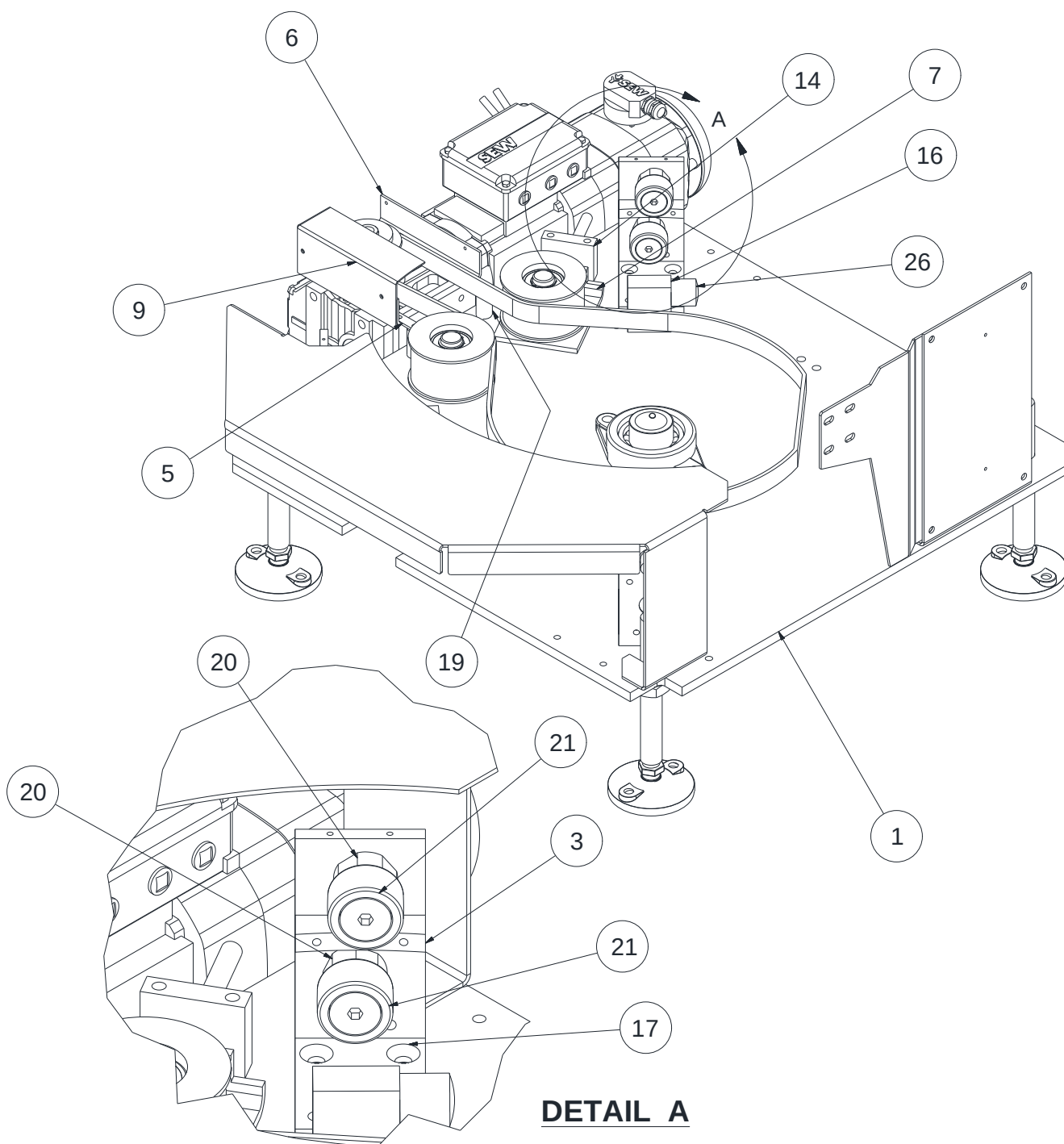


Rotary Base Frame Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



Rotary Base Frame Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

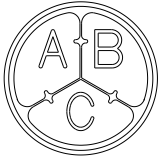
MODEL "108"

