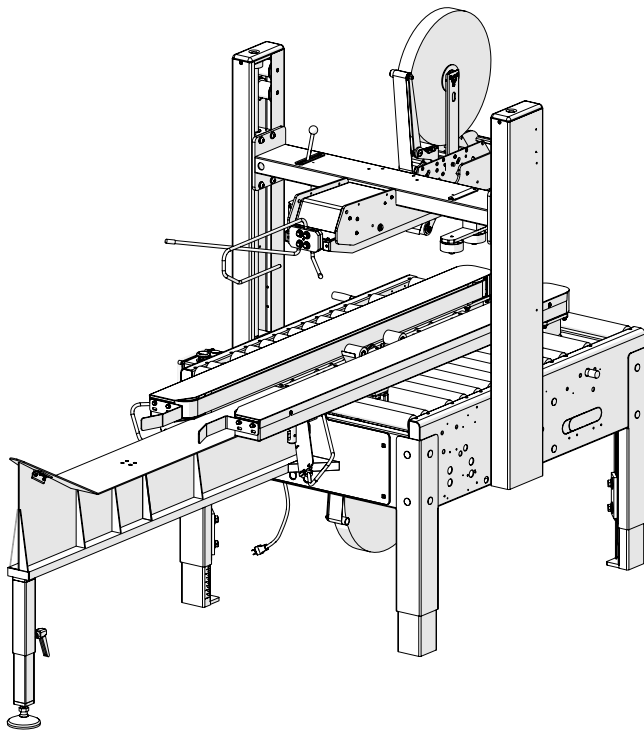




# USER MANUAL USA 2024-BFF



For Serial Numbers:  
TM136 XX X XXX



# **USER NOTES**

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# TECHNICAL ASSISTANCE

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This is the Interpack Model **Uniform Semi-Automatic Bottom Flap Folder (USA 2024-BFF)** Side-Belt Case Sealer you ordered. It has been set up and tested in our factory with IPG manufactured pressure sensitive tapes. If any problems occur when setting up or operating this equipment, please contact the authorized distributor from where you purchased this item.

If contact with the authorized distributor is not possible, **IPG Machinery Support** is available. Should the need to contact **IPG Machinery Support** arise, **please have the equipment model and serial number available prior to contact**. This information can be found on the nameplate of the tape head as well as on the machine, both sets of information may be necessary to assist. A section at the bottom of this page is available to write this information down. **IPG Machinery Support** is available during normal business hours (M-F 8am-7pm) Eastern Time.

Phone: 813-345-3070

Email: [machsupp@itape.com](mailto:machsupp@itape.com)

## Replacement Parts

A breakdown of parts, including part numbers, can be found in the appendix of this manual. If you know the part number that you require please contact your authorized distributor or IPG Customer Service 877-447-4832 Option 3

Please use this area to enter the detailed information on your Case Sealer and Tape Heads. This should be filled out at the time of install. This information can be found on the nameplate of the machine, typically on the side the electrical box is on. On pressure sensitive tape the nameplate is located on the same side the tape is loaded from. On the WAT Tape Heads serial information can be found near the air intake of the head.

### **Machine**

**Model**

**Serial**

**Distributor**

**Name**

**Phone/Email**

### **Tape Head Top**

**Model**

**Serial**

### **Tape Head Bottom**

**Model**

**Serial**

**Date of Purchase**

**Date of Install**

# **FIELD SERVICE ASSISTANCE**

---

Your Interpack Case Sealer and Tape Heads are designed to provide years of trouble free operation. This is not without proper preventative maintenance, a recommended schedule can be located in the maintenance section of this manual, performed by then end user of the equipment. If any problems arise with this machine during the normal course of operation, your properly trained and qualified internal service personnel should be able to repair any issues after consulting the troubleshooting section of this manual in conjunction with phone and/or email support from IPG Machinery Support.

Field Service Support is available from your IPG Authorized Distributor at additional cost if the problem cannot be remedied after consulting the troubleshooting section of this manual.

IPG offers comprehensive programs that help keep your equipment up and running.

Proactive maintenance efforts help to prevent equipment failures and costly emergency repairs. Keeping your machine in optimal working condition also enhances employee safety, reduces facility downtime and efficiently allocates internal resources.

Please contact your IPG Representative to discuss the best options for your IPG equipment.

# WARRANTY INFORMATION

---

EQUIPMENT WARRANTY AND LIMITED REMEDY: The following warranty is made in lieu of all other warranties, express or implied, including, but not limited to, the implied warranty of merchantability, the implied warranty of fitness for a particular purpose, and any implied warranty arising out of a course of dealing, a custom or usage of trade:

Intertape sells its Interpack Tape Heads, Case Tapers and Case Erectors with the following warranties:

1. The IPG Pressure Sensitive Tape Heads' knife blades, springs and wipe down rollers will be free from all defects for a period of ninety (90) days.
2. All other IPG Pressure Sensitive Tape Head parts will be free from all defects for one (1) year after delivery.
3. Water Activated Tape Heads' blades will be free from defects for ninety (90) days after delivery.
4. Drive Belts will be free from defects for ninety (90) days after delivery
5. The Gear Motors will be free from defects for one (1) year after delivery.
6. All other components for Case Tapers and Case Erectors will be free from defects for one (1) year after delivery.

If any part is proven defective within its warranty period, then the exclusive remedy and Intertape's and the seller's sole obligation shall be, at Intertape's option, to repair or replace the part, provided the defective part is returned immediately to Intertape's factory or an authorized service station designated by Intertape.

A part will be presumed to have become defective after its warranty period unless the part is received or Intertape is notified of the problem no later than five (5) calendar days after the warranty period.

If Intertape is unable to repair or replace the part within a reasonable time, then Intertape, at its option, will replace the equipment or refund the purchase price. Intertape shall have no obligation to install the repaired or replacement part.

Intertape shall have no obligation to provide or pay for the labor required to install the repaired or replacement part.

Intertape shall have no obligation to repair or replace (1) those parts failing due to: operator misuse, carelessness, or due to any accidental cause other than equipment failure, or (2) parts

1. Failure or damage is due to misapplication, lack of proper maintenance, abuse, improper installation or abnormal conditions such as temperature, moisture, dirt or corrosive matter, etc.
2. Failure due to inadequate cleaning, improper operating environment, improper utilities or operator error.
3. Failure due to operations above the rated capacities, or in any other improper manner, either intentional or otherwise.
4. Failure is due to equipment, which has been altered by anyone other than an authorized representative of Intertape Polymer Group.
5. Failure is due to an attempt by the purchaser to correct alleged defective equipment. In this event the purchaser is responsible for all expenses incurred.

LIMITATION OF LIABILITY: Intertape and seller shall not be liable for direct, indirect, special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability or any other legal theory.

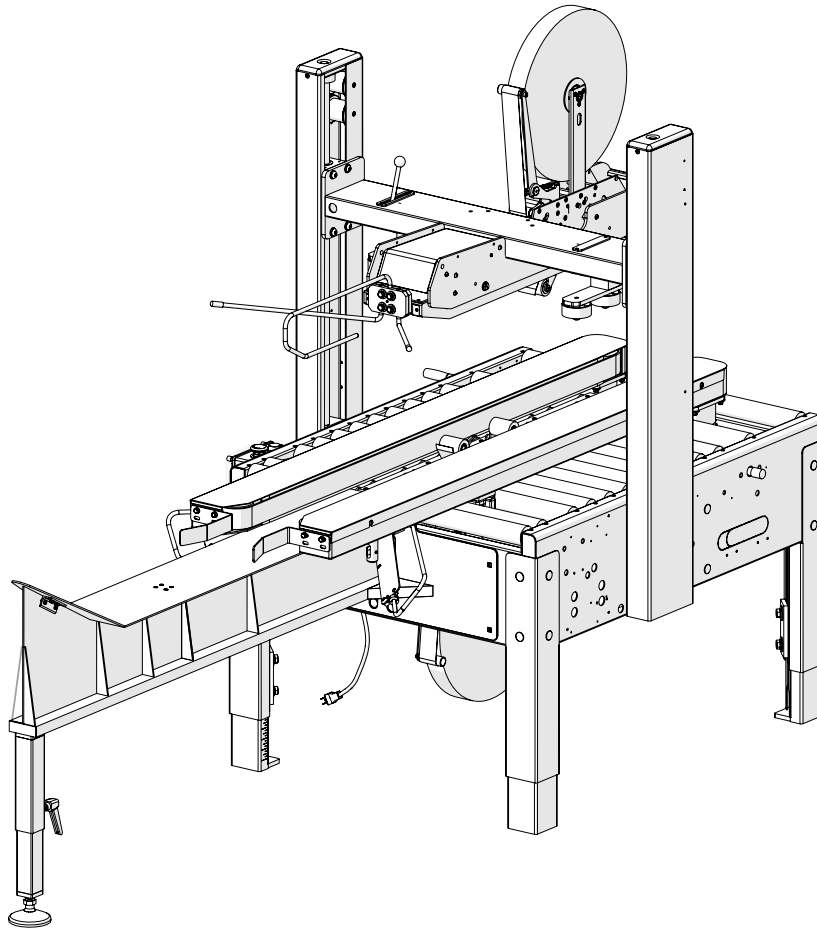
The foregoing Equipment Warranty and Limited Remedy and Limitation of Liability may be changed only by written agreement signed by authorized officers of Intertape and seller.

# GENERAL INFORMATION

## Description of USA 2024-BFF

This machine is designed to provide years of trouble free operation. If any problems arise with this machine during the normal course of operation, your properly trained and qualified internal service personnel should be able to repair any issues after consulting the [Troubleshooting](#) section of this manual.

The **USA 2024-BFF** Case Sealer is designed to apply IPG brand pressure sensitive carton sealing tape to the top and/or bottom center seam of regular slotted corrugated cartons. The **USA 2024-BFF** Case Sealer manually adjusts to a variety of case sizes and will automatically close the bottom flaps and top front minor panel and major flaps. An operator must manually close the rear minor flap before pushing the box into the case sealer.



**Figure 1: USA 2024-WAT BO**

## Definitions

Common terms that will be used throughout this manual.

**Tape Head** – This will refer to the ET Extreme or ETII Plus tape heads for the remainder of this manual

**Case Sealer** – Refers to IPG manufactured Case Sealers

**Machine System** – Refers to the fully assembled Case Sealer with the Tape Head(s) installed

**User/Operator** – The individual who has been trained on the daily use of the Machine System

**Maintenance Champion** – The individual(s) who work for the end user of the Machine System who are responsible for conducting general and preventative maintenance

# OPTIONAL EQUIPMENT

The USA 2024-BFF can be outfitted with a variety of optional equipment. The below list is **not** standard and should be discussed with your distributor or authorized IPG representative if you would like them to be added to your machine.

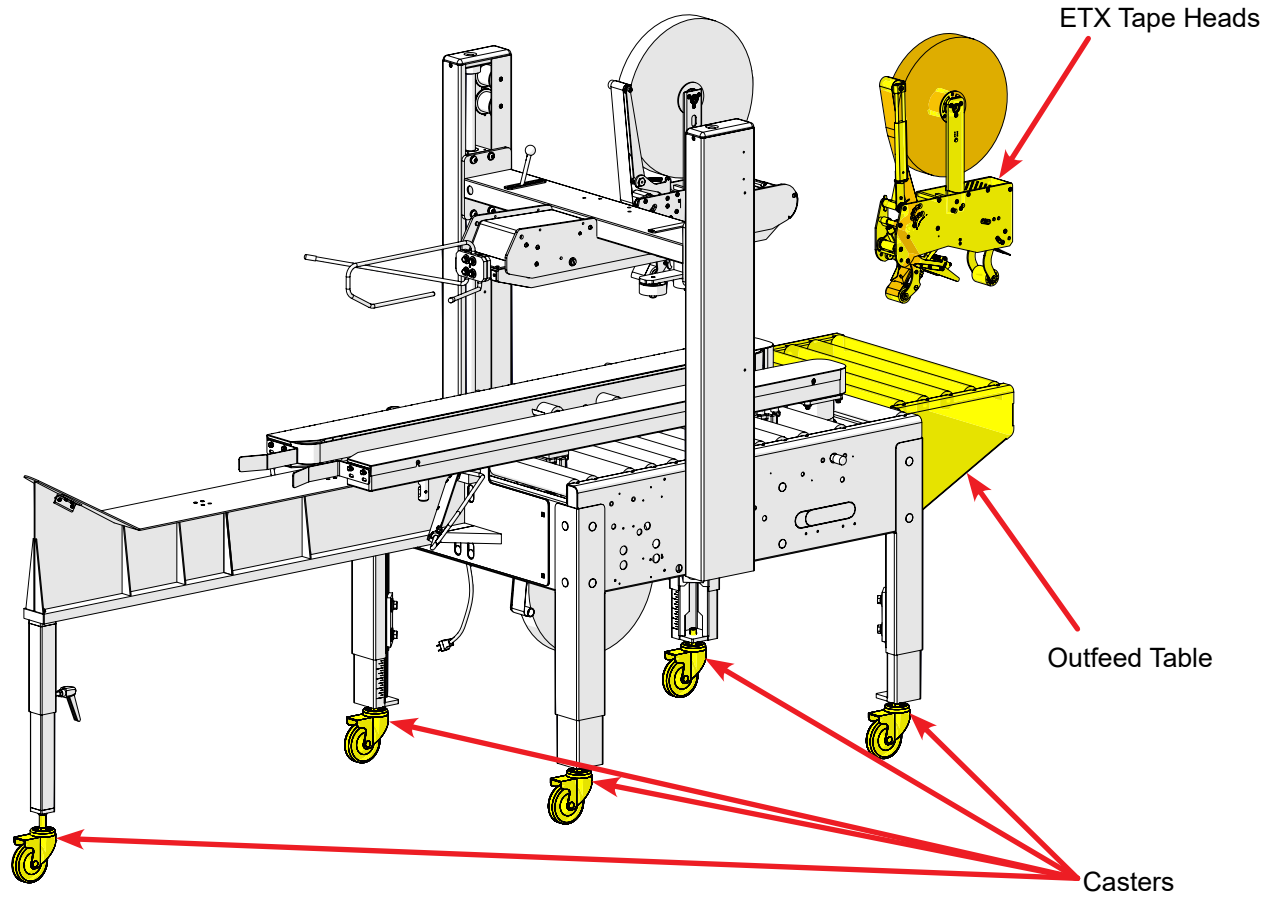


Figure 2: Optional Equipment

## Additional Tape Heads

It is recommended to keep a spare top and/or bottom tape head in the event any failure or malfunction causes the machine to stop production. This is to help reduce any possible downtime.

## Can be installed on site

| Description                             | Item Number            | Quantity Per Machine  |
|---|------------------------|---|
| <a href="#">Outfeed Table .4M (16")</a> | <a href="#">UM894T</a> | 1   |
| <a href="#">Outfeed Table .6M (24")</a> | <a href="#">UM998T</a> | 1   |
| <a href="#">Outfeed Table .9M (36")</a> | <a href="#">UM898T</a> | 1   |
| Casters                                 | UM711                  | 1 set of 5 (36" Feed Table will require 2 additional casters) |

| Description      | Item Number |
|------------------|-------------|
| 2" ETX Tape Head | UH230TW     |
| 3" ETX Tape Head | UH430TW     |

## Cannot be installed on site

| Description         | Item Number                        | Quantity Per Machine |
|---------------------|------------------------------------|----------------------|
| 4" High Drive Bases | USM8127 (right) and USM8128 (left) | 1 each               |



# OPTIONAL EQUIPMENT CONTINUED

The USA 2024-BFF comes standard with an 8" wide ski that has a 24" long workspace. There are some standards options for changing the width of the ski as well as the length of ski. It is recommended that the ski width be 1" narrower than the largest carton that will be processed. Longer skis allow for multiple cartons to be staged ahead of the belts to allow for multiple operators packing simultaneously. Please consult your Authorized IPG Representative for the correct configuration for your needs.

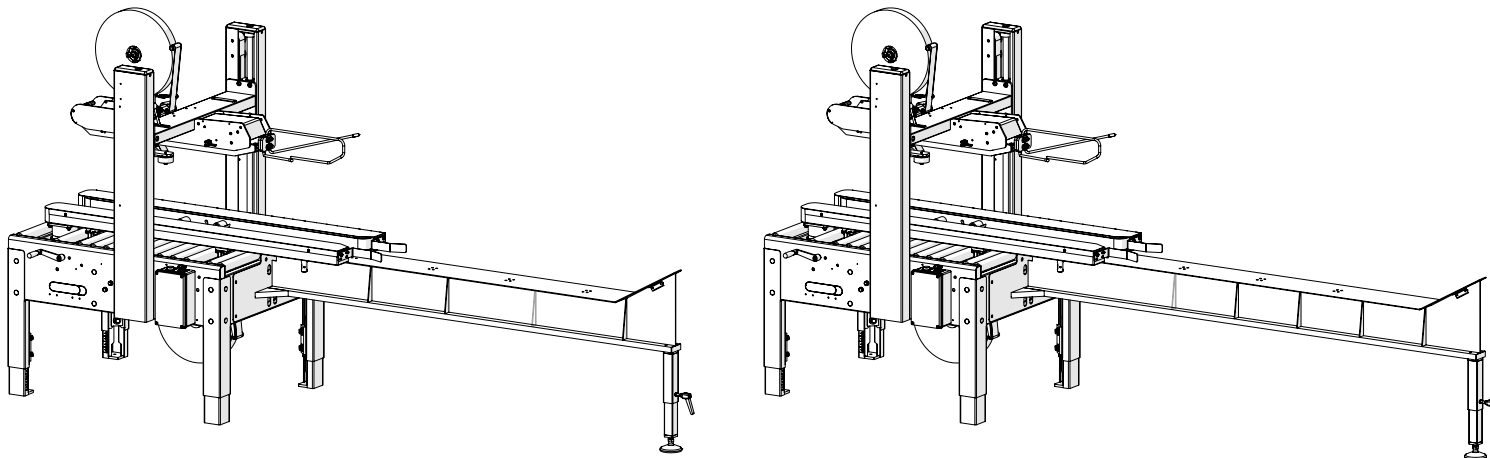


Figure 3: Optional Ski Length

## Optional Ski Width

| Description                            | Item Number | Quantity Per Machine |
|--|-------------|----------------------|
| 3" Wide Ski (for cartons 4" in width)  | UPE0238     | 1                    |
| 4" Wide Ski ( for cartons 5" in width) | UPE0343     | 1                    |
| 6" Wide Ski (for cartons 7" in width)  | UPM2848     | 1                    |

## Optional Ski Length

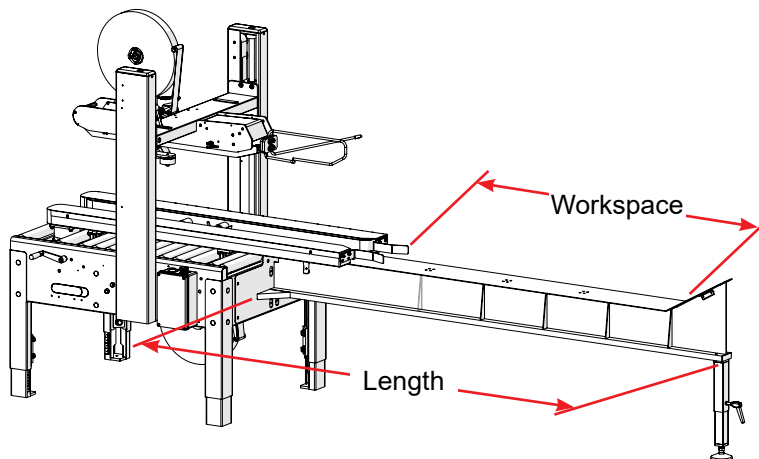


Figure 4: Ski Nomenclature

| Description                             | Item Number | Quantity Per Machine |
|---|-------------|----------------------|
| BFF Ski Assembly 58" Long 40" Workspace | USM0870     | 1                    |
| BFF Ski Assembly 74" Long 56" Workspace | USM0871     | 1                    |
| BFF Ski Assembly 84" Long 66" Workspace | USM0872     | 1                    |

# IMPORTANT SAFEGUARDS

---

There are a number of safety labels used on the **USA 2024-BFF** Case Sealer. These labels are placed at different locations on the machine to warn operators and service personnel of possible dangers (refer to Figure 3). Please read the labels on the machine and the following safety precautions before using the machine.

**Read this manual for other important safety operating and service information.**

**Only trained personnel are to operate machine.**

**Only fully qualified technicians are to service this machine.**

**Wear safety glasses.**

**Shut off power to machine before adjusting machine or loading & threading Tape Heads.**

**Disconnect electrical power and compressed air (where applicable) before servicing.**

**Follow Lock Out / Tag Out Procedures BEFORE servicing any machinery.**

**All factory installed covers and guards must be in place before operating.**

**Stay clear of moving parts which can shear and cut.**

Should any of the safety labels on the Case Sealer be damaged or destroyed, replacements can be ordered through your distributor.

# SAFETY LABEL PLACEMENT

**⚠ WARNING**

**OPERATION / SERVICE**

- Only trained people are to operate and service machine.
- Shut off power to machine before adjusting.
- Unplug electrical power before servicing.

**MACHINE MANUAL**

For other important safety, operating and service information read this machine's manual.

**EYE HAZARD**

Wear Safety Glasses which conform to ANSI Std. Z87.1 or EN 166

**COVERS AND GUARDS**

All covers and guards must be in place before operating machine.

**COMPRESSED AIR**




Lock-out source and bleed off pressure before servicing equipment.

**ELECTRICAL SHOCK**

Hazardous voltages may cause personal injury. Only authorized and qualified personnel are to service electrical enclosures.


**FAILURE TO FOLLOW THE ABOVE COULD RESULT IN SEVERE INJURY.**

**⚠ WARNING**






Moving machine parts can crush, cut and shear. Disconnect and isolate all power before servicing machine. Failure to follow the above can result in severe personal injury.




**⚠ WARNING**



**Blade hazard.**  
Keep hands clear. Follow lock-out procedures before servicing.




**⚠ WARNING**

Moving machine parts can crush, cut and shear. Disconnect and isolate all power before servicing machine. Failure to follow the above can result in severe personal injury.