Sweep Off Bulk Depalletizer

Rotary Base Frame Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	20C0423	BOTTOM PLATE WELDMENT
2	1	42B849	DRIVE PULLEY
3	4	60A69920	GUIDE SHOE
4	2	60A70612	SWIVEL MOUNT EYE BRACKET
5	1	60A77892	GUARD MTG ANGLE RH
6	1	60A77893	GUARD MTG ANGLE LH
7	1	60B69916	BELT TENSIONER WELDMENT
8	1	60B69919	J-BOX MOUNTING PLATE
9	1	60B69928	BELT COVER
10	1	60B76577	CABLE CARRIER MTG BRACKET
11	1	60B80911	BELT COVER
12	1	60C77913	BASE GUARD
13	1	60C78320	CABLE CARRIER SUPPORT
14	1	62A29017	TENSIONER BLOCK
15	1	62A35343	IDLER PULLEY STUD
16	2	62A35346	BUMPER MTG BLOCK
17	4	62B35344	CAM FOLLOWER SUPPORT
18	2	63A12976	IDLER PULLEY
19	2	63A3732	IDLER SPROCKET SPACER
20	8	63A6374	ECCENTRIC CAM FOLLOWER SPACER
21	8	P106-099	CAM FOLLOWER
22	1	P139-017	ADJ. ROD 8 INCHES
23	4	P139-206	LEVELING PAD, ARTICULATING
24	2	P44-1055	2-HOLE FLANGE BEARING
25	4	P44-319	BALL BEARING, 1"
26	2	P53-018	BUMPER
27	2	P55-014	RETAINING RING, 1.0 SHAFT
28	1	P66-27093 (PR28)	PROXIMITY SENSOR
29	1	P66-27116	INDUCTIVE SAFETY SWITCH
30	2	P66-6932	PHOTO EYE BRKT.
31	2	P66-6966	CABLE
32	1	P71-1435	SEW GEARMOTOR S47/EK8C
33	1	P74-213	TIMING BELT

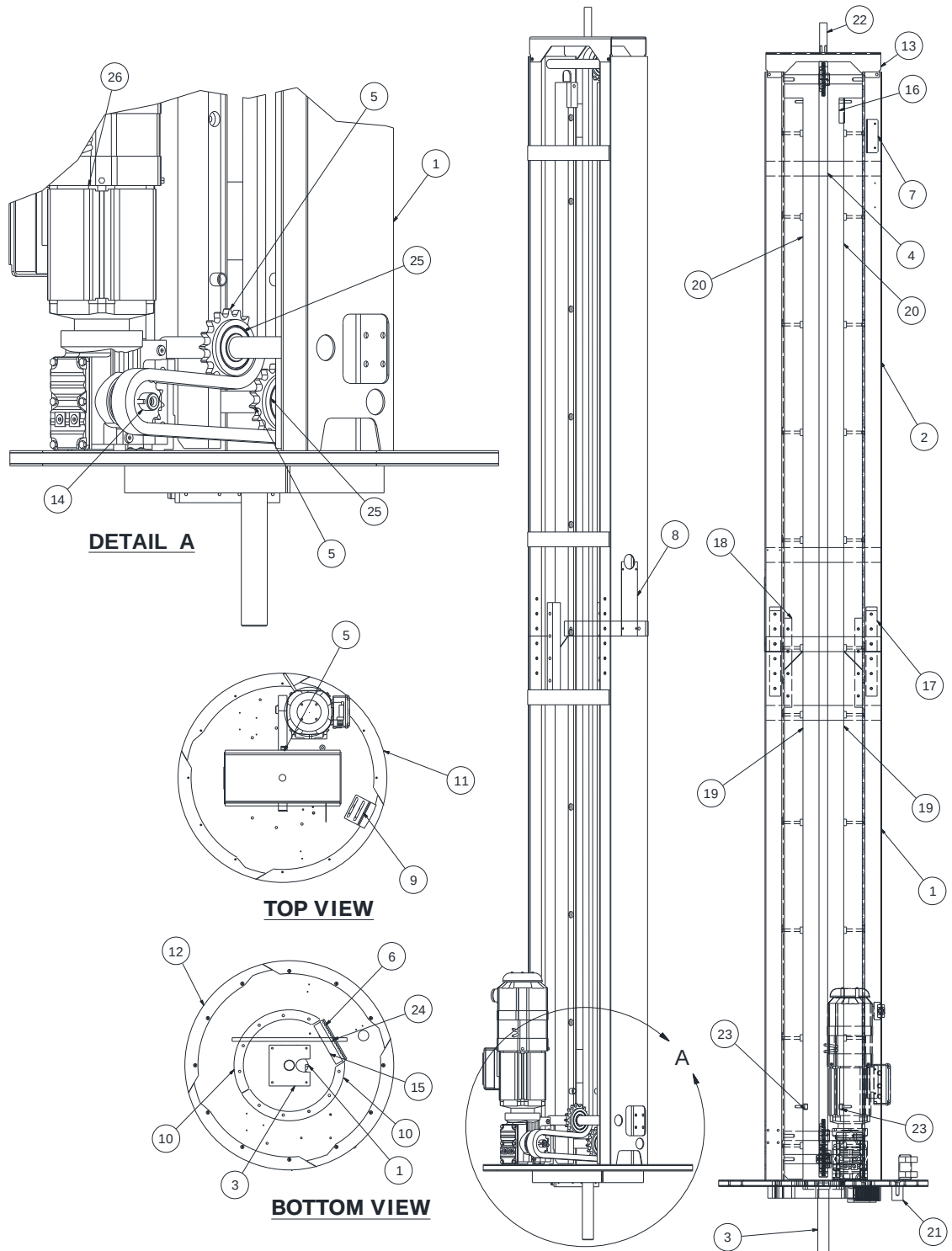
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Rotating Mast Assembly

SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer

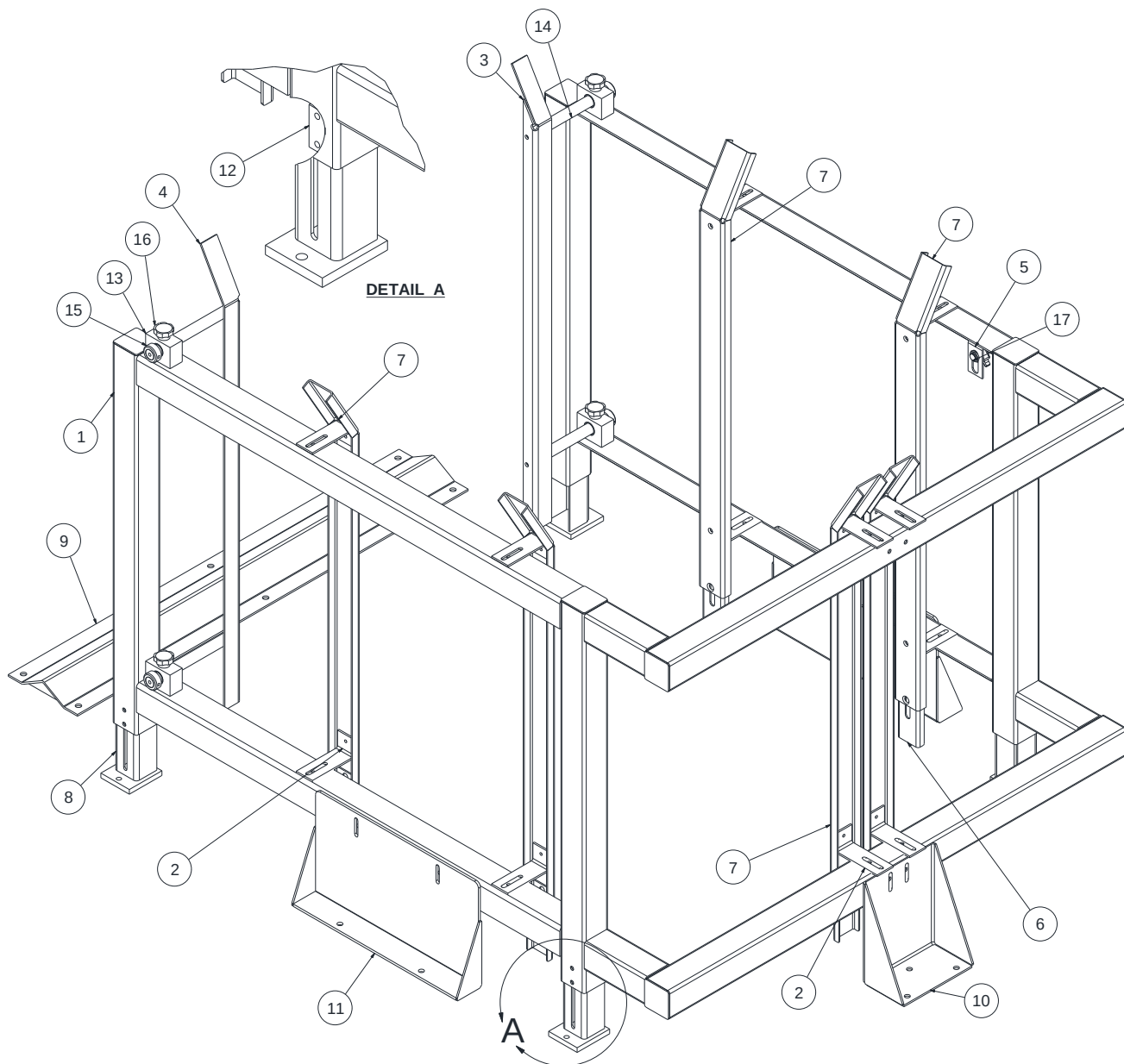
Rotating Mast Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	20E1007	ROTARY LOWER MAST WELDMENT
2	1	20E1331	ROTARY UPPER MAST WELDMENT
3	1	47B6271	TURN SHAFT
4	1	48A1126	TIER SHEET HOIST CHAIN #60X309"
5	3	4A4172-2217	IDLER SPROCKET, 60P 17T
6	2	60A69906	BELT CLAMP
7	2	60A78215	SENSOR ACTUATOR
8	1	60A78472	WIRE COVER PLATE
9	1	60A83312	HOME PROX ACTUATOR, 2-FLAG
10	2	60B69907	BELT RING SEGMENT
11	4	60B69908	CAM TRACK
12	4	60B69973	CAM TRACK
13	1	60B77997	TOP BRACE
14	1	60BS12-1	SPROCKET 3/4P, 12T, 1.0B, 1/4KW
15	1	62A35340	BELT CLAMP BLOCK
16	1	62A38077	STOP BAR
17	4	62A38097	SPLICE BAR
18	2	62A38198	TRACK BAR SUPPORT
19	2	62D38102	GUIDE BAR, LOWER
20	2	62D39408	GUIDE BAR, UPPER SHORT
21	1	63A12975	TURN TABLE STOP
22	1	63A13869	TOWER PIN
23	2	63A13870	STOP BUTTON
24	2	74A212	TIMING BELT CLAMP
25	3	P44-165	BALL BEARING
26	1	P71-2197	SEW GEARMOTOR S47/EK8C