**⚠ WARNING**



**Hazardous voltage.**  
Disconnect power before servicing.

**⚠ CAUTION**

To provide continued protection against risk of electric shock, connect to properly grounded outlets only.



|                 |              |
|-----------------|--------------|
| <b>MODEL</b>    | <b>VOLTS</b> |
| <b>SER. NO.</b> | <b>HZ</b>    |
| <b>HP</b>       | <b>PH</b>    |
| <b>P.S.I.</b>   | <b>AMPS</b>  |
| <b>C.F.M.</b>   | <b>SCCR</b>  |
| <b>DWG #</b>    |              |

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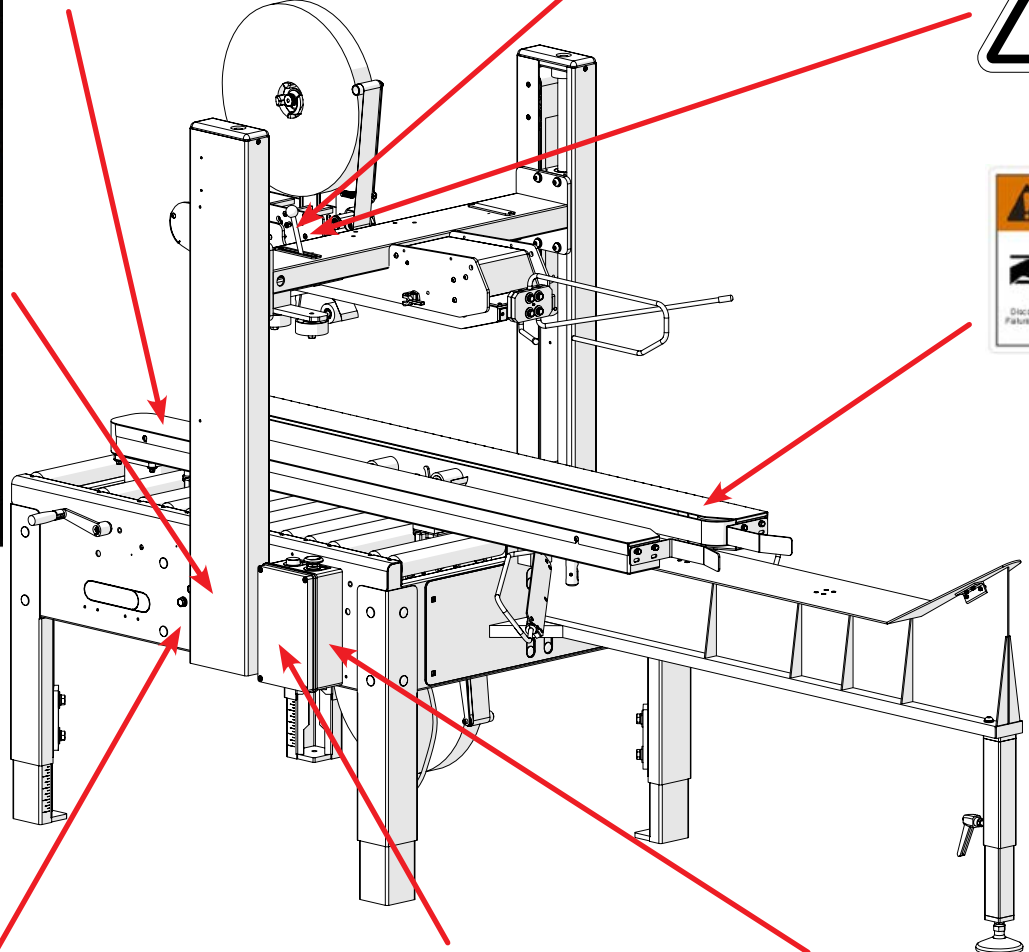







Figure 5: Safety Label Placement

# SAFETY LABEL DESCRIPTIONS

|   |  |
|---|--|
| <p>The label shown is affixed to the upper tape head assembly on both sides of the machine.</p> <p>It warns operators and service personnel of the presence of the cutting blade that may not be visible. Caution should be exercised when approaching this area.</p> |  <p><b>Figure 6: Blade Hazard</b></p>          |
| <p>The label shown is affixed to the upper tape head assembly on either side of the machine.</p> <p>It warns operators and service personnel of a potential crush hazard when cases are moving through the case sealer.</p>   |  <p><b>Figure 7: Crush Hazard</b></p>         |
| <p>The label shown is located on the in-feed and exit ends of the machine belt drives.</p> <p>The label warns the operators and service personnel of the pinch points at each end of the belt drives.</p>   |  <p><b>Figure 8: Drive Base Hazard</b></p>   |
| <p>The label shown is affixed to the electrical control box.</p> <p>The label advises service personnel to connect the machine to a properly grounded outlet.</p>   |  <p><b>Figure 9: Hazardous Voltage</b></p>   |
| <p>The label shown is affixed to the electrical control box.</p> <p>The label advises service personnel to connect the machine to a properly grounded outlet.</p>   |  <p><b>Figure 10: Ground Connection</b></p> |

# SAFETY LABEL DESCRIPTIONS CONTINUED

The label shown is located on the side of the column.

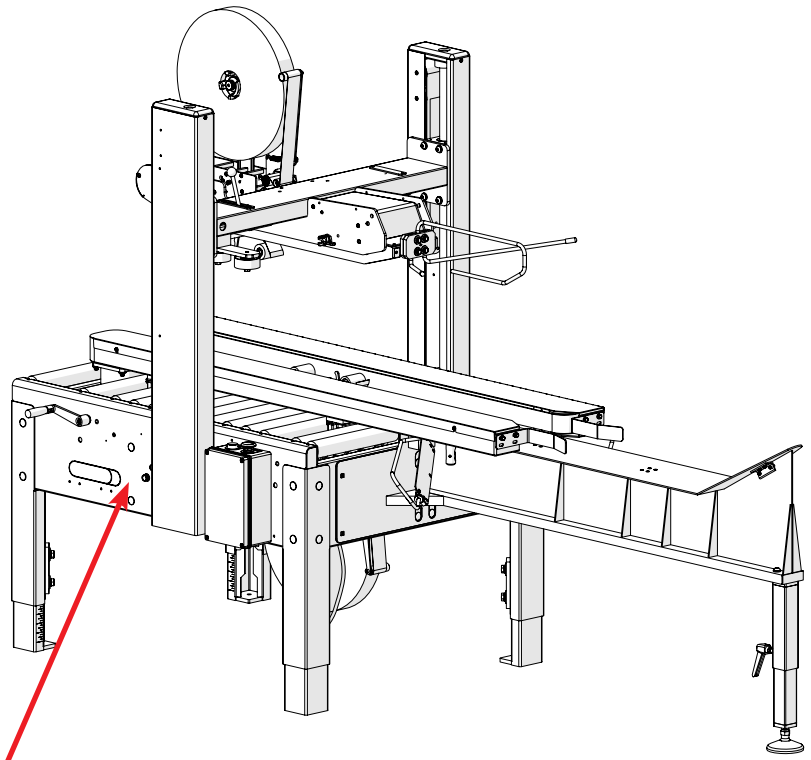
This label provides convenient safety instructions for the operator and service personnel in the operation of the IPG Case Sealing Equipment.




**Figure 11: Safety Instructions**

Should any of the safety labels on the Case Sealer be damaged or destroyed, replacements can be ordered through your distributor.

# MACHINE NAMEPLATE





|                 |              |              |     |
|-----------------|--------------|--------------|-----|
| <b>MODEL</b>    | USA 2024-BFF | <b>VOLTS</b> | 110 |
| <b>SER. NO.</b> | TM13624A001  | <b>HZ</b>    | 60  |
| <b>HP</b>       | 2x 1/3HP     | <b>PH</b>    | 1   |
| <b>P.S.I.</b>   |              | <b>AMPS</b>  | 7.6 |
| <b>C.F.M.</b>   |              | <b>SCCR</b>  |     |
| <b>DWG #</b>    |              |              |     |

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Machine Identification and Motor Power

Machine Electrical Requirements

Machine Pneumatic Requirements if applicable

Applicable Machine Drawing Number

Manufacturer Details

Figure 12: Machine Nameplate

## Reading Interpack Serial Numbers

|                  |                               |                           |
|------------------|-------------------------------|---------------------------|
| Model Identifier | Year and Month of Manufacture | Machine Production Number |
| <b>TM136</b>     | <b>24A</b>                    | <b>001</b>                |

# IMPORTANT SAFEGUARDS

---

## Explanation of Signal Word Consequences



**WARNING: INDICATES A POTENTIALLY HAZARDOUS SITUATION, WHICH IF NOT AVOIDED COULD RESULT IN DEATH OR SERIOUS INJURY OR PROPERTY DAMAGE**



**CAUTION: INDICATES A POTENTIALLY HAZARDOUS SITUATION, WHICH IF NOT AVOIDED COULD RESULT IN MINOR OR MODERATE INJURY OR PROPERTY DAMAGE**



### **WARNING**

1. **To reduce the risk associated with mechanical, pneumatic, and electrical hazards:**
  - Read, understand, and follow all safety and operating instructions before operating or servicing the Case Sealer and/or Tape Head(s)
  - Allow only properly trained and qualified personnel to operate and service this equipment
2. **To reduce the risk associated with pinches, entanglement, and hazardous voltage:**
  - Turn electrical supply off and disconnect before performing any adjustments, maintenance, or servicing the Case Sealer or Tape Head
3. **To reduce the risk associated with pinches and entanglement hazards:**
  - Do not leave the Case Sealer running while unattended
  - Turn the Case Sealer off when not in use
  - Never attempt to work on any part of the Case Sealer, Tape Head, load tape, or remove jammed boxes from the Case Sealer while the machine is running
4. **To reduce the risk associated with hazardous voltage**
  - Position electrical cord away from foot traffic and vehicle traffic
  - Do not operate the Case Sealer with a damaged power cord
5. **To reduce the risk associated with sharp blades hazards:**
  - Keep hand and fingers away from the tape cutoff blades, the blades are very sharp
6. **To reduce the risk associated with fire and explosion hazards:**
  - Do not operate this equipment in potentially flammable and/or explosive environments
7. **To reduce the risk associated with muscle strain:**
  - Use the appropriate rigging and material handling equipment when lifting or repositioning this equipment
  - Use proper body mechanics when removing or installing Tape Heads that are moderately heavy or may be considered awkward to lift
8. **To reduce the risk associated with mechanical, pneumatic, and electrical hazards:**
  - Allow only properly trained and qualified personnel to operate and service this equipment



### **CAUTION**

1. **To reduce the risk associated with pinch hazards:**
  - Keep hands clear of the upper head support assembly as boxes are transported through the Case Sealer
  - Keep hands, hair, loose clothing, and jewelry away from box compression rollers, moving belts, and Tape Heads
  - Always feed boxes into the Case Sealer by pushing only from the end of the box

# IMPORTANT SAFEGUARDS

## Operator Skill Level Descriptions

These descriptions and levels are uniform across all IPG Case Sealers

### Skill “A” Machine Operator

This operator is trained to use the Case Sealer with the machine controls, to feed cases into the machine, make adjustments for different case sizes (USA series machines), to change tape, to start, stop, and restart production, and to clear jams and perform basic troubleshooting.

**Important:** The end user area supervisor must ensure that the operator has been properly trained on all machine functions before operating the machine.

### Skill “B” Mechanical Maintenance Technician

Also referred to as the Maintenance Champion, this technician, is trained to use the Case Sealer as the Operator is able and in addition is able to work with the safety protection disconnected to check and adjust mechanical components, to perform maintenance operations and repair the Case Sealer. A skill “B” operator is not allowed to work on live electrical components.

### Skill “C” Electrical Maintenance Technician

This technician is trained to use the Case Sealer as the Operator is able and in addition is able to work with the safety protection disconnected, to check and adjust mechanical components, to perform maintenance operations and repair the Case Sealer. A skill “C” operator is allowed to work on live electrical panels, terminal blocks, and control equipment.

### Skill “D” Manufacturer Technician

Skilled technician sent by the manufacturer or its agent (distributors) to perform complex repairs of modifications, when agreed with the customer.

### Operators skill level required to perform the following tasks on the Machine System

| OPERATION   | MACHINE CONDITION                             | OPERATOR SKILL LEVEL | NUMBER OF OPERATORS |
|---|---|----------------------|---------------------|
| Tape Roll Replacement                             | Stopped by pressing the Emergency Stop Button | A                    | 1                   |
| Blade Replacement                                 | Electrical Power Disconnected                 | B                    | 1                   |
| Ordinary Maintenance and Preventative Maintenance | Electrical Power Disconnected                 | B                    | 1                   |
| Extraordinary Mechanical Maintenance              | Running with Safety Protections Disabled      | C                    | 1                   |
| Extraordinary Electrical Maintenance              | Running with Safety Protections Disabled      | D                    | 1                   |
| Drive Belt Replacement                            | Electrical Power Disconnected                 | B                    | 1                   |
| Machine Installation & Set-Up                     | Running with Safety Protections Disabled      | B & C                | 2                   |

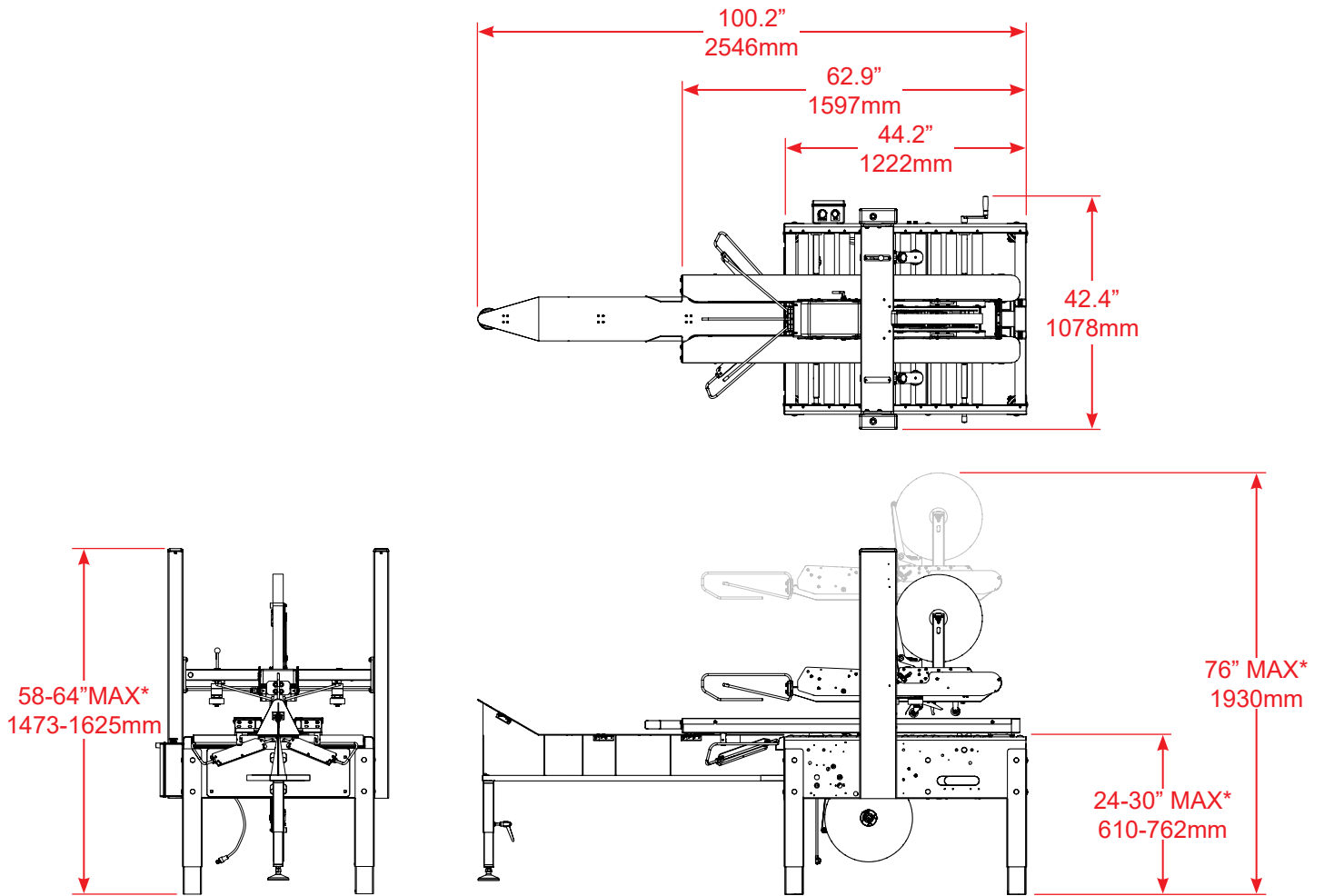
**Proper Electrical Disconnect is achieved when the machine is unplugged from the electrical socket.**



# SPECIFICATIONS

## USA 2024-WAT-BO Dimensions

Machine Weight: 679 lbs. (308kg)



\* Height notated is with standard legs. If a different range is necessary please contact your Authorized IPG Representative for additional conveyor height options. If optional casters are added they will add 4" (102mm).

**Figure 13: Machine Dimensions**

# SPECIFICATIONS

## Machine Components

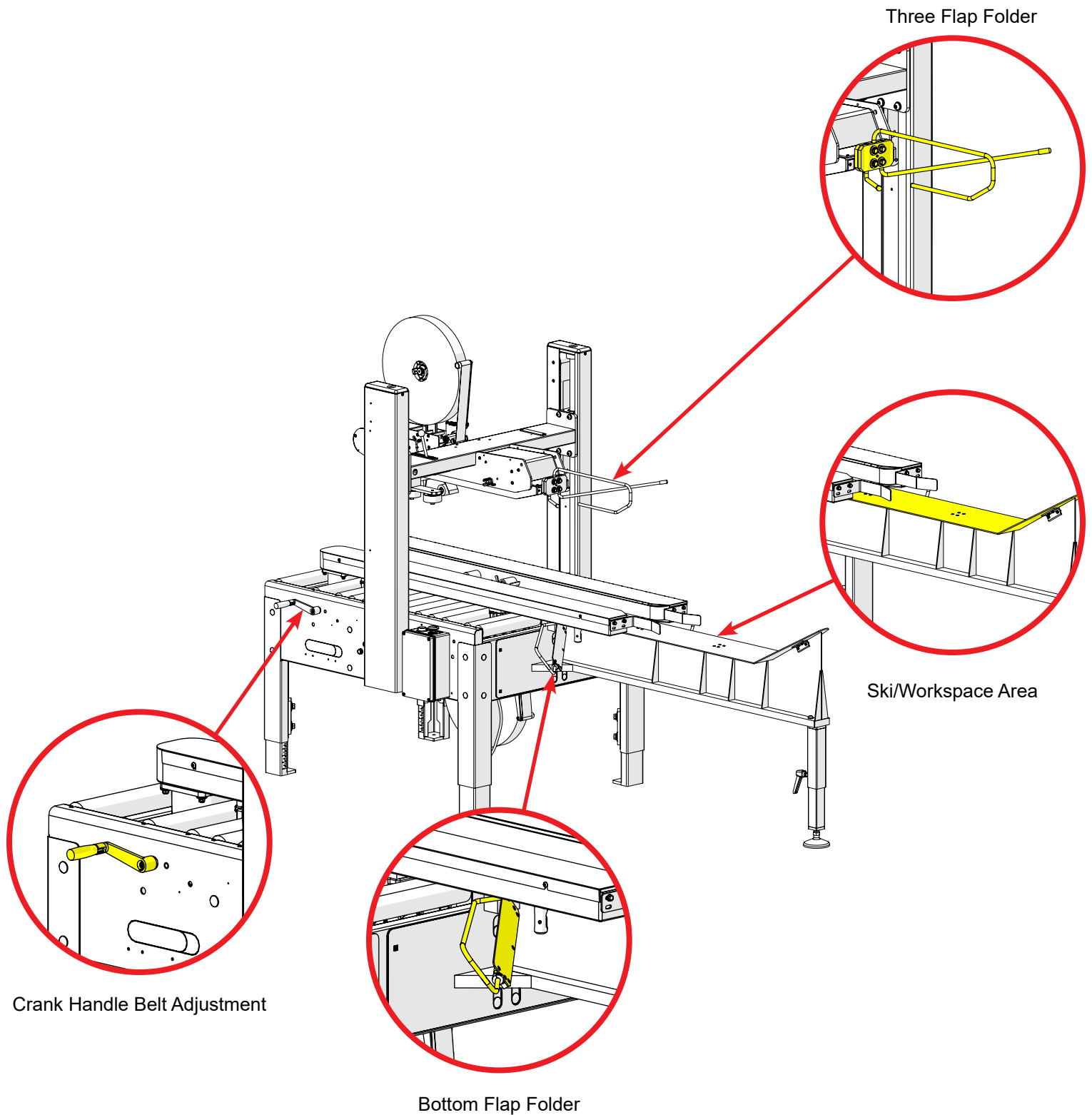


Figure 14: Machine Components

# **SPECIFICATIONS**

## **Power Requirements**

Electrical: **110v, 60HZ, 5A (560 Watts)**

This machine comes standard with two gear motors, one on each drive base, and an electrical box/control box.

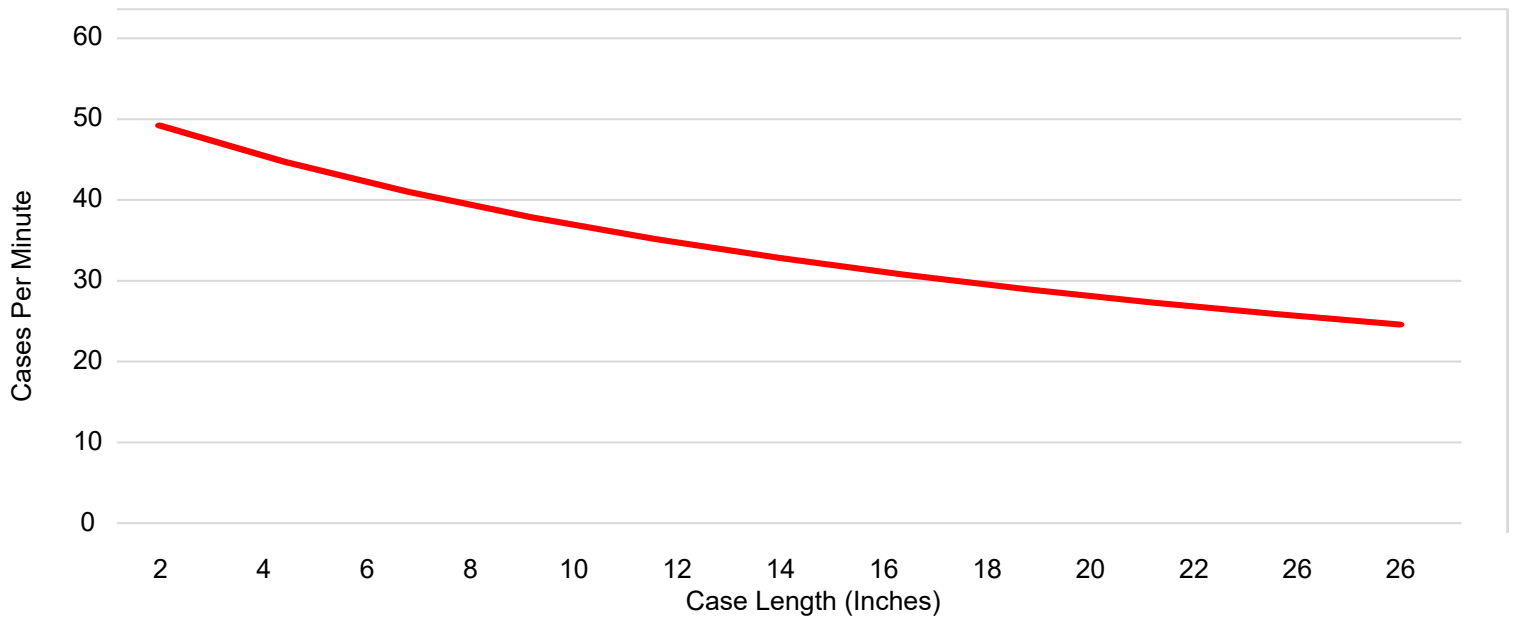
The electrical box/control box contains a Start Button and Emergency Stop.

A 12 ft. (3.6 m) standard, three-conductor power cord with plug is provided for **110V, 60HZ, 15A** service. The receptacle providing this service **must** be properly grounded.

## **Operating Speed**

Belt speed is 82 ft./min (24.9 m/min). Boxes must be separated by 14 in. (356mm).

Cases Per Minute by Case Length



**Figure 15: Cases Per Minute**

# SPECIFICATIONS

## Tape Specifications

Use only **IPG Pressure Sensitive Tape**. The machine can accommodate both 2" and 3" tape heads.

Please refer to the tape head manual for the tape head in your machine for more specific details on setting up your tape head(s).

## Operating Conditions

Use in a dry, relatively clean environment at 40° to 105° F (5° to 40° C) with clean dry cartons. Maximum sound pressure level is less than 70dBA.



**CAUTION: MACHINE SHOULD NOT BE WASHED DOWN OR SUBJECTED TO CONDITIONS CAUSING CONDENSATION ON COMPONENTS.**



**CAUTION: TO PREVENT INJURY KEEP AN AREA WITH A MINIMUM OF 36 IN. (915MM) OF SPACE CLEAR, CLEAN, AND DRY ON THE OPERATOR AND CONTROL BOX SIDES OF THE MACHINE.**

## Carton Specifications

### Type

- Regular Slotted Containers (RSC)
- Other styles may be processed. Consult factory.