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



Tier Sheet Bin Assembly

SERIAL NUMBER **24464**

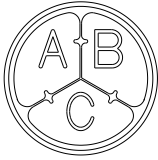


TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer

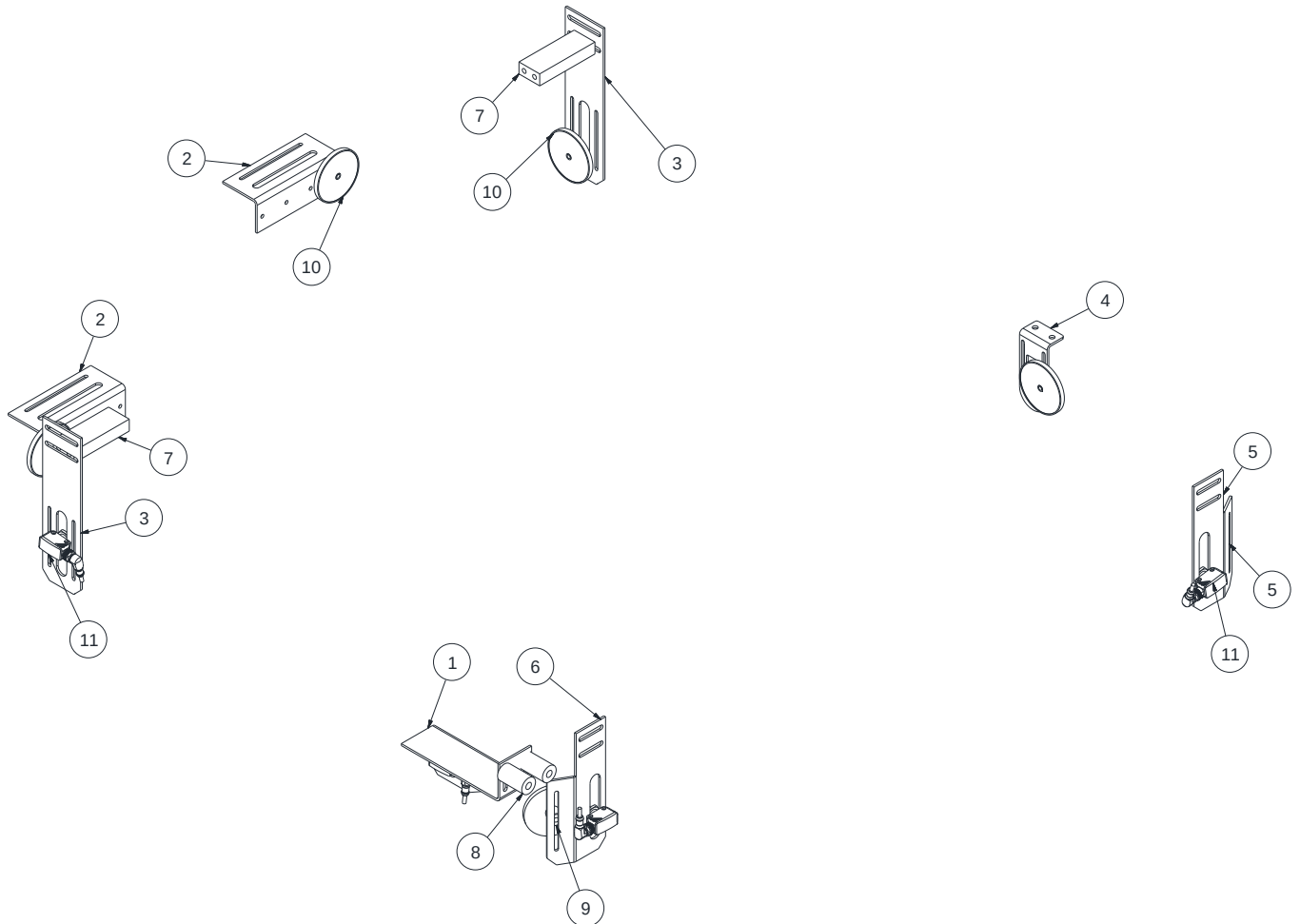
Tier Sheet Bin Assembly Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	20D1340	TIER SHEET BIN WELDMENT
2	12	60A37606	MOUNTING BRACKET
3	1	60A46642	GUIDE RAIL
4	1	60A46642 LH	GUIDE RAIL
5	1	60A56284	SENSOR MTG. BRACKET
6	6	60A83339	GUIDE EXTENSION NARROW
7	6	60B42404	TIER SHEET GUIDE
8	4	60B46517	FOOT
9	1	60B70146	WHEEL STOP
10	1	60B82756	FLOOR MOUNTING BRACKET
11	2	60C82373	TIER SHEET BRACKET
12	4	62A21216	LEG NUT PLATE
13	4	62A26438	BEARING BLOCK MAGAZINE
14	4	63A13611	GUIDE SPACER
15	4	P110-007	COLLAR, 1" ID
16	4	P112-097	PLASTIC KNOB
17	1	P66-26032	ULTRASONIC SENSOR