### Material

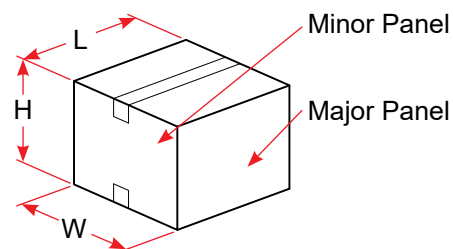
- 125 to 175 PSI bursting test, single or double wall, B or C flutes
- Other styles may be processed. Consult factory.

### Weight

- 0 to 38.5 kg (0 to 85 lbs.) Max

### Size

| Carton Size | Length        | Width         | Height      |
|-------------|---------------|---------------|-------------|
| Minimum     | 8.5" (127mm)* | 8.5" (127mm)* | 2" (50mm)** |
| Maximum     | Infinite      | 20" (508mm)   | Infinite    |



However, if the box length (in the direction of the seal) to box height ratio is 0.75 or less, several boxes should be test run to assure proper machine performance. The formula is as follows:

$$\frac{\text{Carton Length in direction of seal}}{\text{Carton Height}} > 0.75$$

\* Minimum carton width and length is determined by the ski width. A standard 8" wide ski is included. If other ski sizes are needed please consult the Optional Equipment section. Consult your Authorized IPG Representative or IPG Machinery Support if you have questions or concerns. A box minimum width is 0.5" greater than the ski width.

\*\* A minimum height of 2" is possible as long as the width of the carton is 8" or greater. If the box width is narrower than 8" then a minimum height of 3.5" is possible.

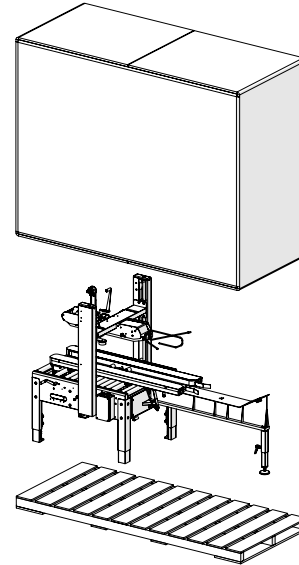
# SET-UP PROCEDURE

## Receiving and Handling

The Interpack USA 2024-BFF is shipped to the customer in a box and fixed to a pallet. The machine is enclosed with either a corrugated sleeve and cap or an HSC corrugated box. The sequence below is step by step instructions to remove all packing materials.

### **PRIOR TO SIGNING FOR THE MACHINE INSPECT IT FOR ANY DAMAGE THAT MAY HAVE OCCURRED DURING SHIPPING**

1. Remove the strapping and/or staples at the bottom of the box
2. Lift the box cover off of the machine, use caution and team lift
3. Remove any bubble wrap or protective wrapping
4. Inspect the machine for any damage that may have occurred during shipping
5. Remove the mounting bolts and nuts that secure the machine to the pallet
6. Using a forklift or other lifting device, lift the machine off the pallet
  - Install any optional casters at this point as well as adjusting leg height for desired conveyor height
7. Position the machine in its desired location
8. Remove any remaining tie wraps and shipping materials
9. Install the included Carton Retainers
10. Install any optionally ordered equipment



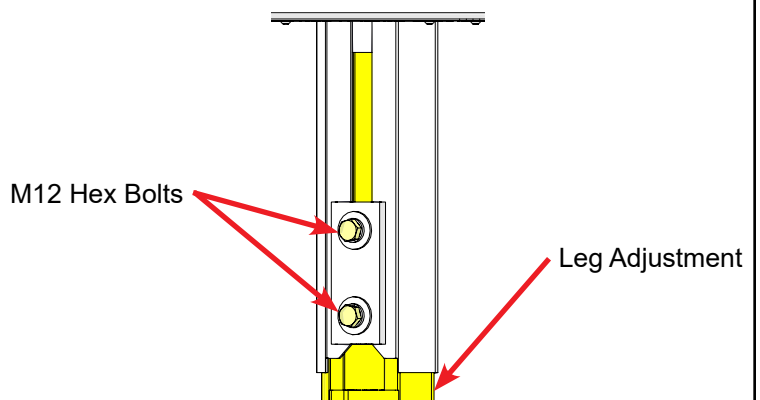
**Figure 16: Unboxing**

After unpacking the Case Sealer, look for any damage that may have occurred during shipping. Should the Case Sealer be damaged, file a claim with the transport company and notify your IPG representative as soon as possible.

## Set up

The Case Sealer must be installed on a near level ground. Use the adjustable legs to ensure the machine is level and firmly planted on the ground (no rocking). Adjust the leg height with the six (6) telescopic adjustment legs to accommodate conveyor heights from 24 in. to 30 in. Consult with the factory for any other conveyor heights that may be required. Optional Casters add 4 in. to the conveyor height.

To adjust the Case Sealer height, jack up the machine to give ample room to extend the legs. Using a 19mm box end wrench, loosen the eight (8) M12mm hex bolts. Adjust the legs to the desired conveyor height and tighten the bolts. Etched lines on the legs ease leveling. The machine must be properly supported prior to any leg adjustment.



**Figure 17: Leg Adjustment**

Customer supplied exit conveyor (if used) should be straight and declined no more than 1 in./yard (5 cm/meter) away from the Case Sealer to convey the sealed cartons away from the machine.

# SET-UP PROCEDURE



**WARNING: CASTER INSTALLATION REQUIRES RAISING THE MACHINE TO ACCESS THE BOTTOM OF EACH LEG. FOLLOW ALL POSSIBLE SAFETY PROCEDURES PRIOR TO AND DURING THIS PROCESS.**

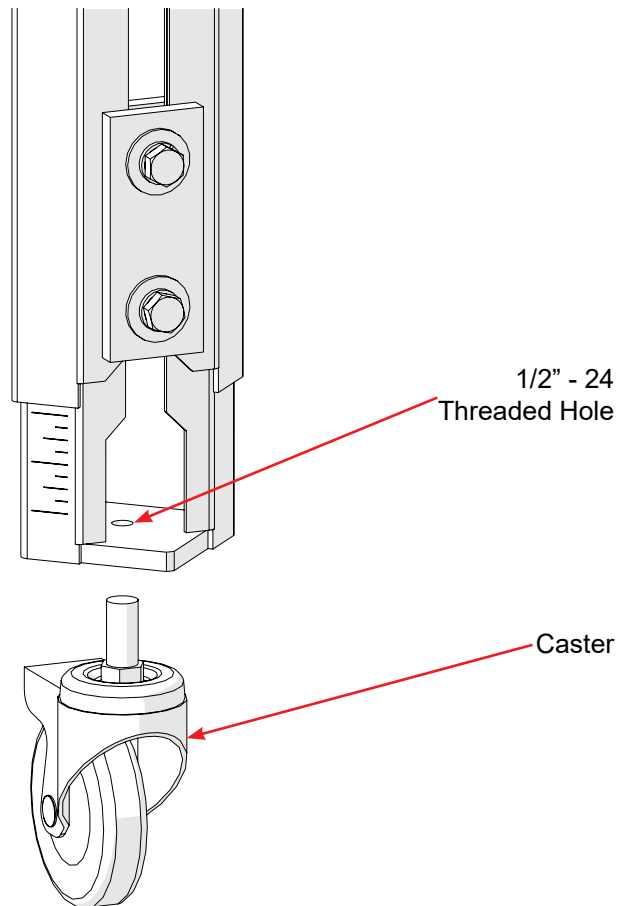
Be advised there are several ways to install the casters on IPG Case Sealers. Consult your company's safety practices after reading through the below directions. Take all precautions necessary.

1. Raise the machine to allow access to the bottom of each leg.
2. By hand, screw the caster into each leg.
3. Using a wrench, verify each caster is firmly seated to the bottom of the legs.
4. Lower the machine back down until it is resting on the casters.
5. Adjust the legs as necessary to achieve proper level of the machine.



**CAUTION: DO NOT ADJUST THE HEIGHT USING THE CASTERS. HEIGHT CHANGES ARE TO ONLY BE MADE BY ADJUSTING THE LEG EXTENSIONS.**

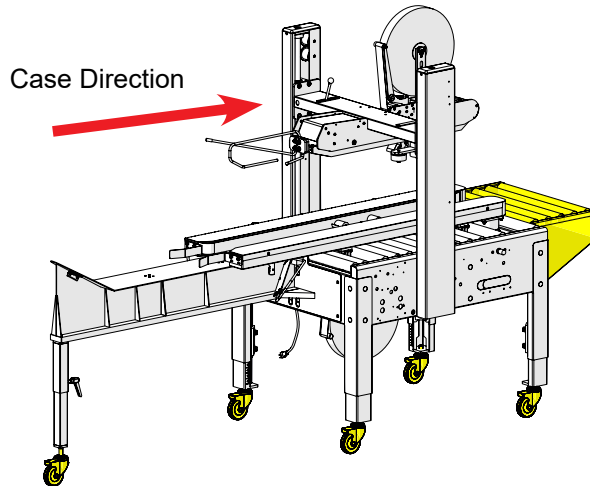
6. Position the machine in its desired location.
7. Lock the casters.



**Figure 18: Caster Installation**

# SET-UP PROCEDURE

## Optional Equipment: Outfeed Table Installation

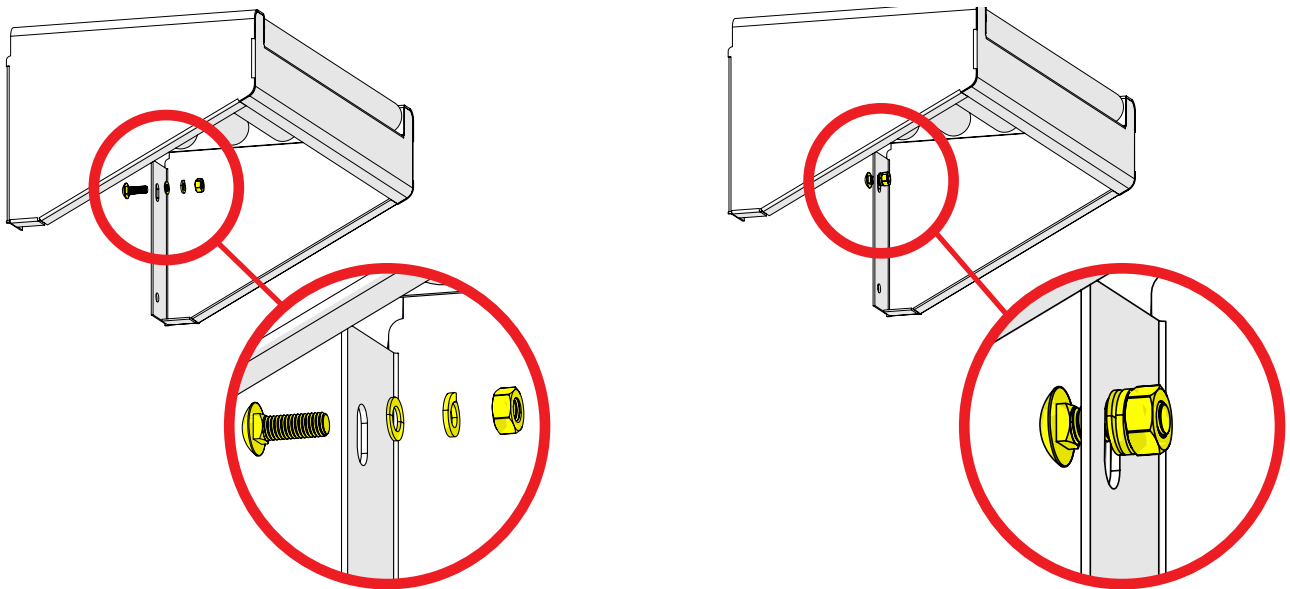


**Figure 19: Case Direction**

The USA 2024-BFF can only accept an Outfeed Table. Where a traditional Infeed Table would be mounted the ski support is mounted.

IPG Case Sealers come with the necessary mounting points for in-feed/out-feed tables. The optional in-feed/out-feed tables will come with all necessary hardware to mount to the machine. The case sealers can accept a variety of table sizes. Please consult with the factory on the best size table for your application.

1. Loosely install two carriage bolts into top two mounting holes on roller table with hardware included.

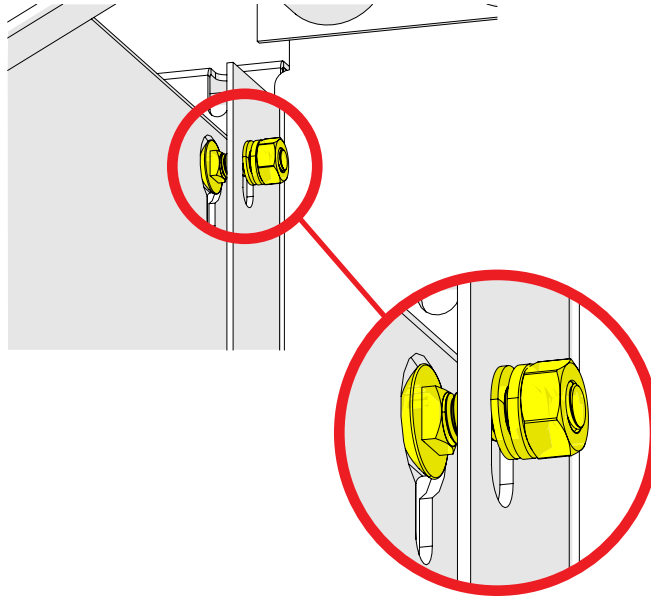


**Figure 20: Carriage Bolt Assembly**

# SET-UP PROCEDURE

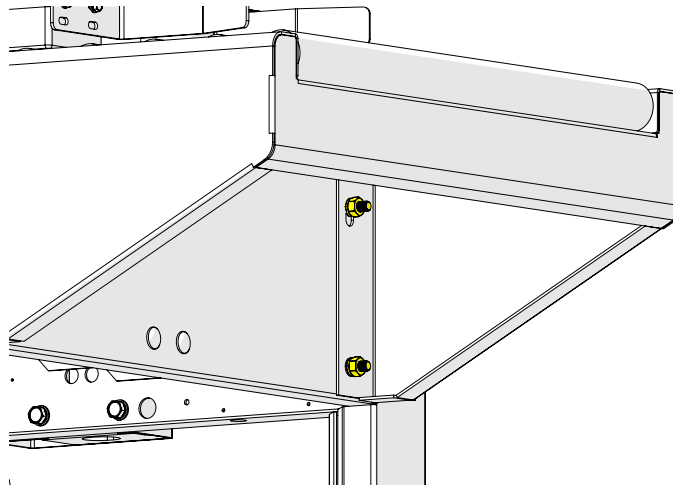
## Optional Equipment: In-feed Table Installation (Continued)

1. Utilizing the slots on the machine base, attach roller table to machine base by locating carriage bolts in slots on machine base and push down to lock in place. Make sure carriage bolts are properly aligned into slot when pushed down to lock in place before proceeding.



**Figure 21: Table to Machine Base Installation**

2. Once roller table is attached to the machine base using the two carriage bolts, install remaining two carriage bolts with hardware included through the bottom two holes on the machine base and roller table.
3. After all four mounting studs and included hardware have been installed, tighten all hardware to avoid roller table instability then install rollers on table.



**Figure 22: Remaining Carriage Bolt Installation**



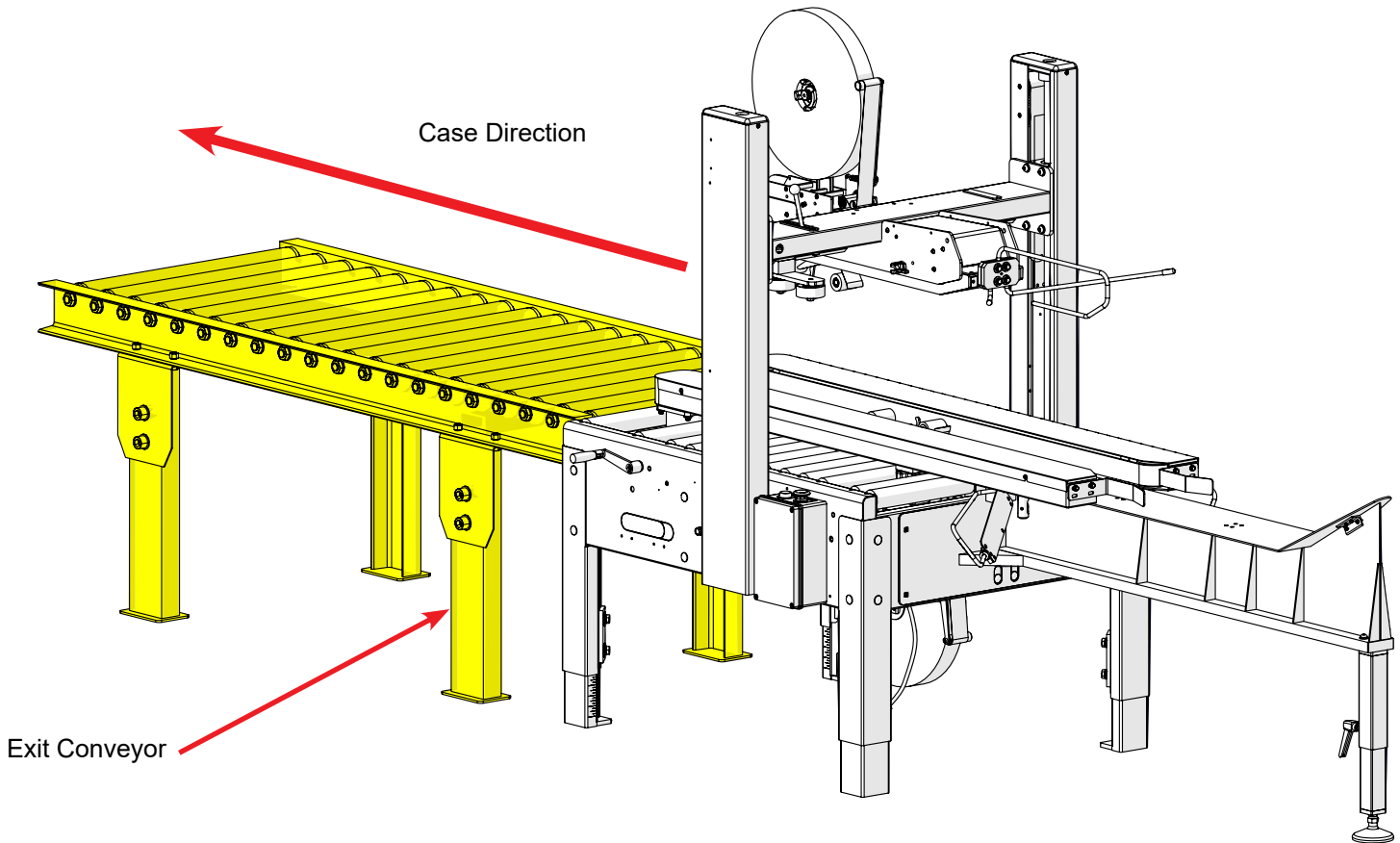
# SET-UP PROCEDURE

## Optional Equipment: Installation of External In-feed and Exit Conveyors

IPG does not supply conveyors. All conveyors are to be customer supplied.

The USA 2024-BFF can only accept an Outfeed Conveyor.

1. Customer supplied gravity exit conveyor (if used) should be straight and declined no more than 1 in./yard (5 cm/meter) away from the machine to convey the sealed cartons away from the machine.
2. Customer supplied powered exit conveyor should be straight and level to convey the sealed cartons away from the machine.



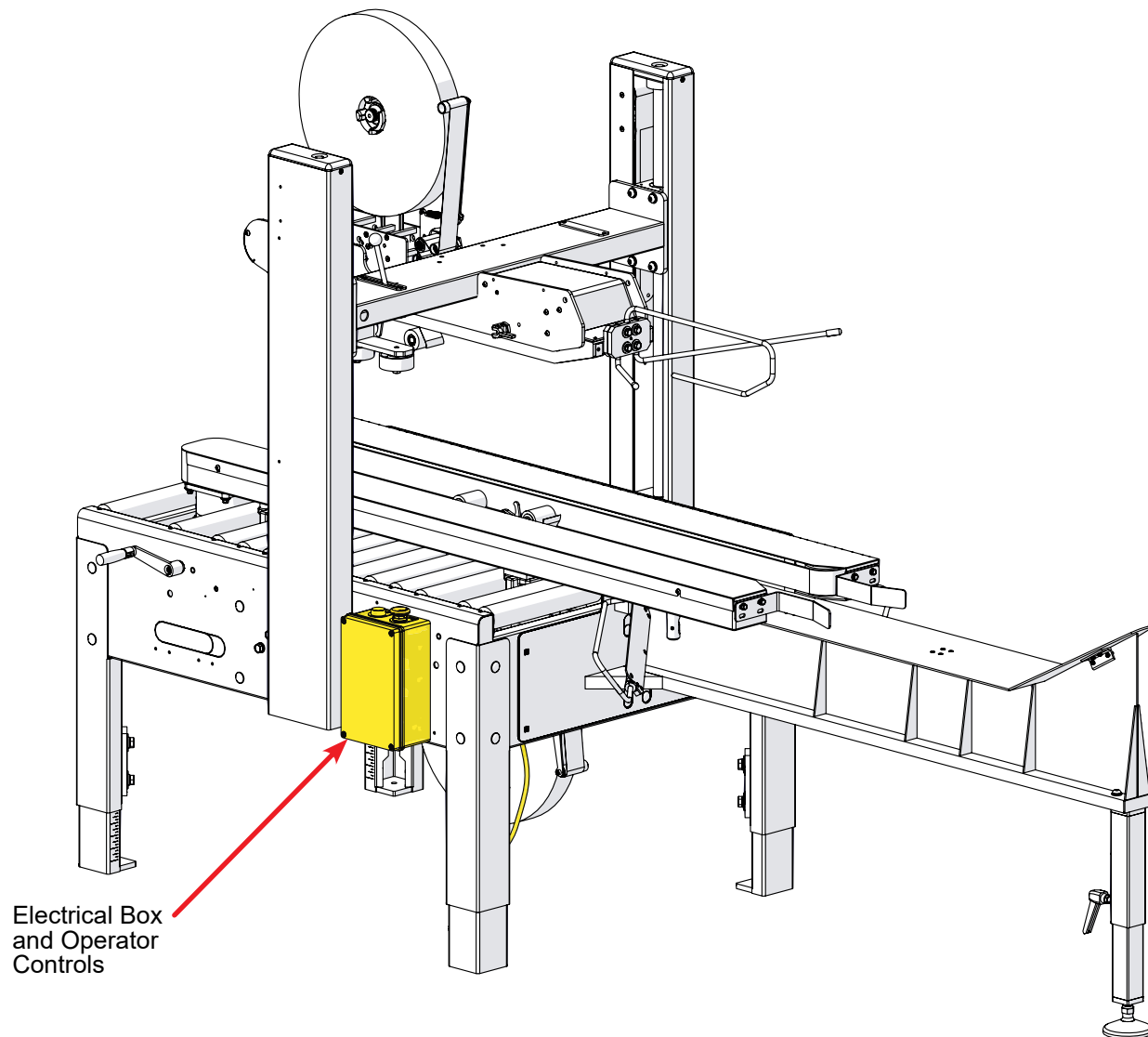
**Figure 23: Installing Exit Conveyors**

# CONNECTING UTILITIES

## Electrical Utilities

A 12 ft. (3.6m) standard three-conductor power cord with plug is provided for **110V, 60HZ, 15A** electric service. The receptacle must be properly grounded. Before the machine is plugged into the receptacle, ensure that all materials are removed from the machine. The electrical control is protected with an automatic circuit breaker with resettable overload.

The electrical box is located on one side of the **USA 2024-BFF** Case Sealer. It also contains the operator controls of a Start Button and Emergency Stop.



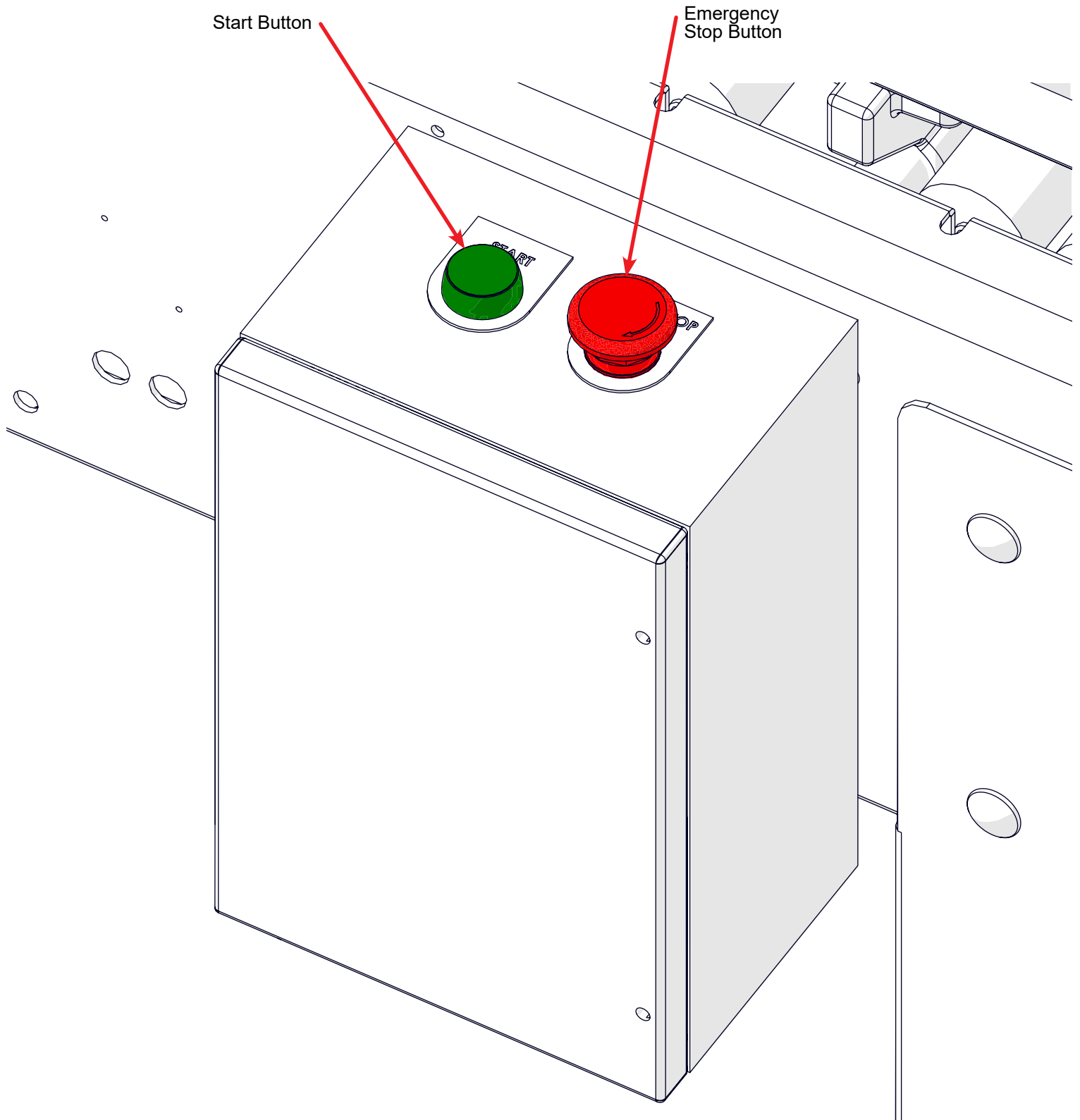
**Figure 24: Electrical Utilities**

The electrical box can be moved to the opposite side of the machine. This requires disconnecting and reconnecting electrical wires and components. Only trained and qualified service technicians should access and open the control box.

If reversing the electrical utilities is required it is recommended to have this done at the factory prior to machine delivery. Please consult your IPG Representative if this process is required.

# OPERATOR CONTROLS

Operator controls are located on the top of the Electrical Box.

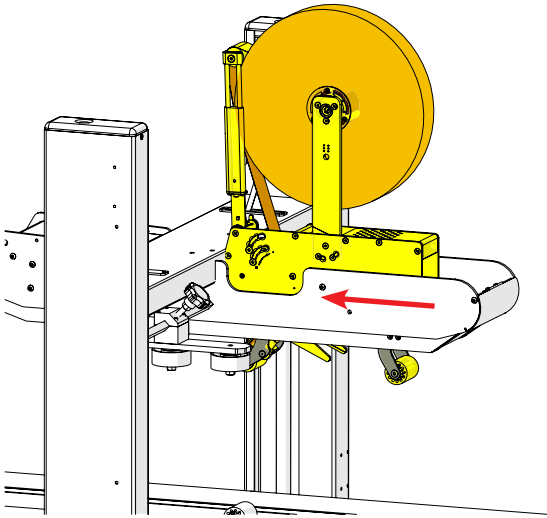


**Figure 25: Operator Controls**

# REMOVING/REPLACING THE TOP TAPE HEAD

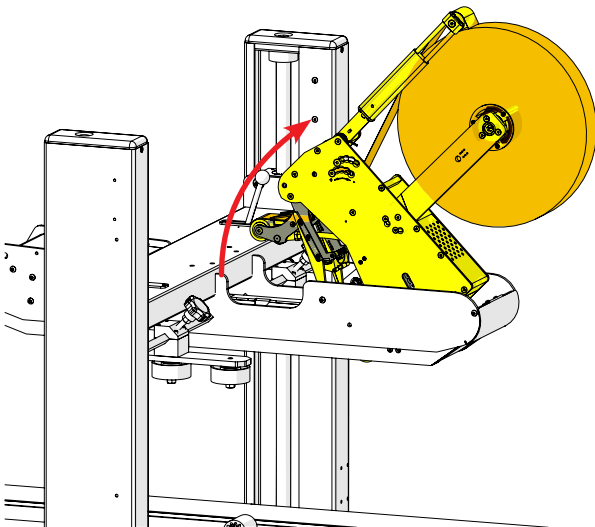
Tape heads may be removed for a variety of reasons including reloading tape and performing preventative maintenance.

1. Top Tape Heads are held in place with spring detents. Push the top Tape Head toward the infeed portion of the case sealer.



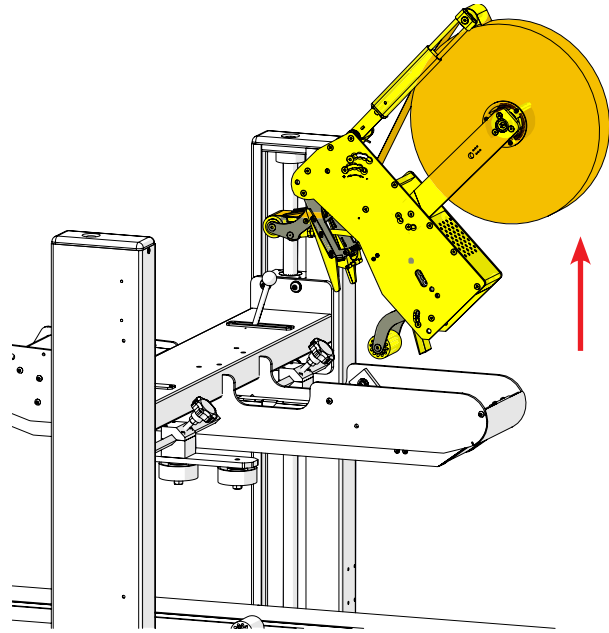
**Figure 26: Top Tape Head Removal 1**

2. When pushed forward, lift the front of the tape head, pivoting on rear adapter pins.



**Figure 27: Top Tape Head Removal 2**

3. The Top Tape Head can be lifted straight up away from the top tape head box.

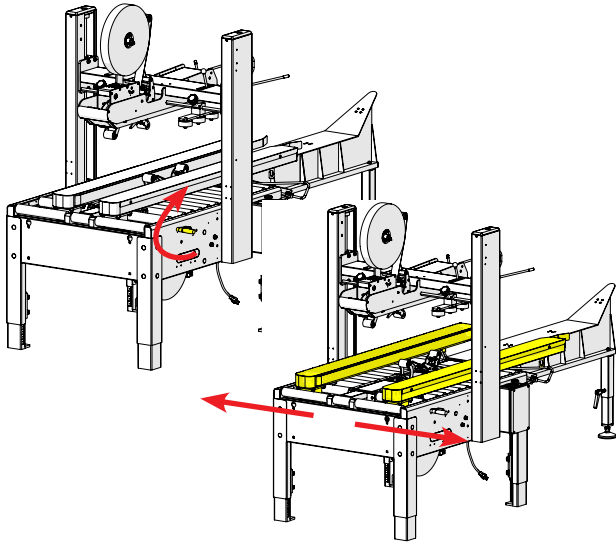


**Figure 28: Top Tape Head Removal 3**

# REMOVING/REPLACING THE BOTTOM TAPE HEAD

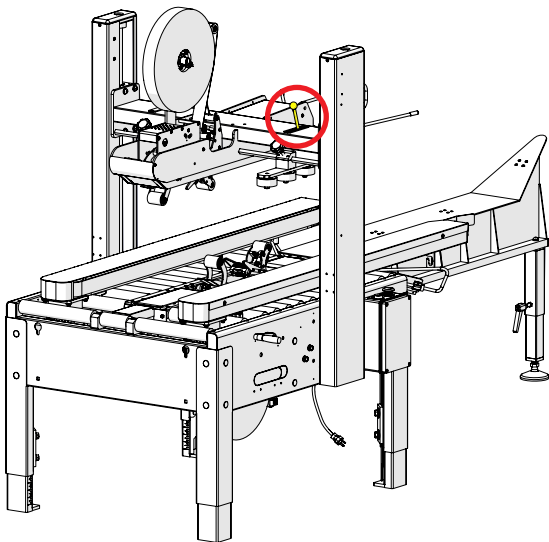
Tape heads may be removed for a variety of reasons including reloading tape and performing preventative maintenance.

1. Bottom Tape Heads are held in place by gravity. If not already, use the crank handle to open the belts.



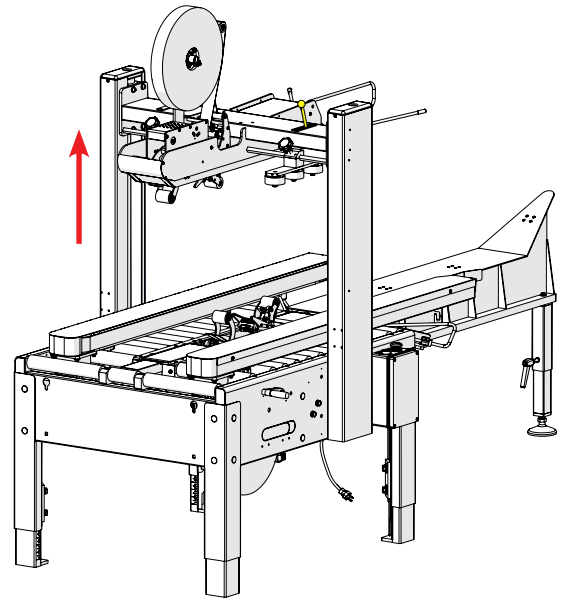
**Figure 29: Bottom Tape Head Removal 1**

2. If the bridge is not raised unlock the bridge using the locking handle.



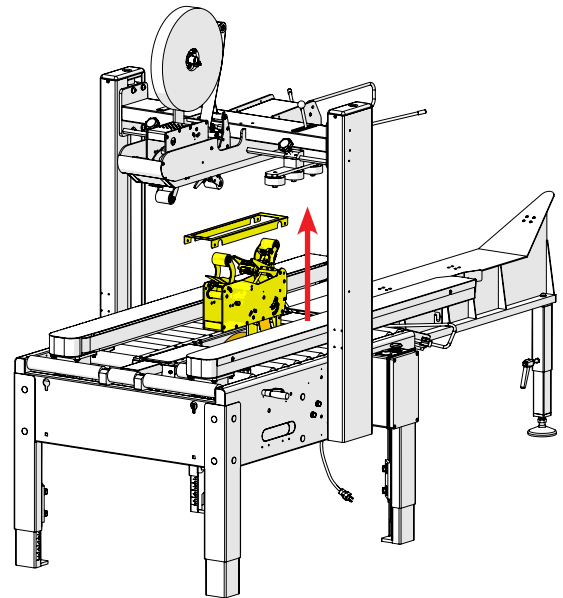
**Figure 30: Bottom Tape Head Removal 2**

3. Raise the bridge to its maximum allowed position. Then lock the bridge.



**Figure 31: Bottom Tape Head Removal 3**

4. Remove the gap fill plate if one is installed then lift the tape head straight out of the base of the case sealer.

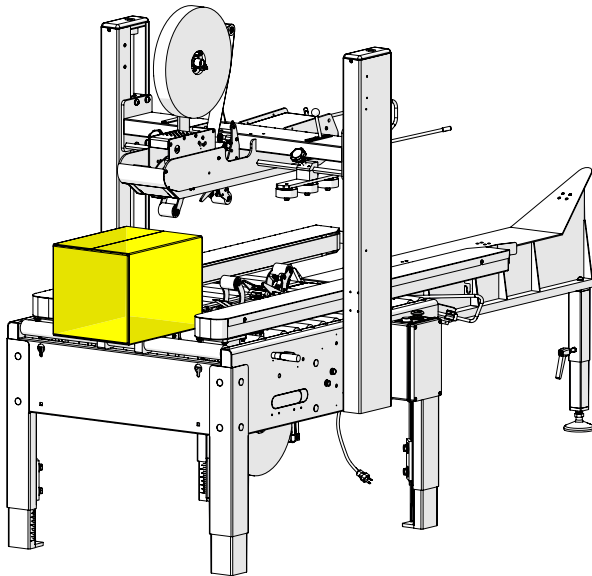


**Figure 32: Bottom Tape Head Removal 4**

# CASE SETUP PROCEDURE

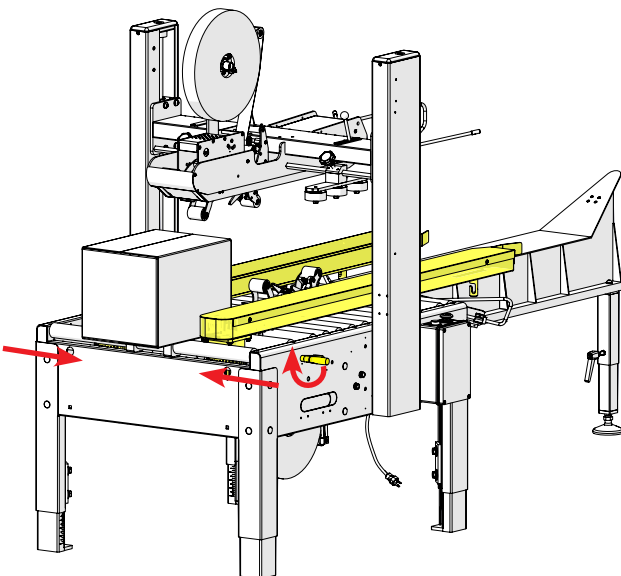
Setting up the **USA 2024-BFF** to process a case size is quick and easy. When performing any setup procedure press the Emergency Stop to prevent any unintended action or motion.

1. Press the Emergency Stop to prevent any unintended action or motion.
2. Fold all of the flaps on the carton and place it between the belts at the rear of the machine.
  - If the carton does not immediately fit you may need to use the crank handle to open the belts.
  - If the carton does not immediately fit under the bridge you may need to unlock the bridge using the locking handle and raise the bridge all the way.



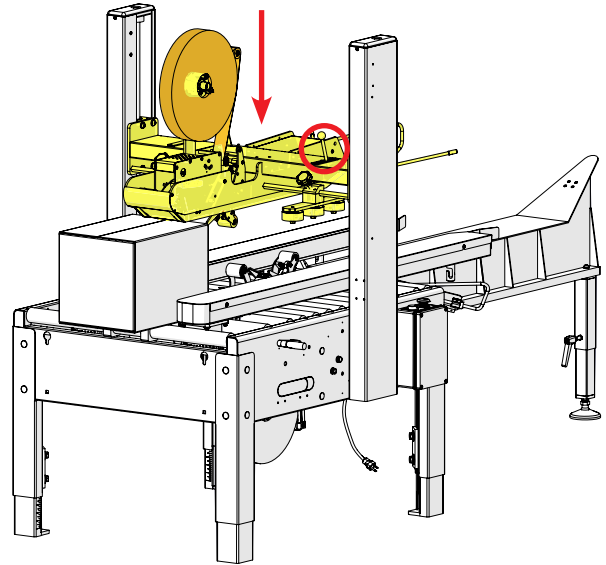
**Figure 33: Place Carton in Machine**

3. Use the crank handle to bring the belts in. They should be pressed against the carton firmly so it cannot easily be pulled out by hand. Do not over tighten the belts.



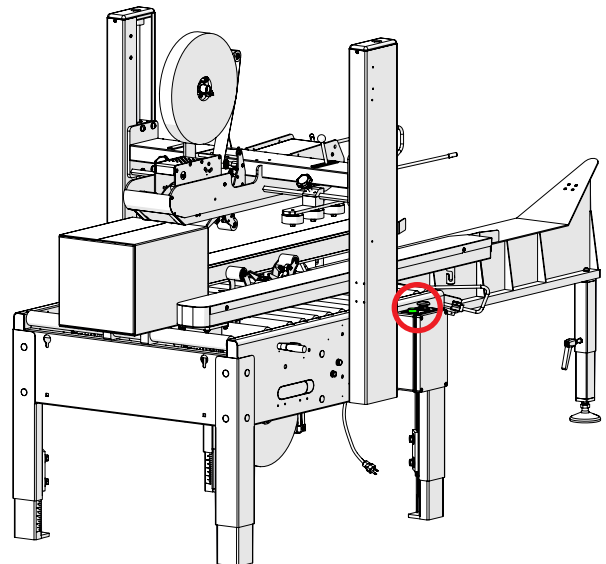
**Figure 34: Tightening the Belts**

4. Unlock the bridge using the locking handle and lower the bridge until it rests on the top of the carton. Do not press the bridge into the carton it only needs to apply a light downward pressure onto the carton. Lock the bridge in place.



**Figure 35: Position the Bridge**

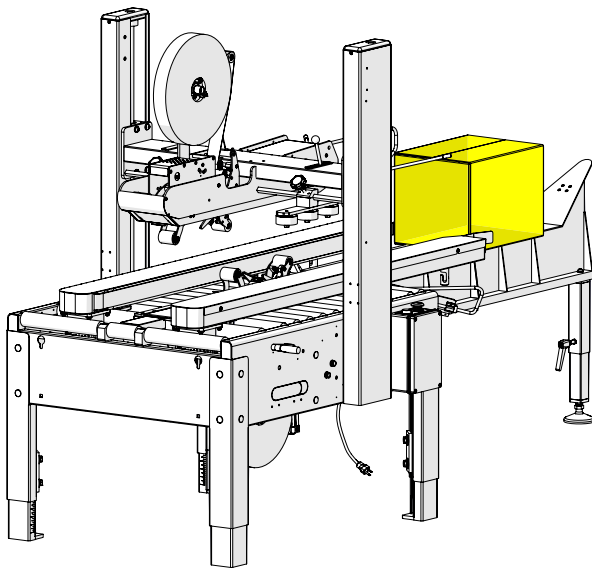
5. Disengage the Emergency Stop and press the Green Start button to eject the carton from the machine.



**Figure 36: Removing Carton from Machine**

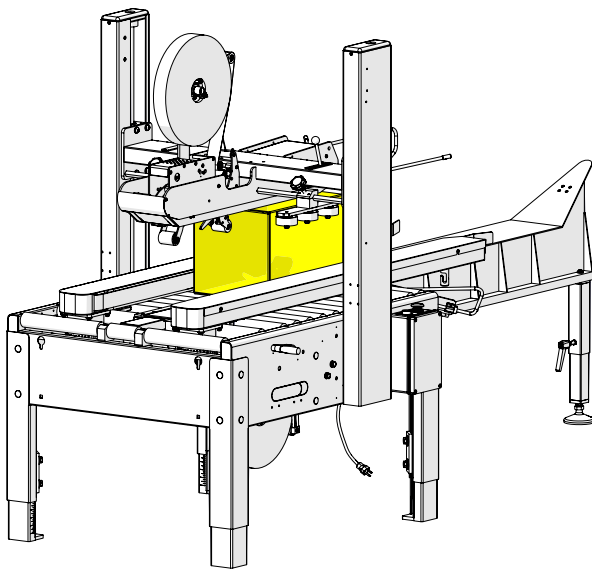
# CASE SETUP PROCEDURE CONTINUED

6. Take the same carton and place it on the ski. Be sure to have all the flaps closed.



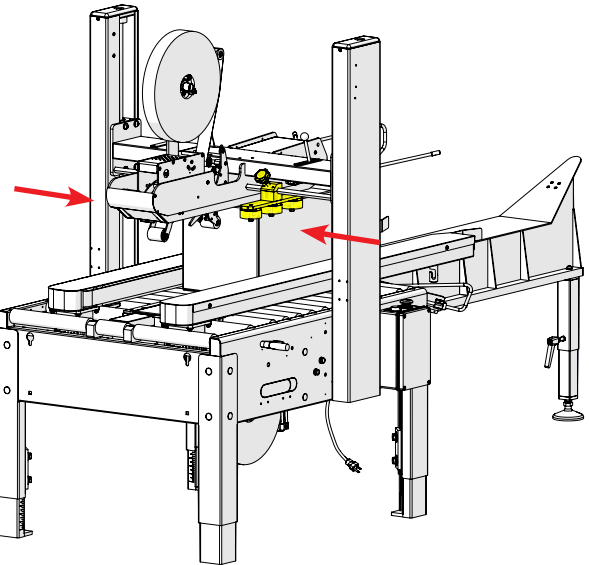
**Figure 37: Case Placement**

7. With the belts on push the case into the machine. When the case is in the middle of the bridge press the Emergency Stop button to keep the carton in the machine.



**Figure 38: Stop The Machine**

8. Loosen the grips on the top squeezers. Slide them into carton so the wheels make contact lightly with the carton. Do not over tighten the squeezers to the carton as it can result in case jams.



**Figure 39: Compression Guide Placement**

9. Disengage the Emergency Stop and press the Green Start button to eject the carton from the machine. The case sealer is now set up and ready for use.

# OPERATING INSTRUCTIONS

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The following instructions are presented in the order recommended for processing cases through the **USA 2024-BFF** Case Sealer.

1. Install and thread tape on the tape head(s) (refer to the tape head manual).
2. Supply or connect machine to 110V electrical supply (refer to Electrical Utilities).
3. Follow the Case Set-up Procedure if the case sealer is not already set up.
4. Twist the E-stop clockwise.
5. Press the Green Start button to begin machine operation.
6. Cartons can be set up on the ski. The bottom minor flaps must be folded in.
7. Operators may pack the carton on the ski.
8. The operator will need to fold the rear minor panel in before pushing it into the belts.
9. The belts will take the carton into the case sealer. The bottom flaps will be closed automatically by the bottom flap folders. The top front minor and side major panels will automatically be closed by the 3 Flap Folder on the bridge.
10. The tape heads will then seal the carton.
11. Cartons will be ejected out the back of the case sealer and onto any outfeed tables or conveyors if being used.