SERIAL NUMBER **24464**



TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



Pallet Leaning Detection Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	60A55758	PHOTO MOUNT BRACKET LH
2	2	60A55760	TABLE SIDE REFLECTOR MOUNT BRKT
3	2	60A55761	CROSS TABLE PHOTO MOUNT PLATE
4	1	60A77908	PHOTOEYE MOUNTING BRACKET
5	1	60A81479	EXT. THRU TABLE PHOTO MOUNT PLATE
6	1	60A81491	EXT. THRU TABLE PHOTO MOUNT PLATE
7	2	62A32127	PHOTOEYE SPACER
8	2	63A8650	FORK SPACER
9	1	63A9439	SPACER
10	5	P66-500	REFLECTOR
11	4	P66-7306	RETRO REFLECTIVE SENSOR

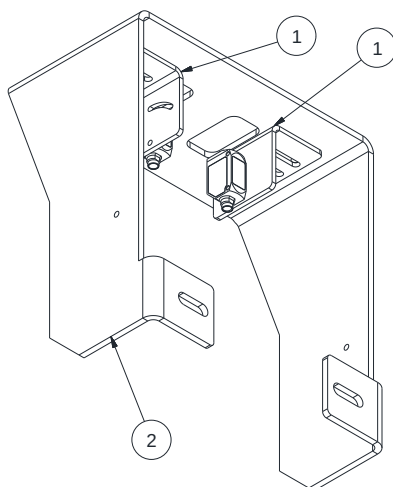
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TECHNICAL MANUAL

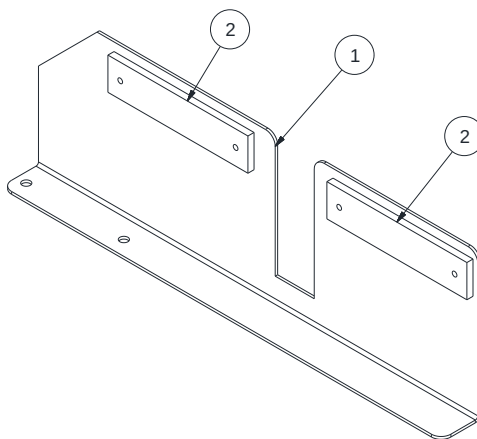
MODEL "108"

Sweep Off Bulk Depalletizer



Muting Eyes Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	60A79409	PHOTO EYE BRACKET I/O
2	1	60C77289	MUTING EYE SUPPORT BRACKET



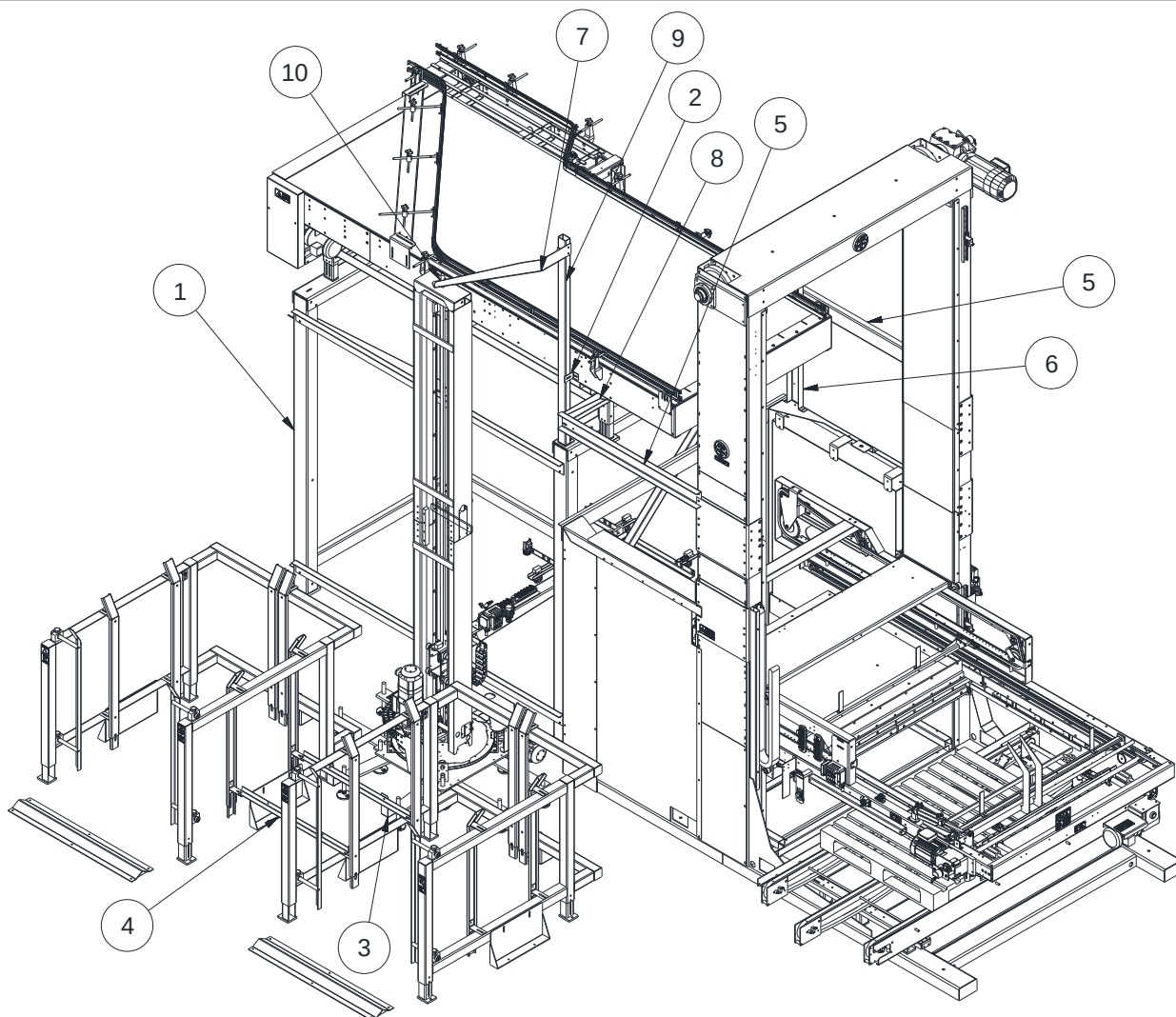
Muting Eye Reflector Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	60B77648	REFLECTOR BRACKET
2	2	P66-6979	REFLECTOR