**WARNING: ENSURE THAT THE OPERATOR'S HANDS ARE AWAY FROM THE CONTACT AREA BETWEEN THE BOTTOM OF THE CARTON AND THE MOVING BELTS. OPERATORS SHOULD GRIP THE CASE AT THE REAR AND LET GO ONCE THE MACHINE HAS TAKEN THE CASE. IMPROPER HANDLING CAN LEAD TO INJURY.**



**WARNING: KEEP HANDS, HAIR, LOOSE CLOTHING, AND JEWELRY AWAY FROM MOVING BELTS, AND TAPE HEADS**



**WARNING: KEEP HANDS AND OTHER BODY PARTS CLEAR OF THE ANTENNA AND BOTTOM FLAP FOLDING MECHANISM WHILE A CARTON IS PROCESSING. THEY MAY MOVE UNEXPECTEDLY WHEN MAKING CONTACT WITH CARTONS.**

When feeding cartons into the Case Sealer bottom minor flaps must be closed prior to entering the belts. Be sure that all cases are fed squarely and straightly into the Case Sealer, feeding cases crooked can result in poor seals or case jams.

In the event of a case jam follow the below procedure. Do not attempt to clear a jam while the case sealer is on. Press the Emergency Stop button before proceeding.



**WARNING: DO NOT ATTEMPT TO REMOVE ANY JAMMED CASE FROM A CASE SEALER THAT IS CURRENTLY ON. DO NOT ATTEMPT TO PUSH A JAMMED CASE THROUGH THE MACHINE. THE MACHINE HAS COMPONENTS UNDER SPRING PRESSURE. NOT FOLLOWING THE PROPER CASE JAM CLEARING METHODS CAN RESULT IN INJURY.**

## Carton Jam Clearing

1. Press the Emergency Stop.
2. Unlock the bridge and raise it. Use caution as the tape head may be under spring pressure.
3. Using the crank handle slightly open the belts. Use caution as the tape head may be under spring pressure.
4. The carton can be removed by hand.
5. If tape is attached to the carton use scissors to cut the tape free.
6. Inspect the tape head(s) for any damage or mis-threaded tape.
7. Using scissors, cut the tape close to the application roller of the tape head(s). Do not use a razor knife. Do not cut the tape against the rollers. Damage to the rollers will cause poor tape application.
8. Follow the Carton Set-up Procedure to reset the machine.
9. The first box processed after clearing a jam may have longer than normal front tape legs that may need a hand wipedown as the legs can be longer than the arms can reach.

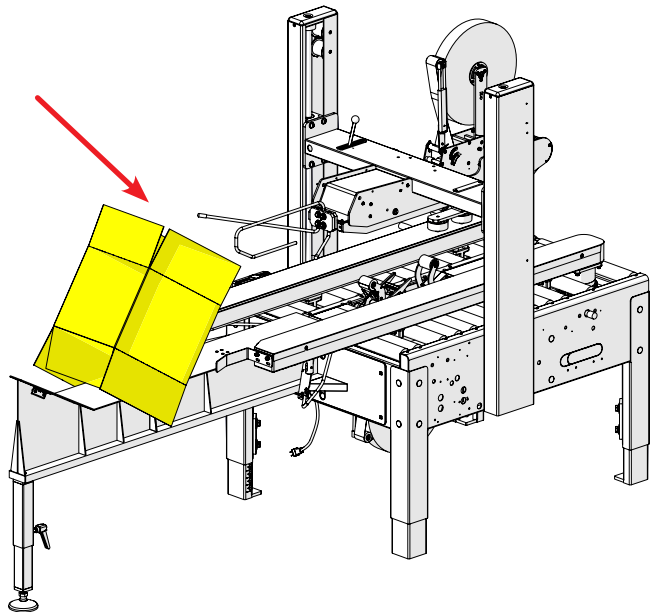


# PREPARING CASES TO BE PROCESSED

## Flap Folding

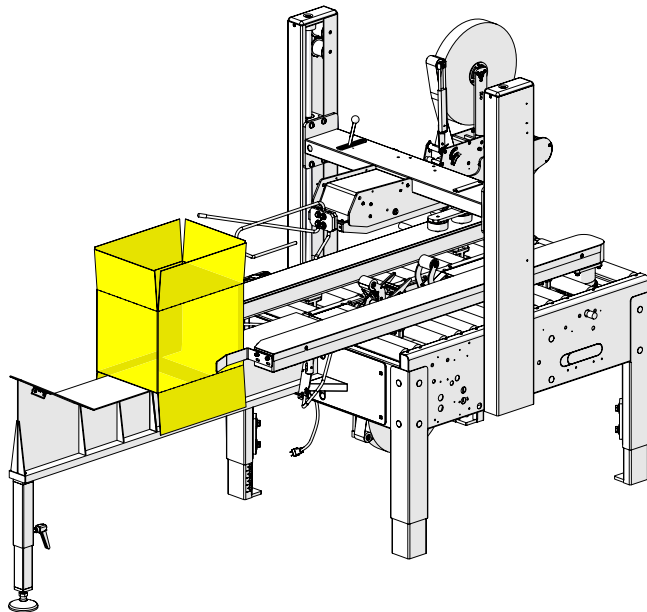
The **USA 2024-WAT-BFF** is a top and bottom case sealer that will automatically close the top front minor and major flaps. It will also close the bottom major flaps. The following procedure is recommended for its ease but there are several ways to prepare cartons to be processed through the **USA 2024-WAT-BFF**. Finding the method that is easiest and most ergonomic may depend on each operator.

1. Open the flat carton and grip the top major flaps.
2. Position the carton over the ski and press the front minor flap into the ski so it folds in.



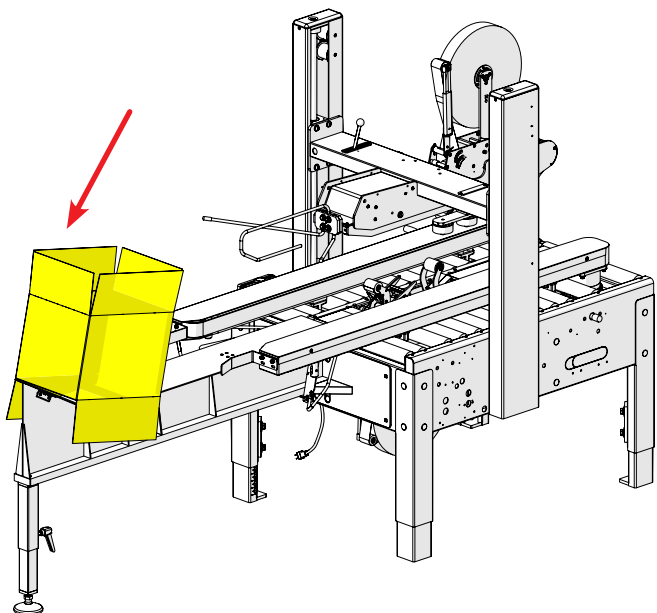
**Figure 40: Carton Set-up Procedure 1**

4. The carton can be positioned in the carton retaining clamps on the belt drives for any packing that needs to happen.



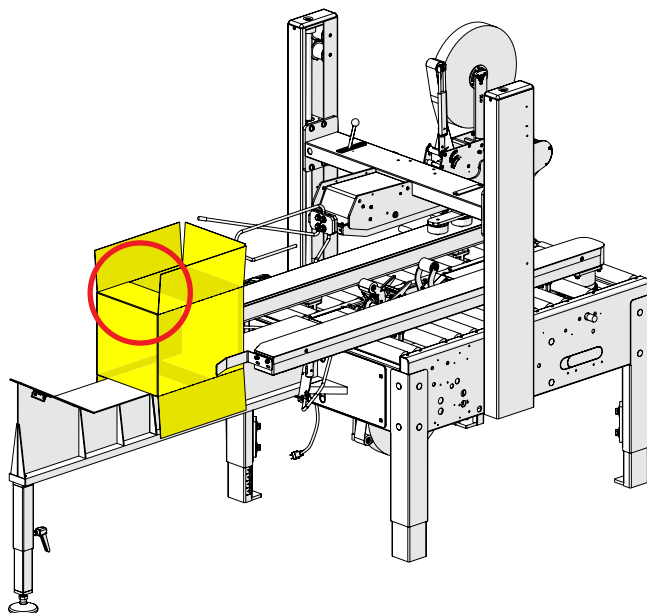
**Figure 42: Carton Set-up Procedure 3**

3. Pull the carton towards the angled portion of the ski. It will impact the bottom rear minor flap and fold it in.



**Figure 41: Carton Set-up Procedure 2**

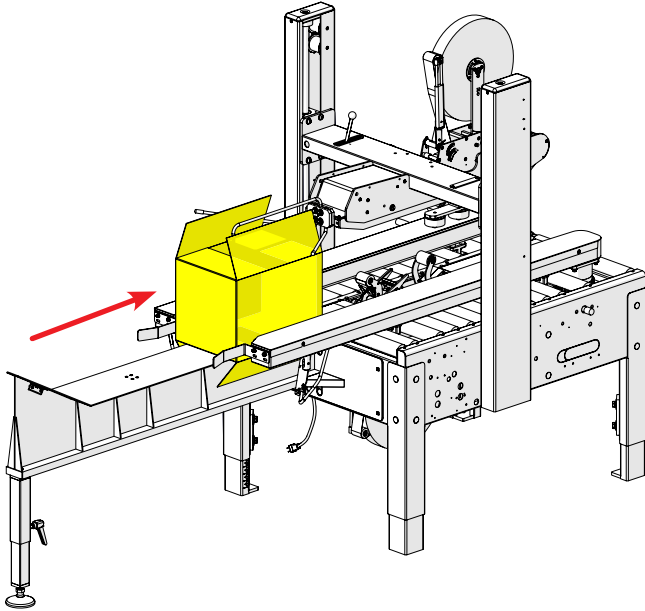
5. Once the operator is ready they will manually close the top rear minor flap then push the carton into the belts.



**Figure 43: Carton Set-up Procedure 4**

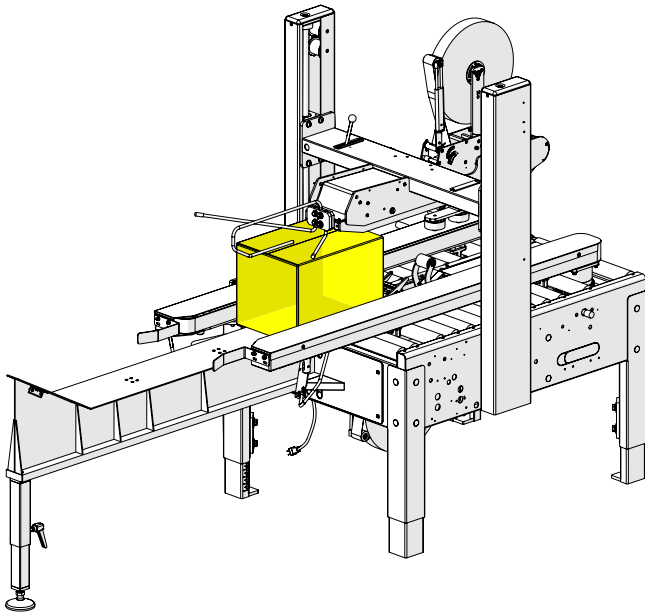
# PREPARING CASES TO BE PROCESSED CONTINUED

- Once the carton enters the belts the front minor flap will impact the lead of the three flap folder and fold in.
- The major flaps will be closed when they reach the other antenna on the three flap folder. The bottom major flaps will close when they impact the bottom flap folder.



**Figure 44: Carton Set-up Procedure 5**

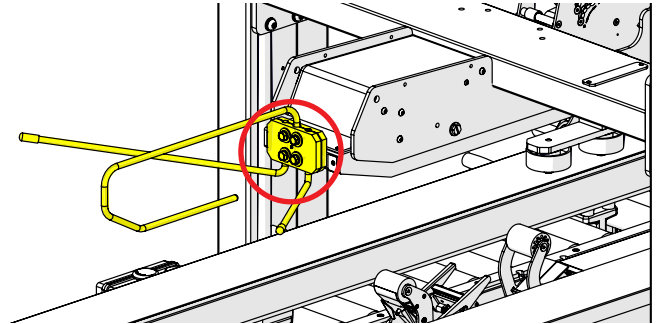
- Once the carton has been pulled far enough into the machine all of the flaps will have been closed and the case sealer will apply a strip of tape down the center seam of the top and bottom of the carton.



**Figure 45: Carton Set-up Procedure 6**

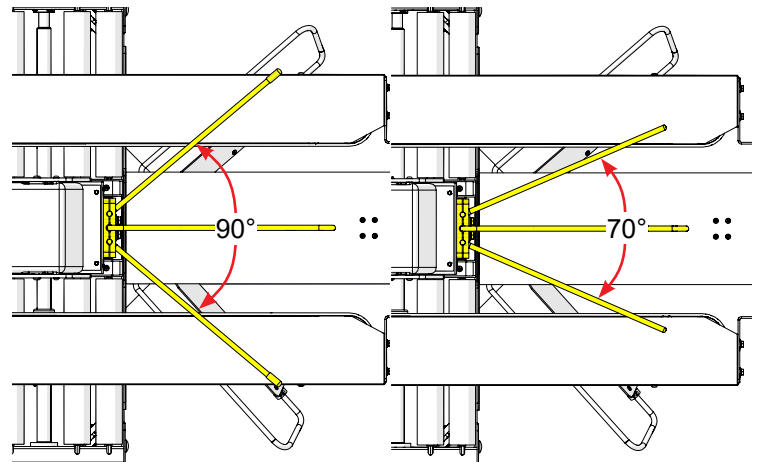
## 3 Flap Folder Adjustment

The adjustment to 3 flap folding mechanism are the antenna responsible for folding the top side majors. These are adjusted by loosening but not removing the four (4) bolts securing them to the bridge.



**Figure 46: 3 Flap Folder Adjustment**

This will allow for the antenna to rotate as well as a mild height adjustment. When cases are processed the antenna should allow for the front and rear minors to be fully closed prior to completely folding the side major flaps. These are factory set for roughly the 80 percentile of cases that can be processed by the USA 2024-BFF, at roughly a 90° angle. However, some adjustment may be needed bases on box suite configurations. When the antenna are positioned wide it will fold the side majors later in the process. Reversely when they are positioned to be more narrow the side majors will begin to fold earlier. When processing smaller cartons narrowing the antenna closer to 70° will be more beneficial.

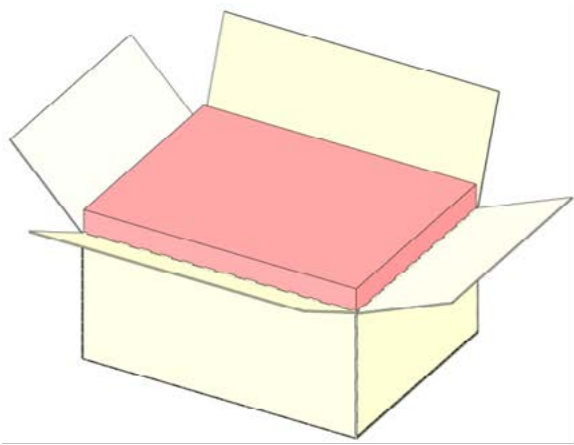


**Figure 47: Antenna Adjustment**

# PREPARING CASES TO BE PROCESSED CONTINUED

## Over Filled and Void Filled Cartons

Care should be taken when processing over filled and void filled cartons. Both pose different challenges that may require some adjustments to the case sealer and/or tape heads.

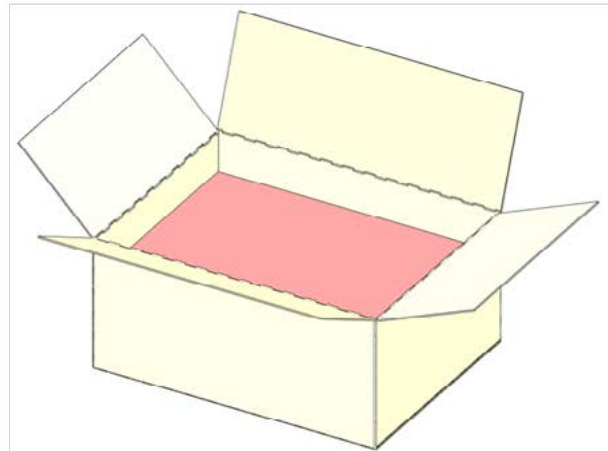


**Figure 48: Over Filled Carton**

When attempting to process over filled or over stuffed cartons the packaged materials are pressing up against the top flaps and would make it difficult to obtain a good seal.

To better process over filled cartons the USA 2024-BFF comes standard with a floating bridge. The blue tape head box floats on hinged springs. When setting up for carton sizes when intending on utilizing the floating bridge it must be locked prior to setting up cartons.

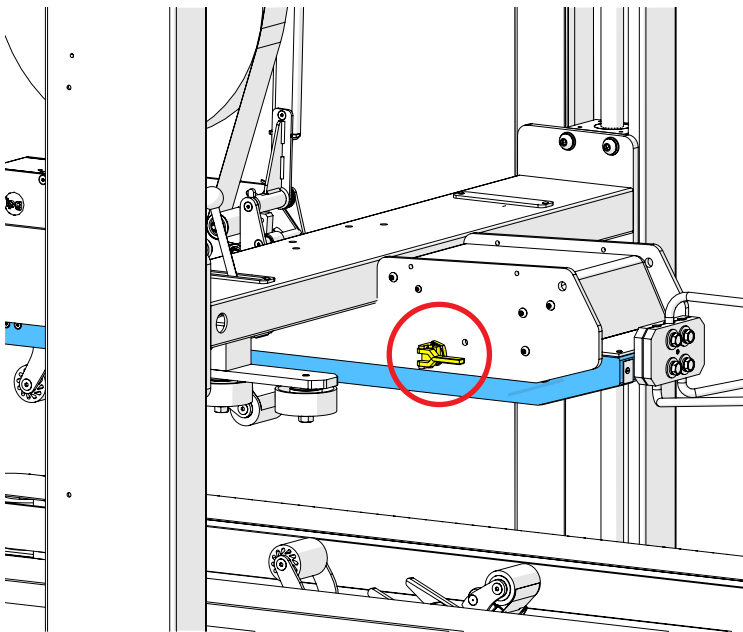
To unlock the floating bridge there is a hinged handle on the side of the bridge. Rotate the handle 180 degrees to unlock.



**Figure 49: Void Filled Carton**

When attempting to process void filled cartons there is a gap between the packed material and the top flaps. In this situation strong tape head springs may press the major flaps in causing a poor seal.

If this happens follow the procedures in the tape head manuals to decrease tension and torque until a good seal is made. Use caution when performing these adjustments as it will also modify wipedown performance.



**Figure 50: Floating Bridge**

# TROUBLESHOOTING

The USA 2024-BFF Case Sealer is fabricated with high quality components that provide trouble-free operation for a long period of time. However, should a problem occur, we recommend that you consult the following pages. If the problem you encounter is not discussed in these pages, call IPG Machinery Support 813-345-3070.

## Motor Overload

In the event the Start button is pressed and a motors do not start it is recommended to check the motor overloads in the electrical box.

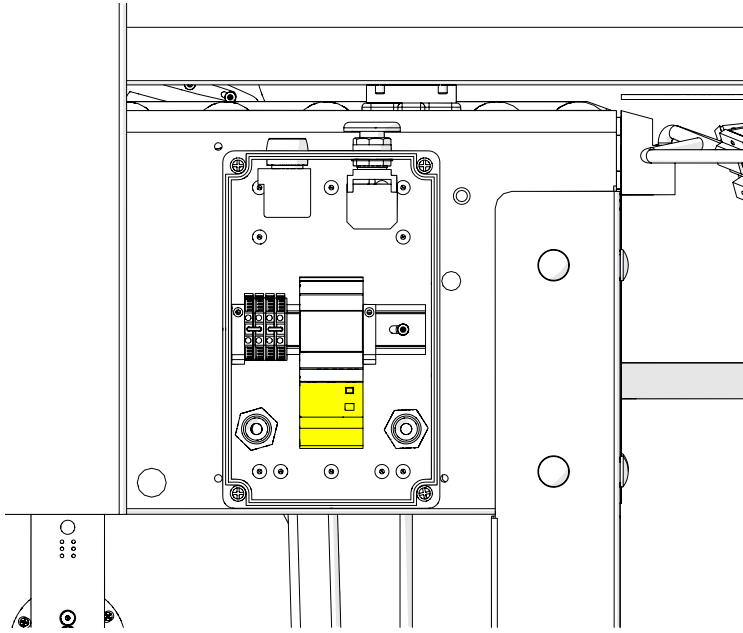


Figure 51: Motor Overload Location

The electric motors are protected with an automatic re-settable overload. Push on the top blue button to reset. The current setting should be set at 110% of the FLA (Full Load Amps) of a single motor.

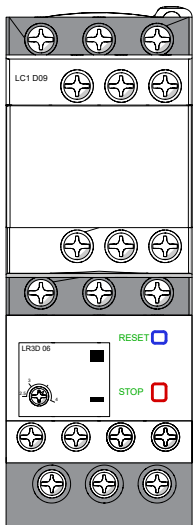


Figure 52: Motor Overload Reset

In the event the motor continues to trip the overload the adjustable scale may be increased a small amount. On the Thermal Overload, protected by the hinged cover, is the adjustable dial.

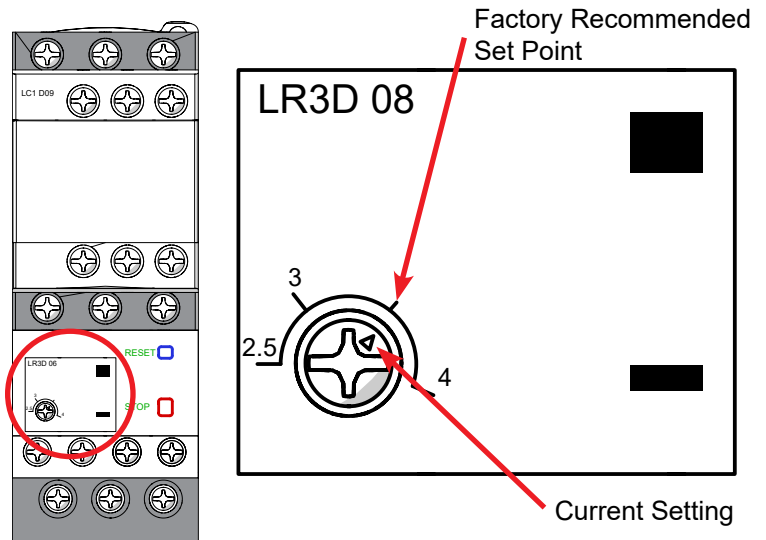


Figure 53: Motor Overload Adjustment

From the factory this dial should be set with the arrow pointing towards the shown point above.

In some cases this dial may be set too low resulting in false overloads. This will most likely be noticed when processing cases near the maximum weight limits of the case sealer.

# TROUBLESHOOTING

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## Q & A

The USA 2024-BFF Case Sealer is fabricated with high quality components that provide trouble-free operation for a long period of time. However, should a problem occur, we recommend that you consult the following troubleshooting guides. If the problem you encounter is not discussed in this section, call IPG Technical Support.

IPG Machinery Support is available Monday through Friday from 8am until 7pm Eastern Time 813-345-3070 or [machsupp@itape.com](mailto:machsupp@itape.com).

The following is a short set of brief questions and answers for some mild troubleshooting in pressure sensitive case sealers. More in-depth troubleshooting can be found in the following pages.

### **Q: Why does my front tape leg fold down in the tape head?**

In most circumstances the tape leg can fall over when strong air circulation has been turned on in the vicinity, normally this can happen when the heating or air conditioning is turned on. Other options can include the tape not being threaded through the tape shoe or the spring tab in the tape shoe is broken.

### **Q: Are the top and bottom tape heads interchangeable?**

All IPG tape heads can be used in a top or bottom configuration. The only recommended change is to install the correct spring in the tape head. A lighter spring is recommended for the top head and a heavier spring is recommended for the bottom tape head.

### **Q: The machine shipped with 2" tape heads, can I change them to 3"?**

All currently manufactured IPG case sealers can accept either 2" or 3" tape heads. Many machine models will need to have the top and bottom gap fill plates removed to accept a 3" tape head. Some old models of machines can only accept a 2" tape head. If you have an older machine please contact IPG Machinery Support for confirmation.

### **Q: What is the best way to clean the tape heads?**

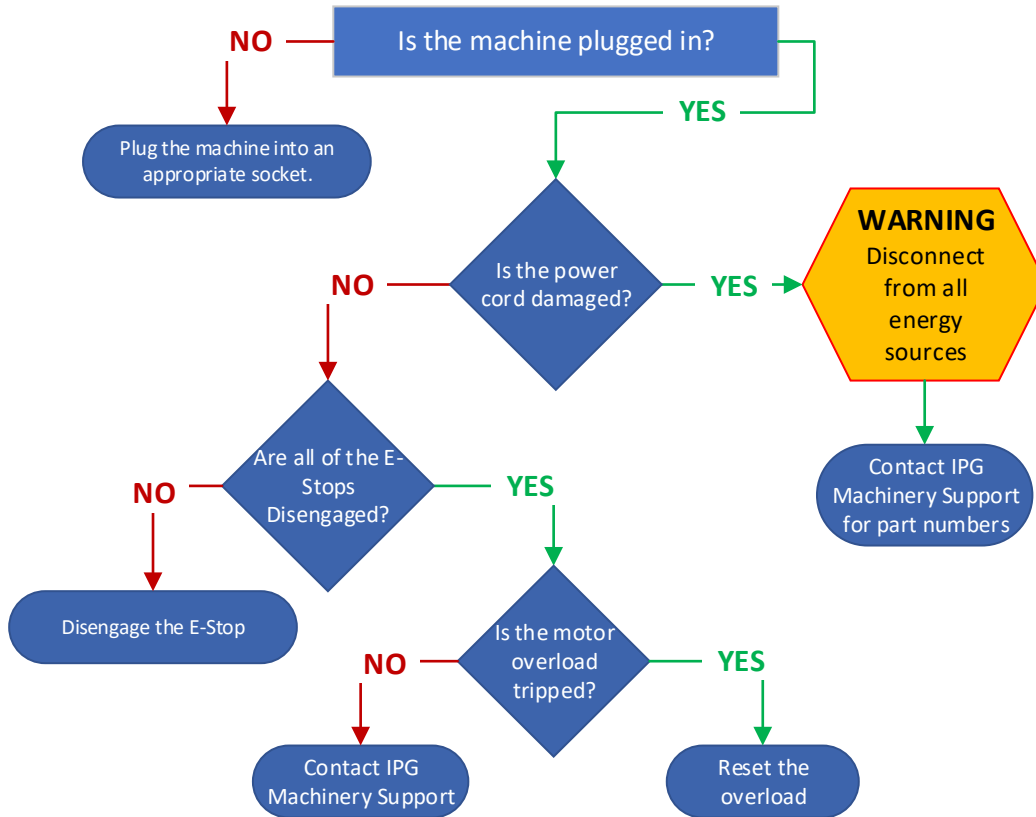
It is recommended to clean the tape path with a mild detergent and water solution. Do not use any harsh industrial cleaners as they can deteriorate parts quickly. Do not use excessive amounts of water and dry the tape head soon after washing.

### **Q: Can we reverse the side the tape is loaded on?**

Standard IPG tape heads cannot be modified in this way, however, both ET 2Plus and ETX tape heads are available in mirror versions. These are available in both 2" and 3" tape heads.

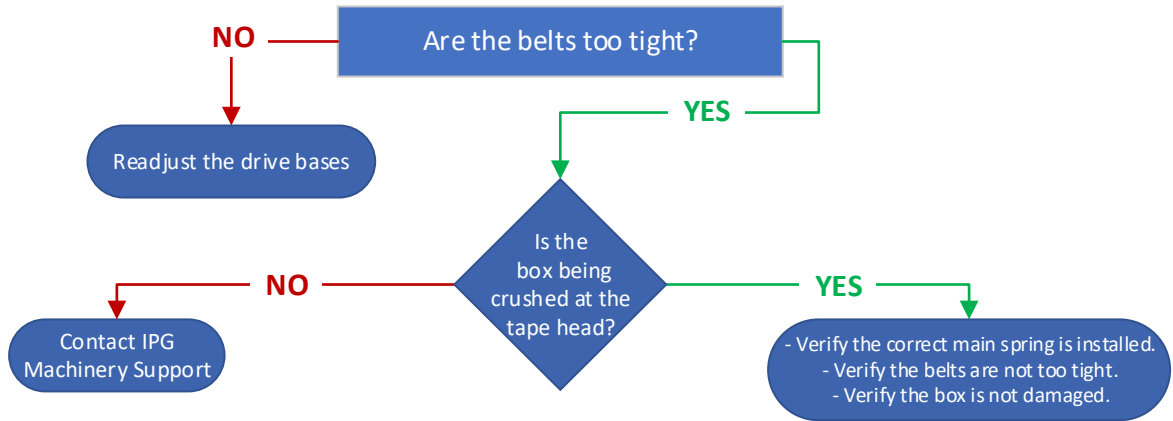
# TROUBLESHOOTING

## The Machine is Turned on and Nothing Happens

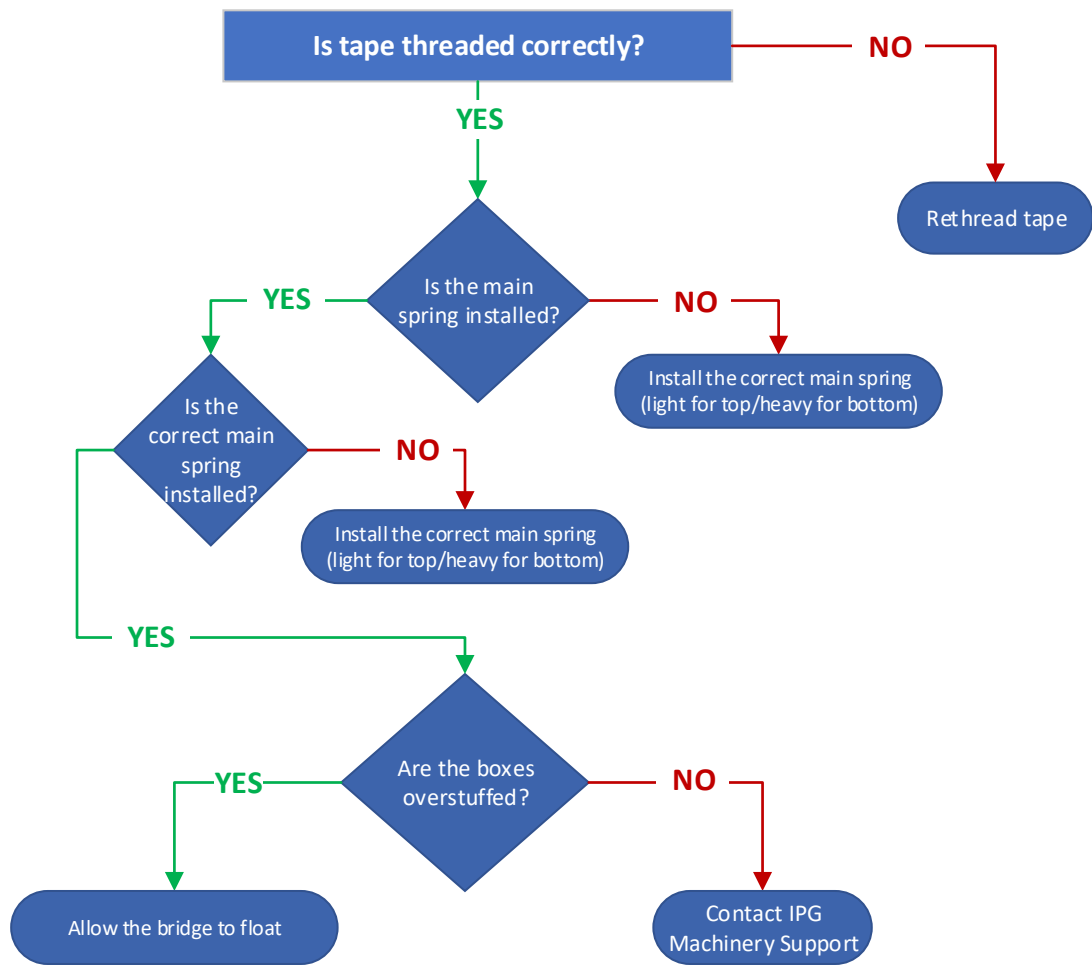


IPG Machinery Support  
877-447-4832 Option 4

## Case is Getting Crushed



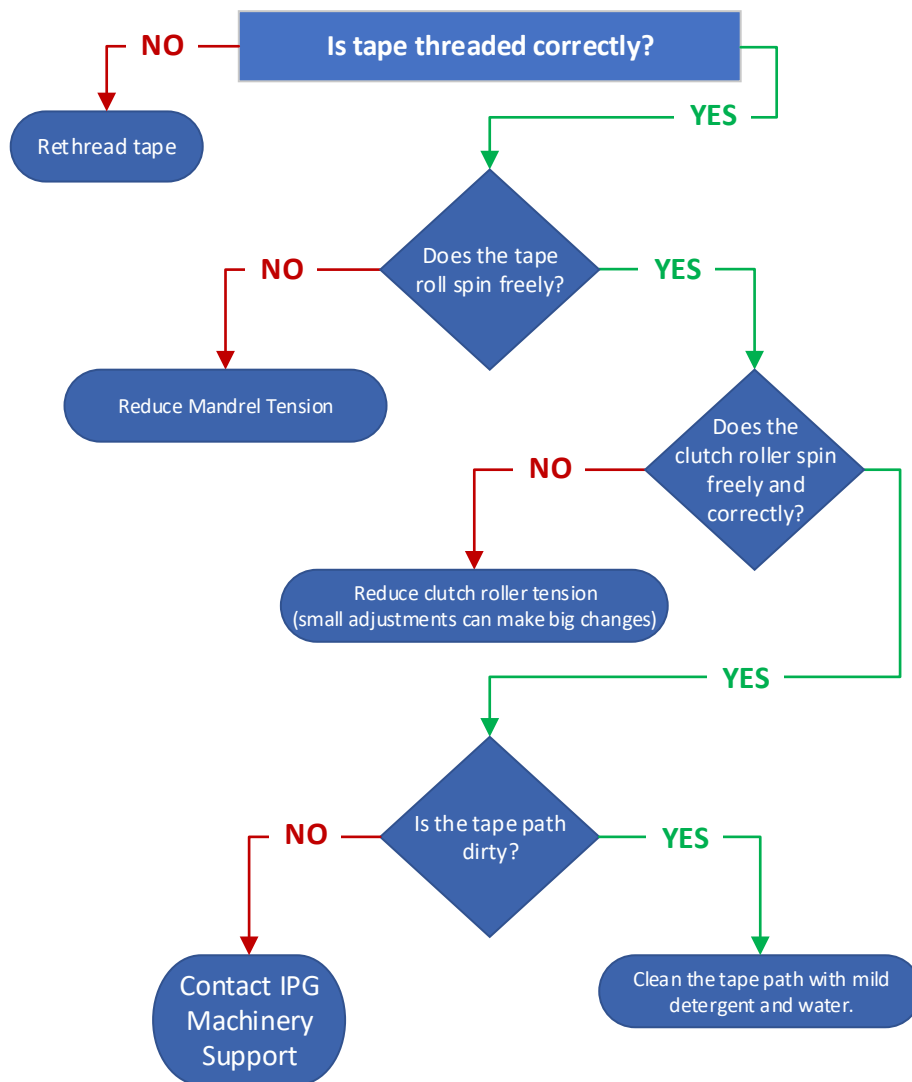
## Poor Tape Wipedown



IPG Machinery Support  
877-447-4832 Option 4

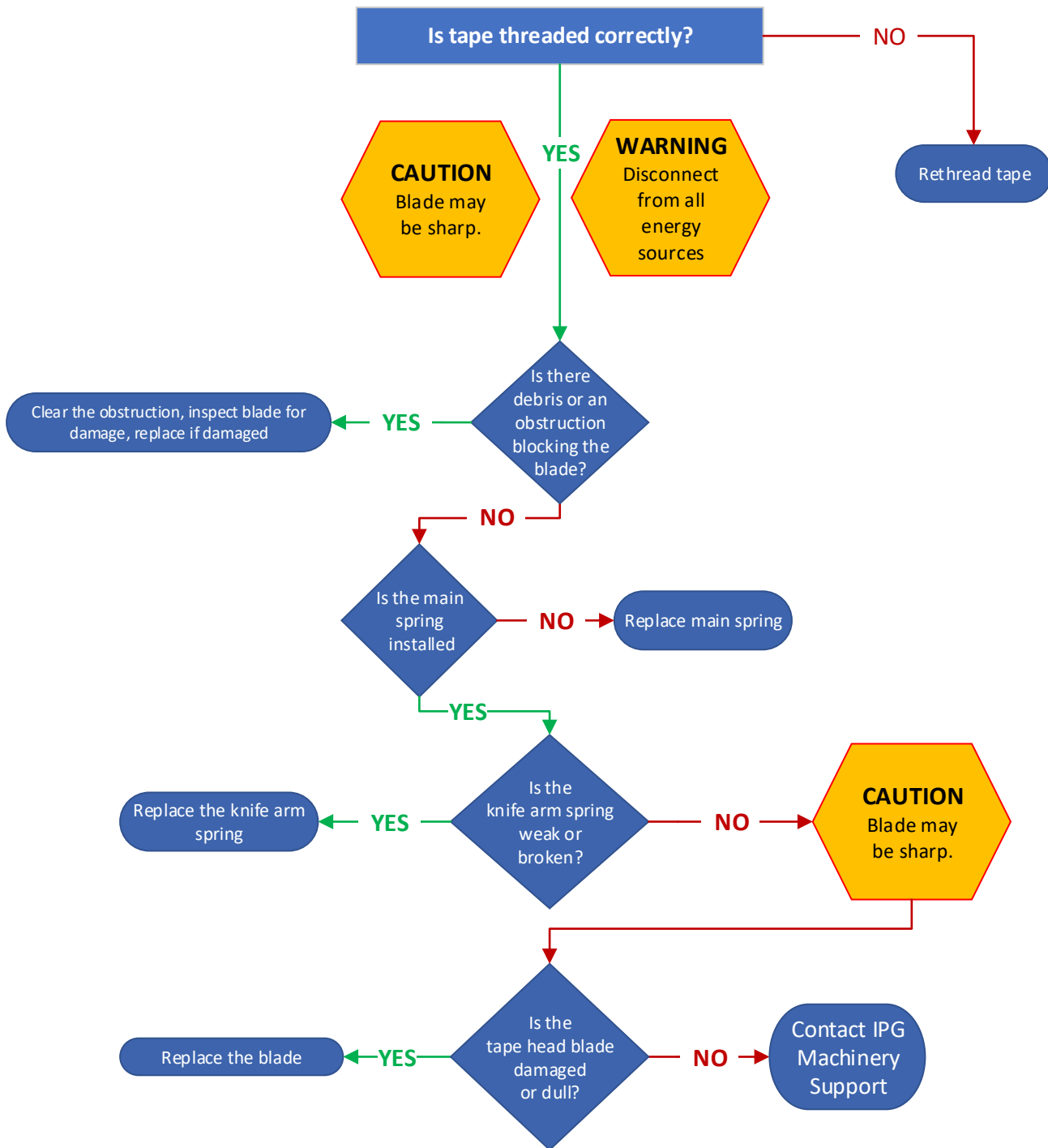


## Rear Tape Leg is Tabbing



IPG Machinery Support  
877-447-4832 Option 4

## Tape Does Not Cut



IPG Machinery Support  
877-447-4832 Option 4

# MAINTENANCE

The **USA 2024-BFF** Case Sealer has been designed and manufactured with the finest components to provide long, trouble-free performance. General preventive maintenance will improve performance and prolong the life of the case sealer. Review the illustrations and chart below for information regarding machine maintenance.



**WARNING: TURN OFF ELECTRICAL POWER AND LOCK OUT THE ELECTRICAL SUPPLY BEFORE CLEANING OR MAINTENANCE. IF POWER CORDS ARE NOT DISCONNECTED, SEVERE INJURY TO PERSONNEL COULD RESULT.**

## Lubrication:

Spray column shafts, centering guide shafts, and compression guide shafts once a month with a silicone based dry film lubricant. This will not attract dust or lint from the surroundings.

Apply chain lube on the drive and centering guide chain once a month.

No other lubrication is necessary to operate the machine.

## Cleaning:

Cartons produce a sizable amount of dust and paper chips when processed or handled. If this dust is allowed to build up in the machine, it may cause component wear and overheating of motors. Remove the accumulated dust with a shop vacuum. Avoid using compressed air to remove the dust as this may cause the dust to penetrate into parts.

| Item                      | Action Required   | Material        | Frequency |         |           |
|---------------------------|---|-----------------|-----------|---------|-----------|
|                           |   |                 | Weekly    | Monthly | Quarterly |
| Carton Dust In/On Machine | Vacuum off machine externally and internally, pay attention to drive base centering chain | Vacuum          | X         |         |           |
| Hardware                  | Re-tighten any loose hardware, replace any missing hardware                               |                 |           | X       |           |
| Column Shafts             | Lubricate   | Dry PTFE        |           | X       |           |
| Cross Shafts              | Lubricate   | Dry PTFE        |           | X       |           |
| Centering Chain           | Lubricate   | Chain Lubricant |           | X       |           |
| Tape Path                 | Clean to remove adhesive  | Water           | X         |         |           |

## Recommended Spare Parts:

It is recommended to keep a small supply of spare parts on hand in order to reduce any potential down time for maintenance. Different applications of machinery may require some amendments to this list, please consult IPG Machinery Support for any additional recommended material.

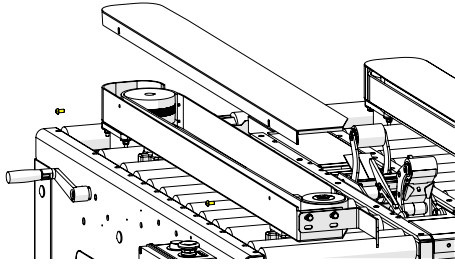
| Description           | Item Number          | QTY |
|-----------------------|----------------------|-----|
| Flanged Screw L.H.    | UPM0698              | 1   |
| Flanged Screw R.H.    | UPM0699              | 1   |
| Emergency Stop Button | UPM4516              | 1   |
| Driving Belts         | UPM0663              | 2   |
| Drive Motor           | UPM7116CD            | 1   |
| Tape head spare kit   | See tape head manual | 2   |

Please consult the tape head manual for the model of tape head that is currently installed in the machine for its preventative maintenance schedule as well as any recommended spare parts.

# MAINTENANCE

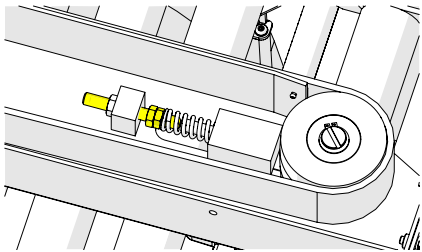
## Drive Belt Replacement

1. Using a 4mm Allen key, remove two screws and remove drive base cover.



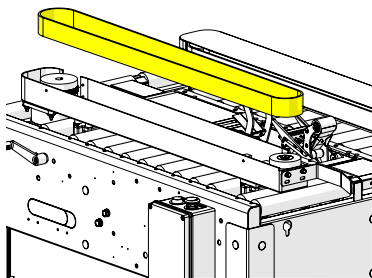
**Figure 54: Drive Base Cover**

2. Using appropriate Allen key and wrench, loosen belt tensioning bolts.



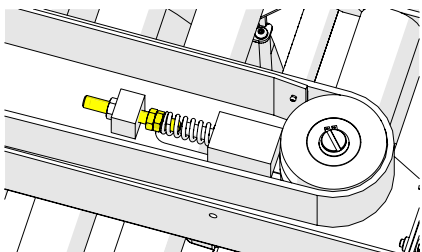
**Figure 55: Loosen Belt Tension Bolt**

3. Remove worn belt and replace with new belt.



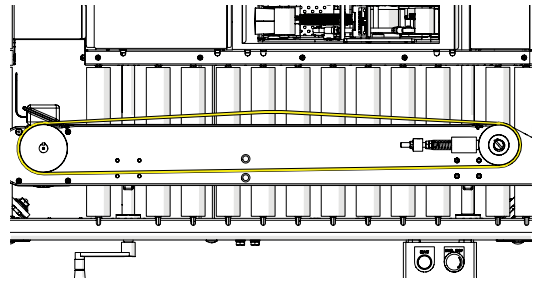
**Figure 56: Replace Belt**

4. Using appropriate Allen key and wrench, tighten belt tensioning bolts. Be sure to equally adjust tensioning bolts for both drive belts.



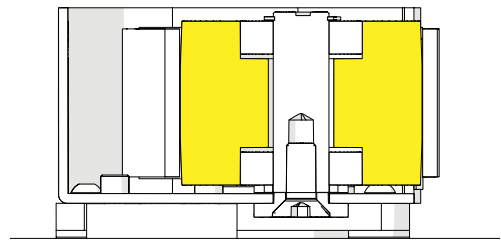
**Figure 57: Tighten Belt Tension Bolt**

5. Proper belt tension is achieved when a 5-pound pull force is used to create a 25mm (1 in.) gap, as shown in the middle of the drive base.



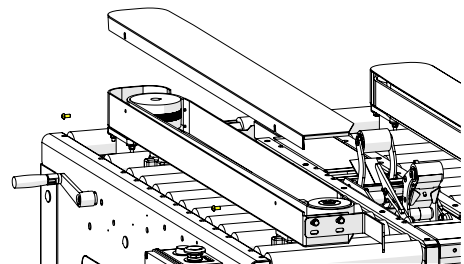
**Figure 58: Proper Belt Tension**

6. Intertape S/B drive idler pulleys are engineered to self-track to center. After tensioning, if the belts do not track on center, contact maintenance or your IPG Distributor.



**Figure 59: Self-Center Pulley**

7. Using a 4mm Allen key, replace drive base cover, as shown.

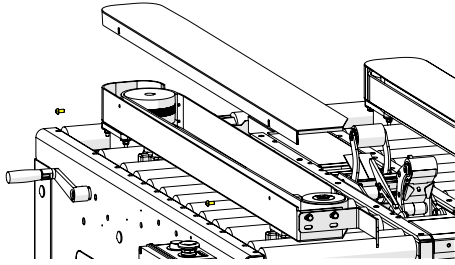


**Figure 60: Drive Base Cover**

# MAINTENANCE

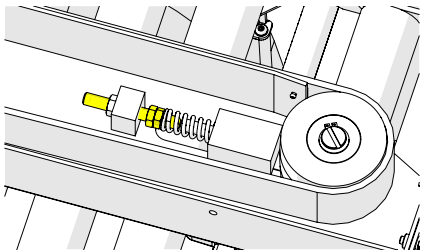
## Drive Belt Adjustment

1. Using a 4mm Allen key, remove two screws and remove drive base cover.



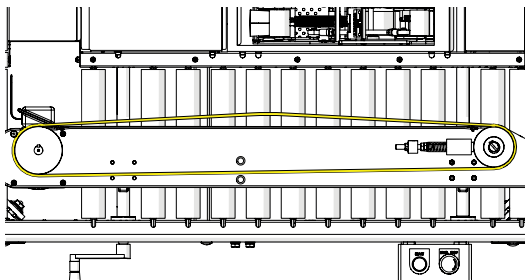
**Figure 61: Drive Base Cover**

2. Using appropriate Allen key and wrench, tighten belt tensioning bolts. Be sure to equally adjust tensioning bolts for both drive belts.



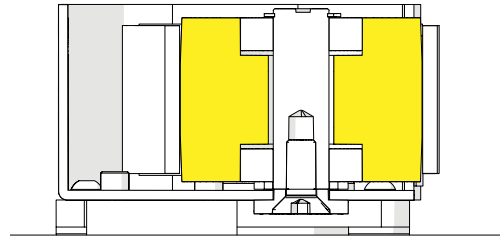
**Figure 62: Tighten Belt Tension Bolt**

3. Proper belt tension is achieved when a 5-pound pull force is used to create a 25mm (1 in.) gap, as shown in the middle of the drive base.