SERIAL NUMBER **24464**



TECHNICAL MANUAL **MODEL "108"** **Sweep Off Bulk Depalletizer**



Tie Brackets Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	20E1341	Bottle Conveyor Sub Frame Weldment
2	1	60A82413	POST TIE BRACKET
3	2	60A82432	BIN TO TIER SHEET REMOVER BRACKET
4	2	60B82431	BIN TIE ANGLE
5	2	60C76813	SUPPORT CHANNEL BRACE
6	1	60C82411	CABLE CHANNEL
7	1	60C82412	MAST BRACE
8	1	60D76812	CROSS CHANNEL BRACE
9	1	62C39438	MAST SUPPORT POST
10	1	P44-358	NICE,#6916 1"FLANGE BRG.

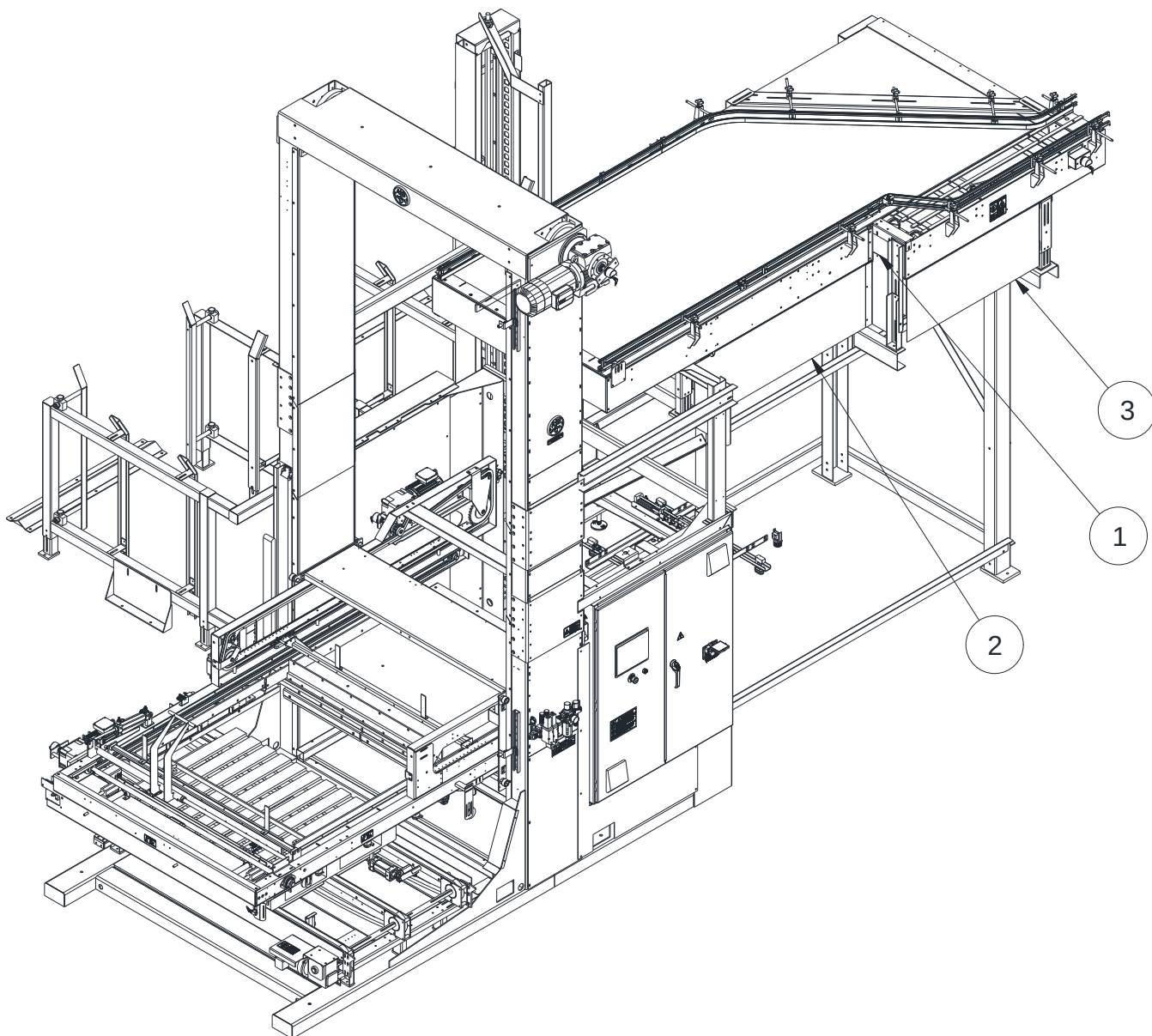
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