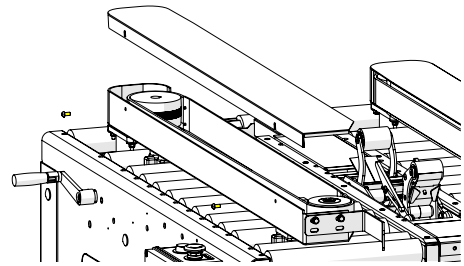
**Figure 63: Proper Belt Tension**

4. Intertape S/B drive idler pulleys are engineered to self-track to center. After tensioning, if the belts do not track on center, contact maintenance or your IPG Distributor.



**Figure 64: Self-Center Pulley**

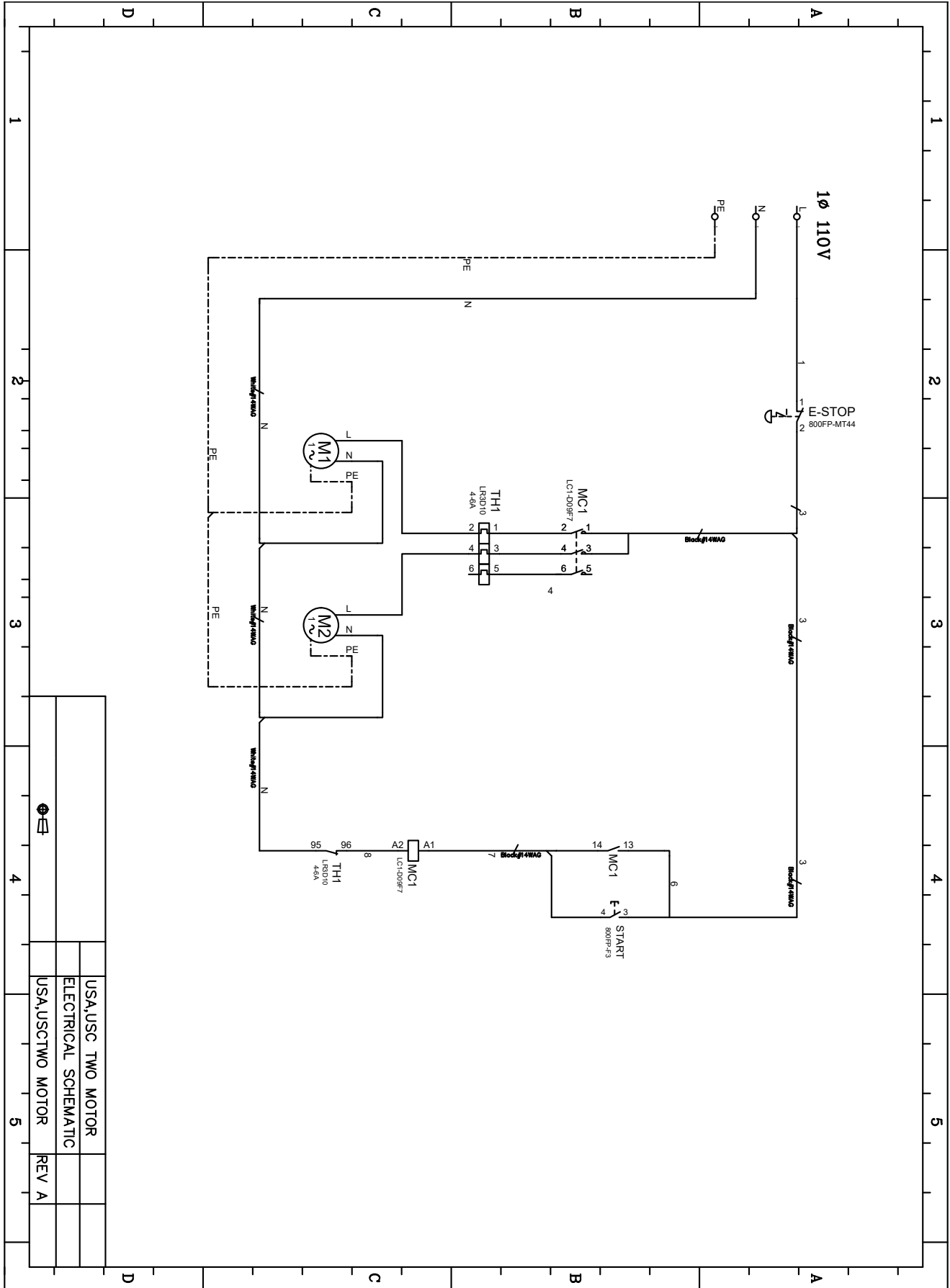
5. Using a 4mm Allen key, replace drive base cover, as shown.



**Figure 65: Drive Base Cover**

# APPENDIX A

## Electrical Drawing



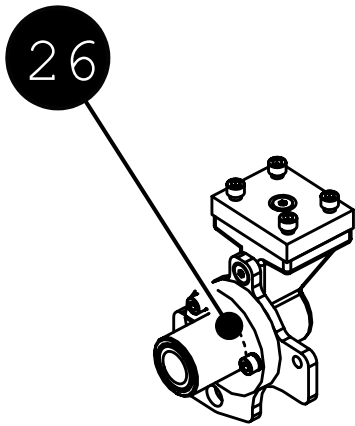
|  |                      |       |
|--|----------------------|-------|
|  | USA,USC TWO MOTOR    |       |
|  | ELECTRICAL SCHEMATIC |       |
|  | USA,USCTWO MOTOR     | REV A |

# APPENDIX B

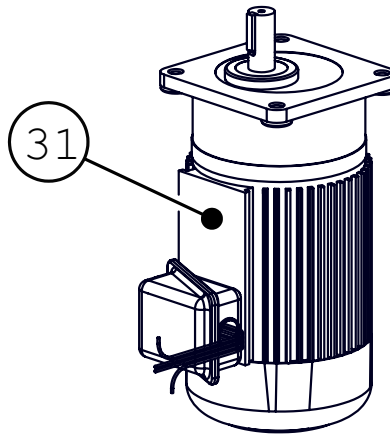
## Parts Listing

|                         |    |
|-------------------------|----|
| USA 2024-BFF            | 60 |
| Ski Assembly            | 61 |
| Left Drive Assembly     | 62 |
| 3 Flap Folder Assembly  | 63 |
| Left Column Assembly    | 64 |
| Locking Handle Assembly | 65 |
| Bridge Assembly         | 66 |
| Bridge Sub Assembly     | 67 |
| Tape Head Box Assembly  | 68 |
| Pivot Assembly          | 69 |
| Right Column Assembly   | 70 |
| Right Drive Assembly    | 71 |
| Rollers                 | 72 |
| Base Assembly           | 73 |
| Leg Assembly            | 74 |
| Centering Assembly      | 75 |
| Machine Frame           | 76 |
| Electrical Assembly     | 77 |
| Compression Guide       | 78 |

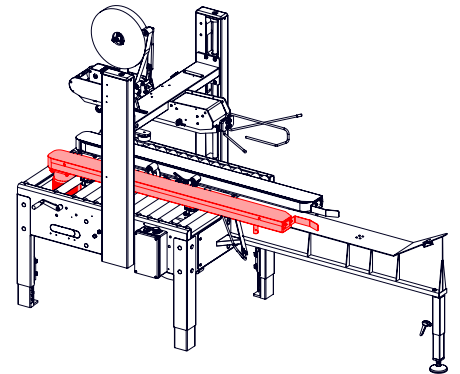
Items with black balloon call outs are assemblies (made of more than one individual part).



Items with white balloon call outs are single parts.



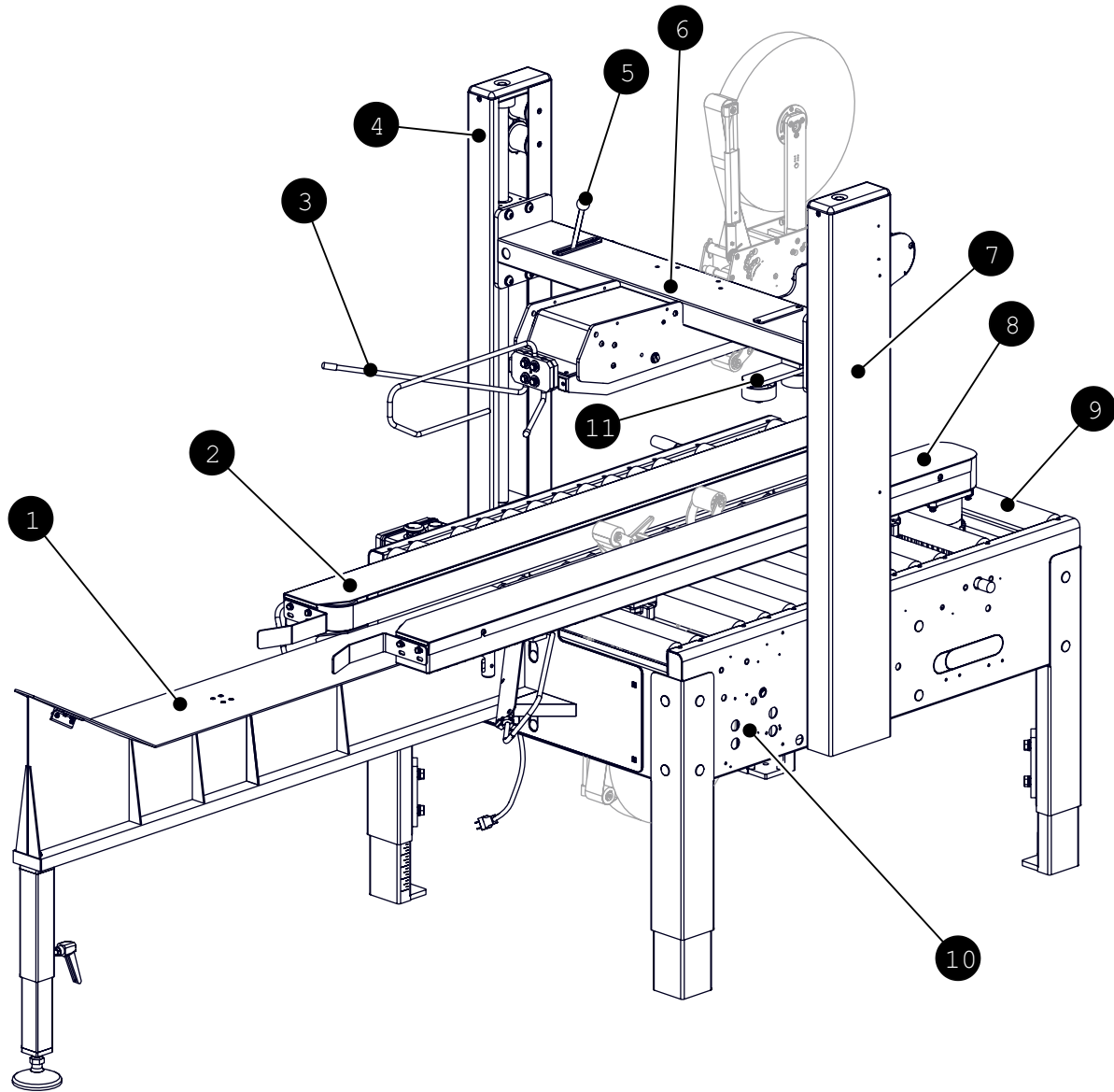
The top right of each page with a parts breakdown will show a red highlighted section of the machine that is being broken out into more detail.



Not all assemblies are sold as assemblies please consult IPG Machine Support for details.

# APPENDIX B

## USA 2024-BFF



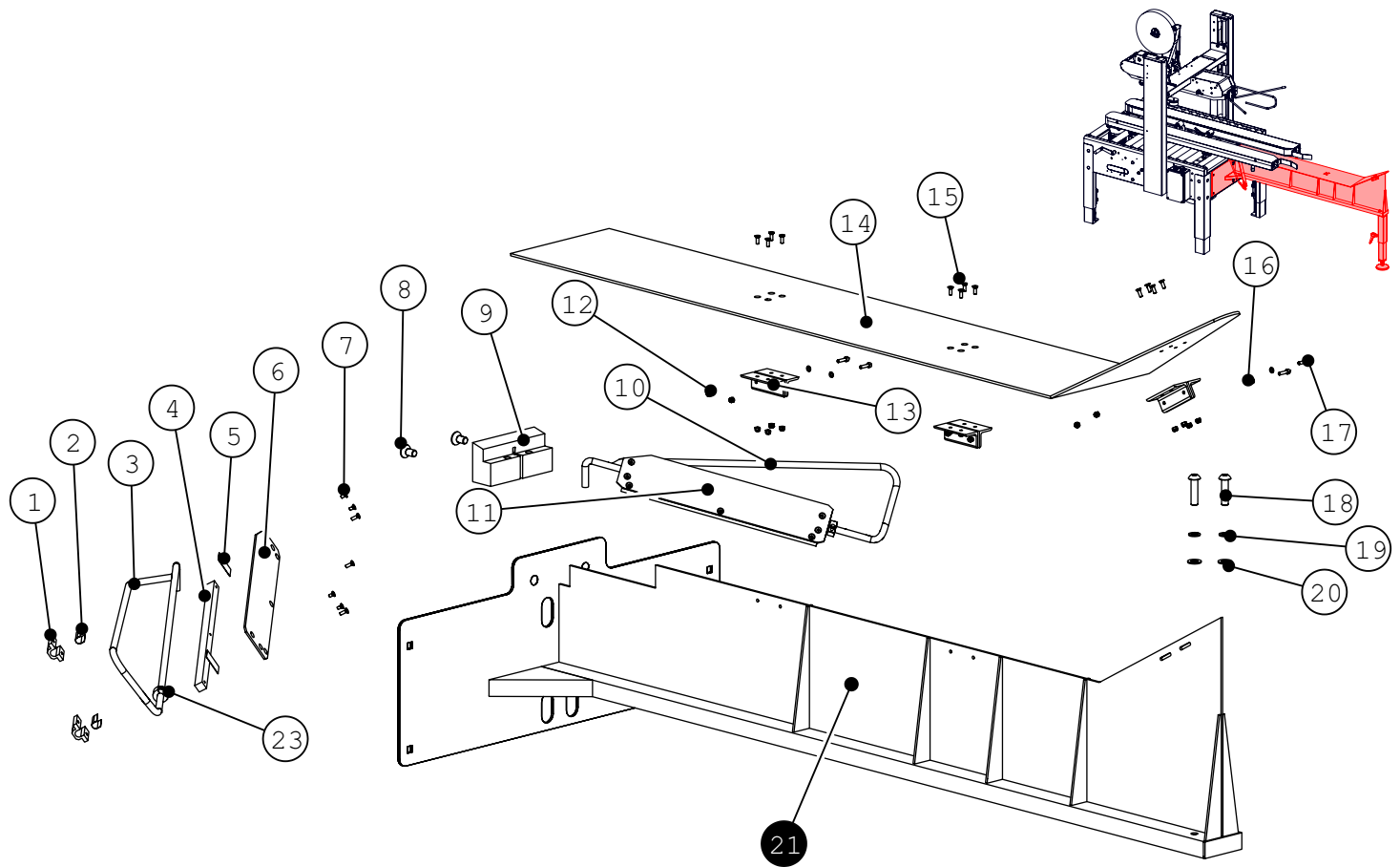
| ITEM | PART NUMBER | DESCRIPTION                   | QTY |
|------|-------------|-------------------------------|-----|
| 1    | USM5063     | TRAIL FOR BFF STANDARD METRIC | 1   |
| 2    | USM5065     | DRIVE BASE 50 mm BFF L.H.     | 1   |
| 3    | USM5066     | 3 FLAP FOLDER                 | 1   |
| 4    | USM0807     | COLUMN 24 LEFT ASS'Y          | 1   |
| 5    | USM0391     | SINGLE LOCK ASS'Y             | 1   |
| 6    | USM6116     | BRIDGE WITH TAPEHEAD BOX      | 1   |

| ITEM | PART NUMBER | DESCRIPTION               | QTY |
|------|-------------|---------------------------|-----|
| 7    | USM0806     | COLUMN 24 RIGHT ASS'Y     | 1   |
| 8    | USM0678     | SET OF ROLLERS            | 1   |
| 9    | USM6115     | BASE ASSEMBLY USA 2024    | 1   |
| 10   | USM5064     | DRIVE BASE 50 mm BFF R.H. | 1   |
| 11   | UAM0260     | COMPRESSION GUIDE         | 2   |

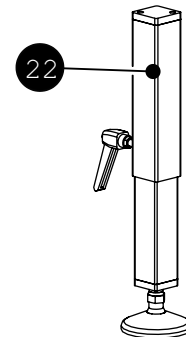


# APPENDIX B

## Ski Assembly

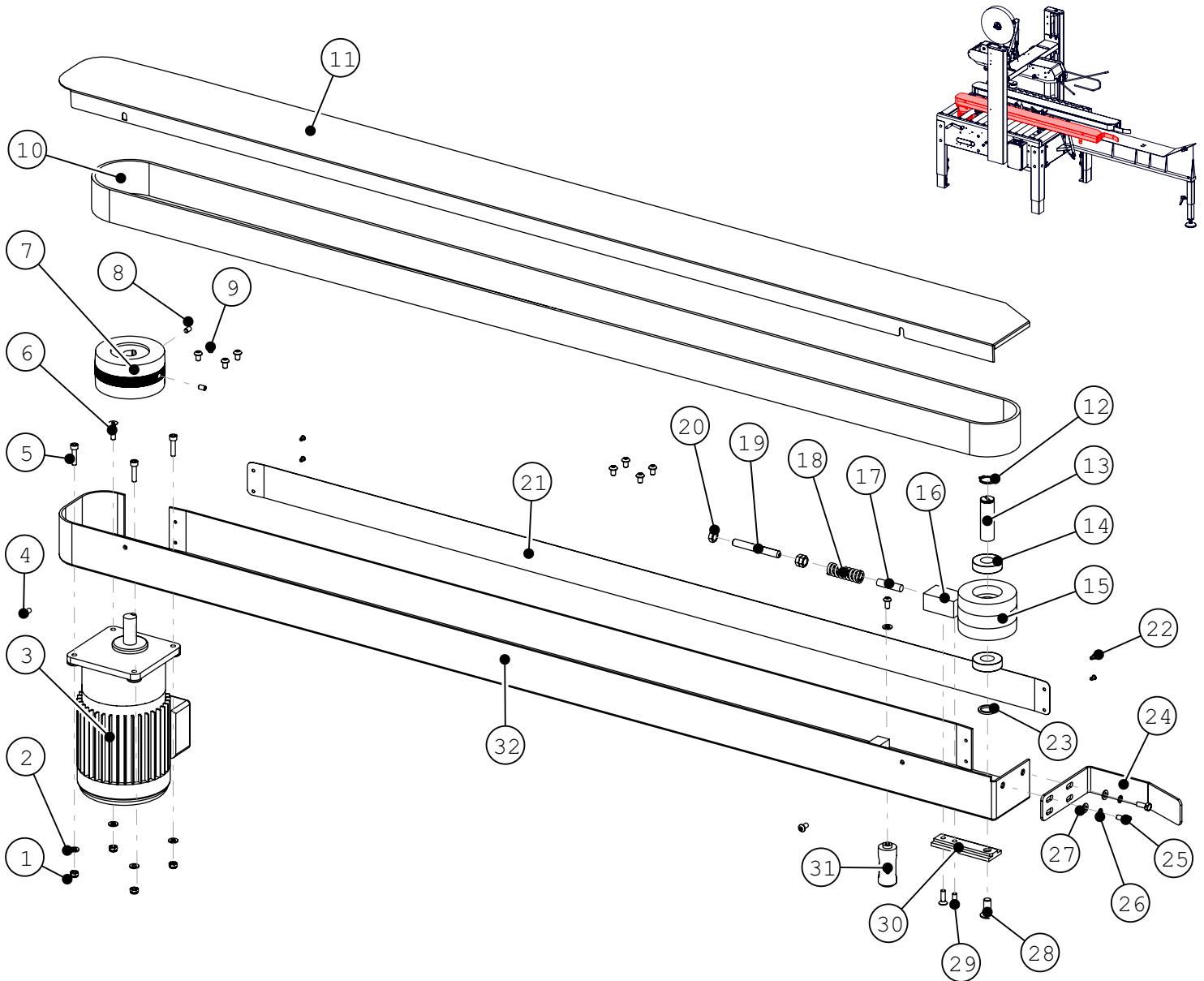


| ITEM | PART NUMBER | DESCRIPTION                       | QTY |
|------|-------------|-----------------------------------|-----|
| 1    | UPM4550     | FOR BOTTOM FLAP DEFLCT            | 4   |
| 2    | UPM1647     | UHMW 0.010 X 13/16" X 1-1/8"      | 2   |
| 3    | UPM2344     | LOWER PLOW ROD FOR BFF LEFT SIDE  | 1   |
| 4    | UPM2513     | BALANCE BAR BOTTOM FLAP DEFLC     | 2   |
| 5    | UPM1647     | UHMW 0.010 X 13/16" X 1-5/16"     | 2   |
| 6    | UPM4553     | BOTTOM FLAP DEFLC PLATE LEFT SIDE | 1   |
| 7    | UF3274      | FHCS M4-0.7 x 8mm                 | 8   |
| 8    | UF6397      | FHCS M10-1.5 x 20mm               | 2   |
| 9    | UPM4551     | BOTTOM PLOW BLOCK                 | 1   |
| 10   | UPM2343     | LOWER PLOW ROD FOR BFF RIGHT SIDE | 1   |
| 11   | UPM4554     | BOTTOM FLAP DEFLECTOR PLATE R.H.  | 1   |
| 12   | UF6376      | NYLON LOCKNUT M4                  | 18  |
| 13   | UPM1890     | SKI ATTCH.BRACKET BFF             | 6   |
| 14   | UPM4552     | BOTTOM FLAP FOLDER SKI            | 1   |
| 15   | UF3714      | FHCS M4-0.7 x 12mm                | 18  |
| 16   | UF3710      | FW M4                             | 6   |
| 17   | UF3682      | SHCS M4-0.7 x 16mm                | 6   |
| 18   | UF6384      | BHCS M10 x 40mm                   | 2   |
| 19   | UF6371      | LW M10                            | 2   |
| 20   | UF3680      | FW M10                            | 2   |
| 21   | UPM2345     | BFF SKI SUPPORT, WELDMENT         | 1   |
| 22   | UAM0337     | SUPPORT LEG BFF METRIC            | 1   |
| 23   | UPM2286     | SHAFT COLLAR DOUBLE SPLIT 3/8"    | 2   |