Sweep Off Bulk Depalletizer



Upper Guarding Assembly & Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	60B82577	LOWER END GUARD
2	1	60D82576	LOWER SIDE GUARD
3	1	60D82578	LOWER SIDE GUARD LONG

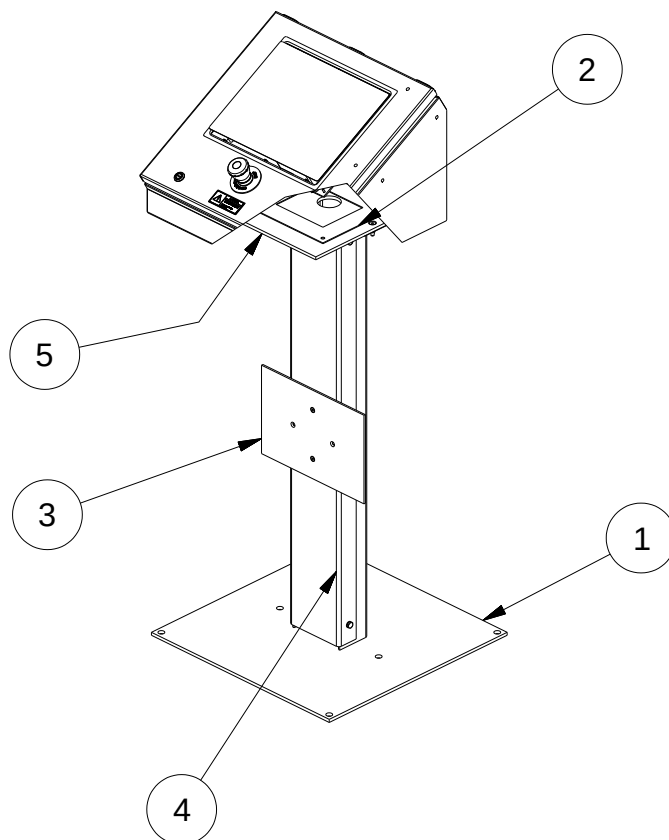
SERIAL NUMBER **24464**



TECHNICAL MANUAL

MODEL "108"

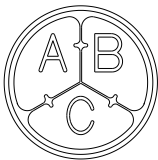
Sweep Off Bulk Depalletizer



PEDESTAL ASSEMBLY & PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	20C0427	HMI PEDESTAL WELDMENT
2	1	51A019	TOP FLANGE GASKET
3	1	60A48108	SAFTEY LABEL MOUNT
4	1	60B70128	PEDESTAL BASE CHANNEL COVER
5	1	62A35439	PEDESTAL TOP PLATE

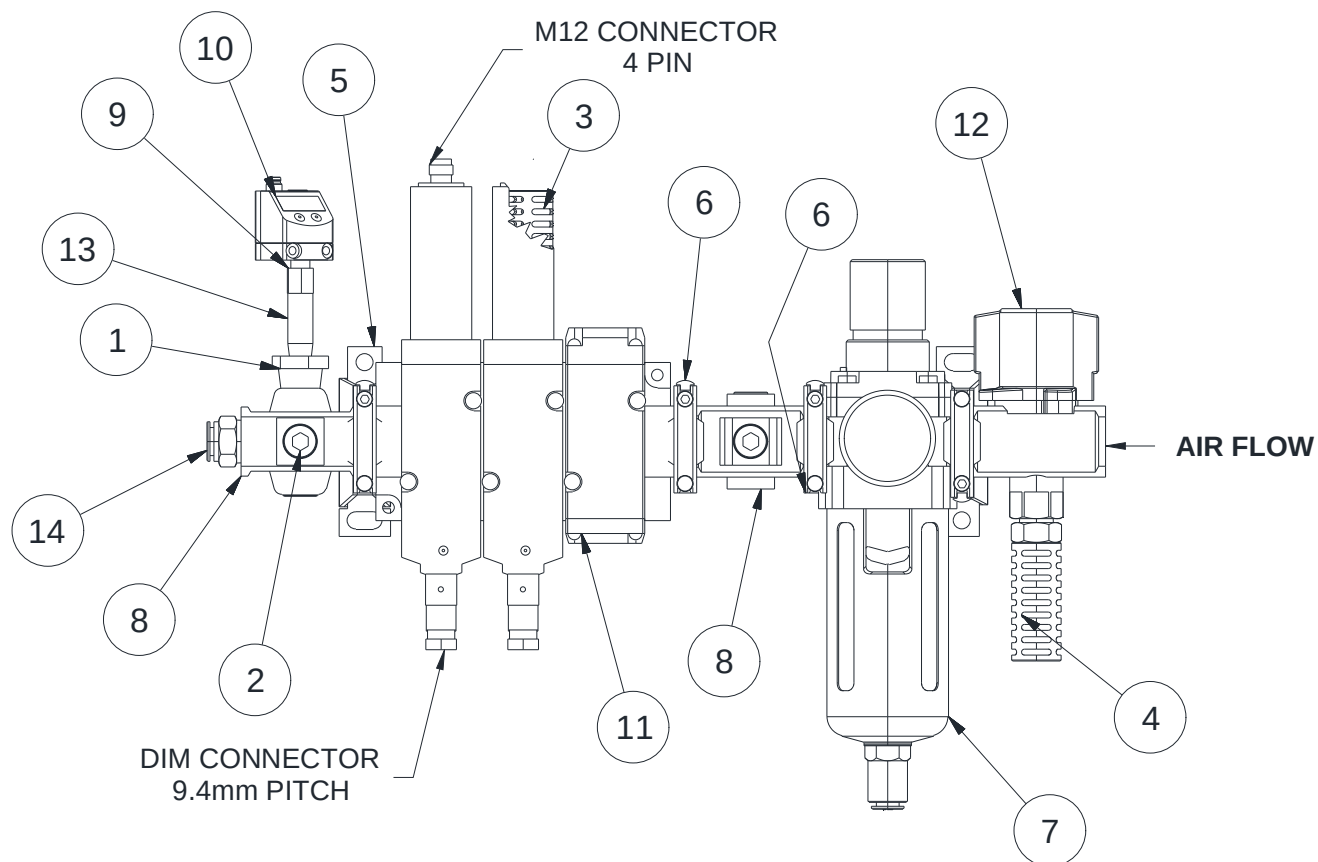
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TECHNICAL MANUAL

MODEL "108"

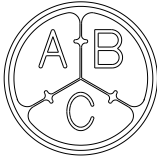
Sweep Off Bulk Depalletizer



AIR SUPPLY PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1		PIPE REDUCER 3/8 TO 1/4
2	6	Hex-Head Plug	Countersunk Hex-Head Plug
3	2	P128-031	SMC SILENCER 1/2NPT PLASTIC
4	1	P128-032	SILENCER
5	2	P129-311	SPACER W/ BRACKET
6	2	P129-312	SPACER
7	1	P129-315	FILTER REGULATOR & GAUGE
8	2	P129-316	CROSS INTERFACE (4) 3/8, (2) 1/2 PORTS
9	1	P56-120	MALE BSPT/FEMALE NPT ADAPTER
10	1	P66-3128	AIR PRPRESSURE SWITCH IO LINK
11	1	P69-1505	DUAL PRESS. VALVE W/ SOFT START
12	1	P69-926	3PORT SHUT-OFF VALVE
13	1	PIPENIPPLE,25X2	PIPE NIPPLE 1/4 X 1 1/2
14	1	WME0218	1/2NPT-1/2TUBE STRAIGHT THREADED FITTING

SERIAL NUMBER **24464**



TECHNICAL MANUAL
MODEL "108"
Sweep Off Bulk Depalletizer



A-B-C would like to offer training in your facility from one of our certified PMMI trainers.

By having your employees trained by a Factory Trainer in the correct set-up and operation of your A-B-C Machine, you can reduce downtime and increase efficiency.

A brief overview of the highlights included in this training are:

- Safety, lock out / tag out, and guarding training
- Machine operation training, controls, features, etc.
- Machine change over training (Interactive)
- Machine maintenance training to include PM's, Troubleshooting, etc.

Additionally, we offer our "Train the Trainer" program. This is a program where we train your in house personnel so that they can train future operators and maintenance personnel.

For more information or to schedule your training, please contact Eric Dederichs at:

Phone: 727-937-5144 ext.: 329
Fax: 727-938-1239
Email: edederichs@abcpackaging.com

SERIAL NUMBER **24464**