# APPENDIX B

## Left Drive Assembly

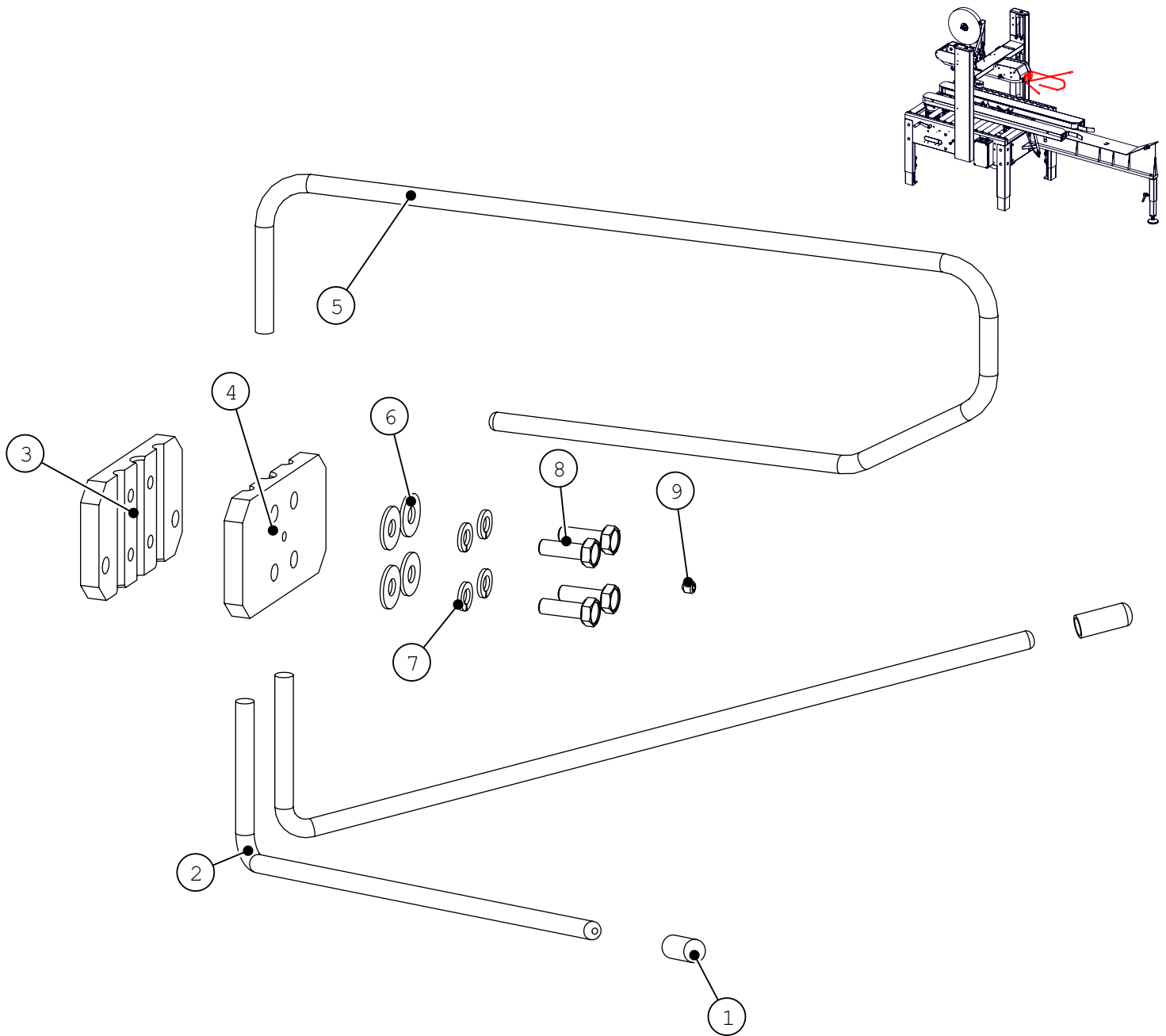


| ITEM | PART NUMBER | DESCRIPTION                | QTY |
|------|-------------|----------------------------|-----|
| 1    | UF5900      | M6-1.0 LOCK-NUT            | 4   |
| 2    | UF1828      | FW M6                      | 4   |
| 3    | UPM7116CD   | MOTOR 1/3 21.4 : 1         | 1   |
| 4    | UF1216      | BHCS M6-1 x 12mm           | 3   |
| 5    | UF0840      | SHCS M6-1 X 25mm           | 3   |
| 6    | UF1194      | FHCS M6 - 1 x 25 mm        | 1   |
| 7    | UPM0129EV   | DRIVE PULLEY 50mm          | 1   |
| 8    | UF3683      | SSS M6 x 10mm              | 2   |
| 9    | UF1230      | BHCS 1/4-20 X 3/8          | 8   |
| 10   | UPM4560     | BELT ENDLESS 50 x 3073 BFF | 1   |
| 11   | UPM4549     | DRIVE BASE COVER BFF L.H.  | 1   |
| 12   | UF2220      | EXT RET'G RING 3/4" SHAFT  | 1   |
| 13   | UPM1233EV   | IDLER PULLEY SHAFT 50mm    | 1   |
| 14   | UPM0324     | BEARING, PULLEY            | 2   |
| 15   | UPM0259     | IDLER PULLEY               | 1   |
| 16   | UPM0101EV   | TENSIONNER SPRING HOLDER   | 1   |
| 17   | UPM1237     | SS SPRING LOCATOR PIN      | 1   |

| ITEM | PART NUMBER | DESCRIPTION                  | QTY |
|------|-------------|------------------------------|-----|
| 18   | UPM0038     | DIE SPRING                   | 1   |
| 19   | UF1400      | SSS HK 3/8-16 X 3'           | 1   |
| 20   | UF1610      | HNJ 3/8-16                   | 3   |
| 21   | UPM0029     | UHMW, 2" W X .03" THK        | 1   |
| 22   | UF2080      | POP RIVET S-44               | 4   |
| 23   | UPM0109     | IDLER PULLEY SPACER          | 1   |
| 24   | UPM0647     | CARTON RETAINER              | 1   |
| 25   | UF0454      | HHCS M6-1.0 X 16mm           | 2   |
| 26   | UF6363      | LW M6                        | 2   |
| 27   | UF1828      | FW M6                        | 2   |
| 28   | UF1191      | FHCS M10-1.5 x 25mm          | 1   |
| 29   | UF5402      | FHCS M6-1 x 20mm             | 2   |
| 30   | UPM1879EV   | TENSIONNER SLIDE             | 1   |
| 31   | UPM7743     | BOTTOM PLOW ROD PIVOT BFF    | 1   |
| 32   | UPM4546     | DRIVE SECTION 50 mm BFF L.H. | 1   |

# APPENDIX B

## 3 Flap Folder Assembly

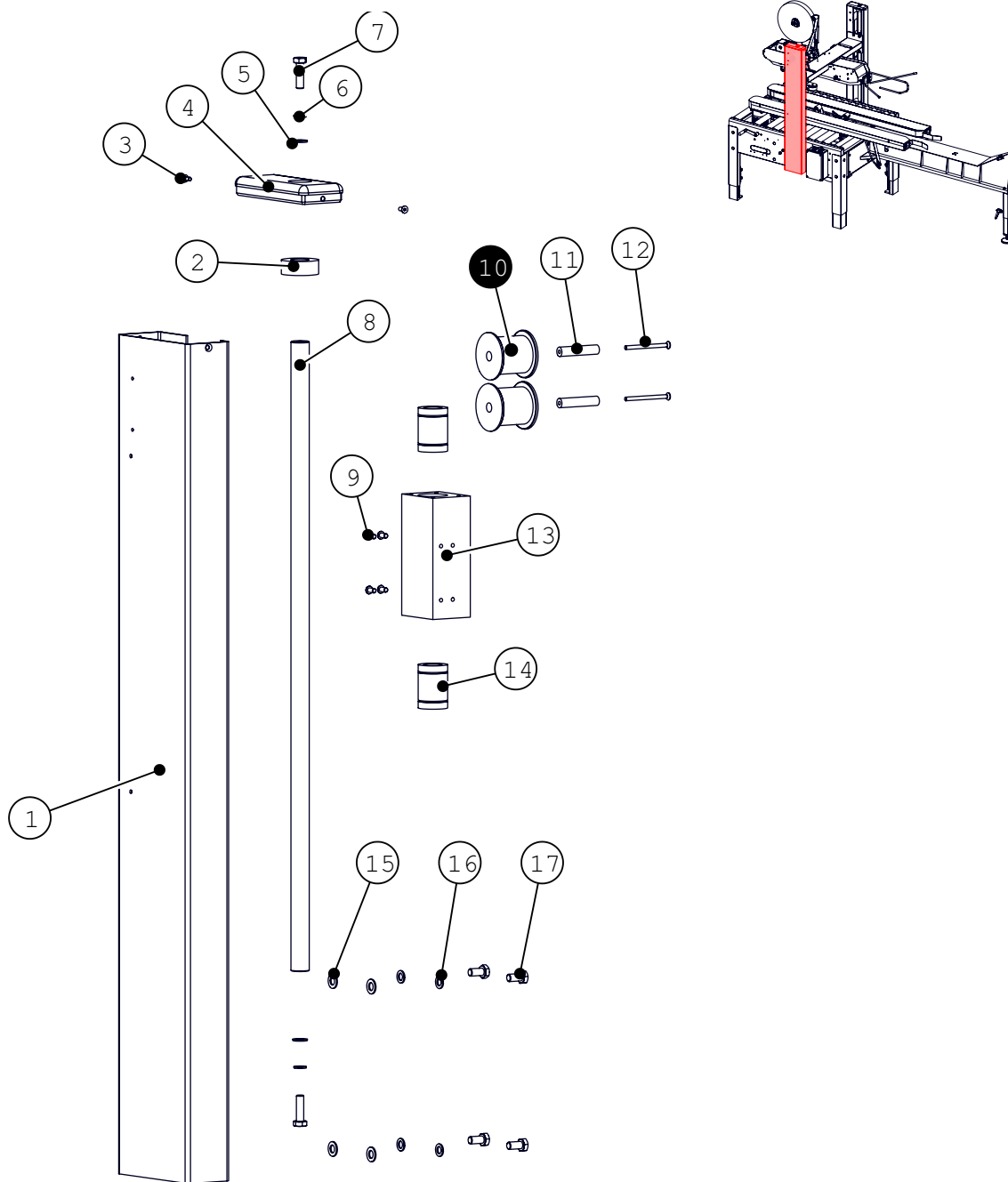


| ITEM | PART NUMBER | DESCRIPTION             | QTY |
|------|-------------|-------------------------|-----|
| 1    | UPM3413     | 3/8 VINYL CAP           | 2   |
| 2    | UPM2280     | PLOW ROD BFF            | 2   |
| 3    | UPM4558     | PLOW BLOCK BACK         | 1   |
| 4    | UPM4555     | PLOW BLOCK FRON         | 1   |
| 5    | UPM2281     | FRONT FLAP PLOW ROD BFF | 1   |

| ITEM | PART NUMBER | DESCRIPTION         | QTY |
|------|-------------|---------------------|-----|
| 6    | UF1821      | FW M8               | 4   |
| 7    | UF0867      | LW M8               | 4   |
| 8    | UF6310      | HHCS M8-1.25 x 25mm | 4   |
| 9    | UF1411      | SSS M6 X 6mm        | 1   |

# APPENDIX B

## Left Column Assembly

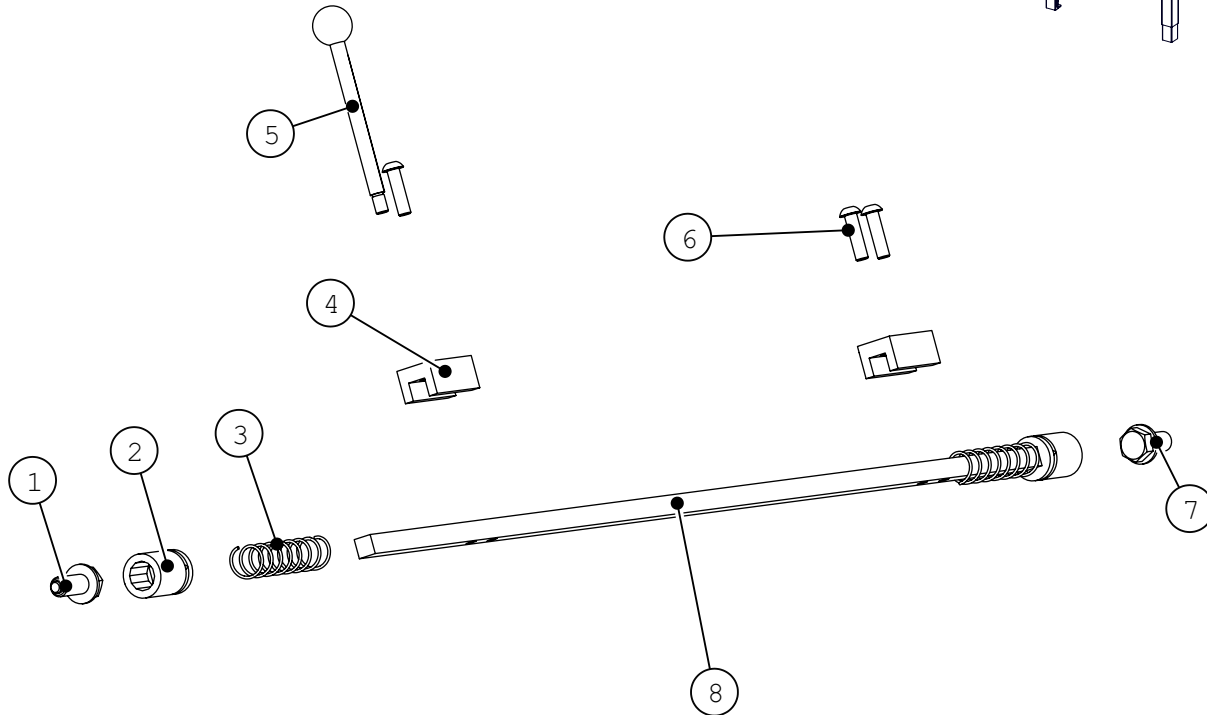
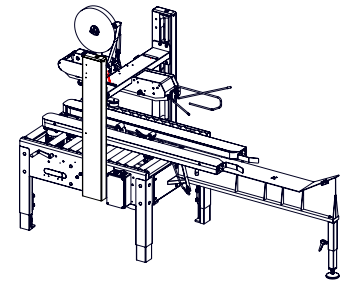


| ITEM | PART NUMBER | DESCRIPTION          | QTY |
|------|-------------|----------------------|-----|
| 1    | UPM9712     | COLUMN 24 LEFT       | 1   |
| 2    | UPM2251     | SAFETY BUMPER        | 1   |
| 3    | UF5400      | FHCS M5-0.8 x 12mm   | 2   |
| 4    | UPM0741EV   | COLUMN CAP LEFT SIDE | 1   |
| 5    | UF3680      | FW M10               | 2   |
| 6    | UF6371      | LW M10               | 2   |
| 7    | UF0301      | HHCS M10-1.5 x 35mm  | 2   |
| 8    | UPM0738EV   | COLUMN SHAFT         | 1   |
| 9    | UF3278      | SS BHCS M6-1 x 12mm  | 4   |

| ITEM | PART NUMBER | DESCRIPTION          | QTY |
|------|-------------|----------------------|-----|
| 10   | USM0893     | SPRING AND SPOOL     | 2   |
| 11   | UPM0743     | SPRING MANDREL SHAFT | 2   |
| 12   | UF1157      | FHCS M5-0.8 x 70mm   | 2   |
| 13   | UPM9651     | COLUMN BLOCK 40 BORE | 1   |
| 14   | UPM4986     | LINEAR BEARING 25mm  | 2   |
| 15   | UF3680      | FW M10               | 4   |
| 16   | UF6371      | LW M10               | 4   |
| 17   | UF0457      | HHCS M10-1.25 x 20mm | 4   |

# APPENDIX B

## Locking Handle Assembly

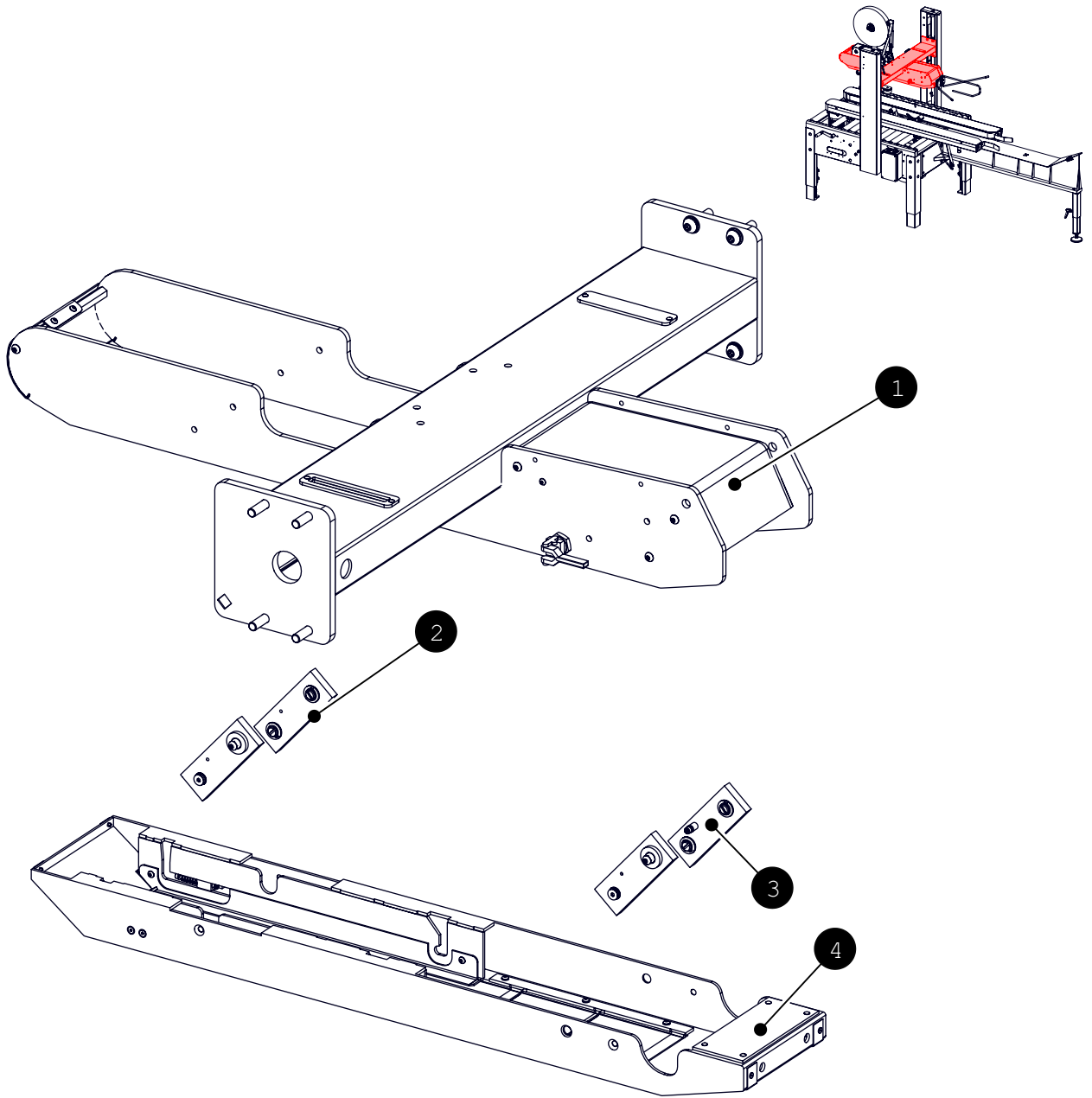


| ITEM | PART NUMBER | DESCRIPTION               | QTY |
|------|-------------|---------------------------|-----|
| 1    | UPM0699     | FLANGED SCREW 1/2-13 R.H. | 1   |
| 2    | UPM0703     | SHORT BOX 3/4", 1/2" DR   | 2   |
| 3    | UPM2184     | COMPRESSION SPRING        | 2   |
| 4    | UPM0700     | SINGLE LOCKING BLOCK      | 2   |
| 5    | UPM0688     | SINGLE LOCKING HANDLE     | 1   |

| ITEM | PART NUMBER | DESCRIPTION               | QTY |
|------|-------------|---------------------------|-----|
| 6    | UF3329      | BHCS M8-1.25 x 20mm       | 3   |
| 7    | UPM0698     | FLANGED SCREW 1/2-13 L.H. | 1   |
| 8    | UPM2187     | SQUARE BAR 0.50"          | 1   |

# APPENDIX B

## Bridge Assembly

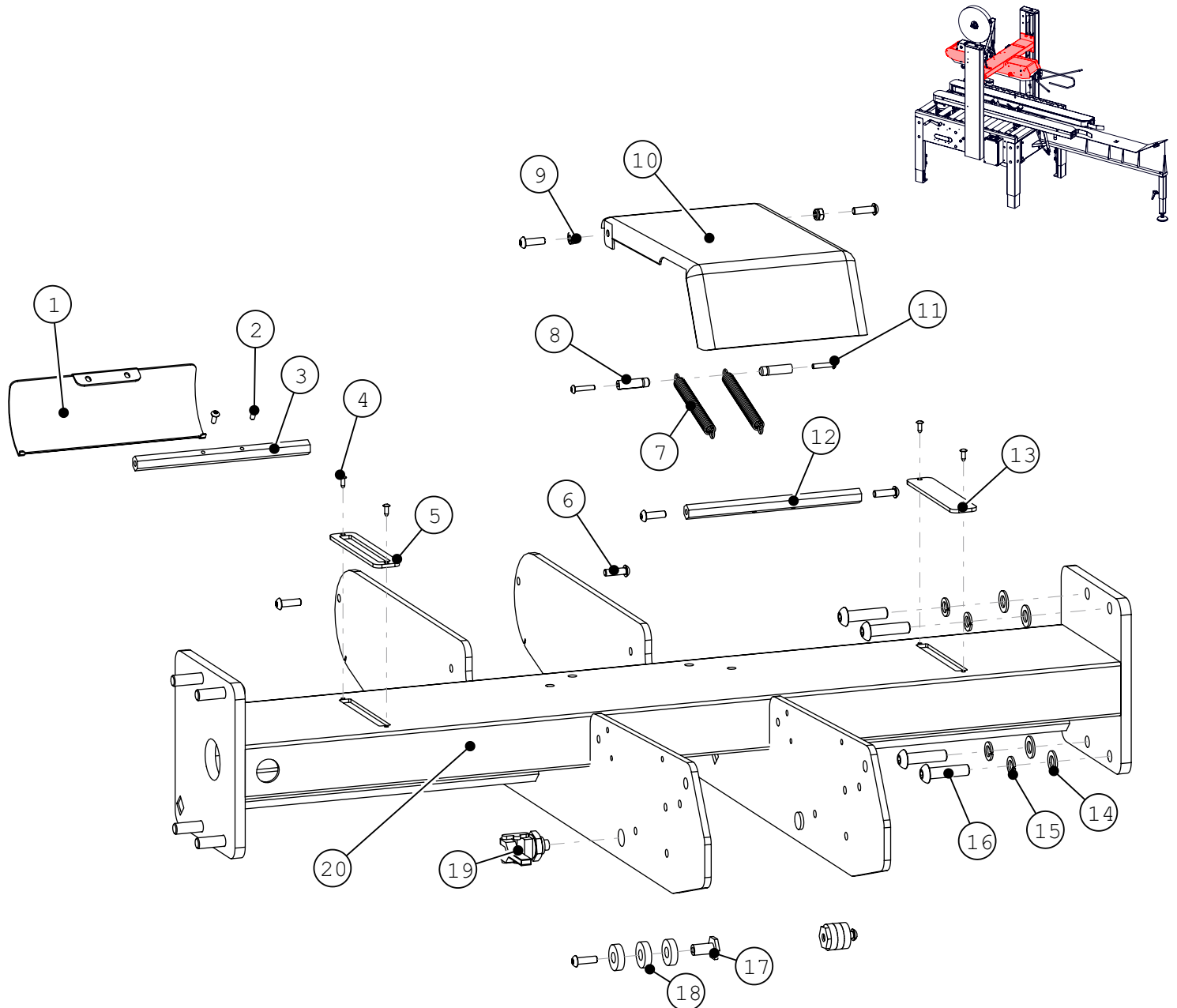


| ITEM | PART NUMBER | DESCRIPTION         | QTY |
|------|-------------|---------------------|-----|
| 1    | UAM0326     | BRIDGE SUB-ASSEMBLY | 1   |
| 2    | UAM0296     | PIVOT ASSEMBLY      | 2   |
| 3    | UAM0297     | PIVOT ASSEMBLY      | 2   |

| ITEM | PART NUMBER | DESCRIPTION  | QTY |
|------|-------------|--------------|-----|
| 4    | UAM0325     | TAPEHEAD BOX | 1   |

# APPENDIX B

## Bridge Sub Assembly

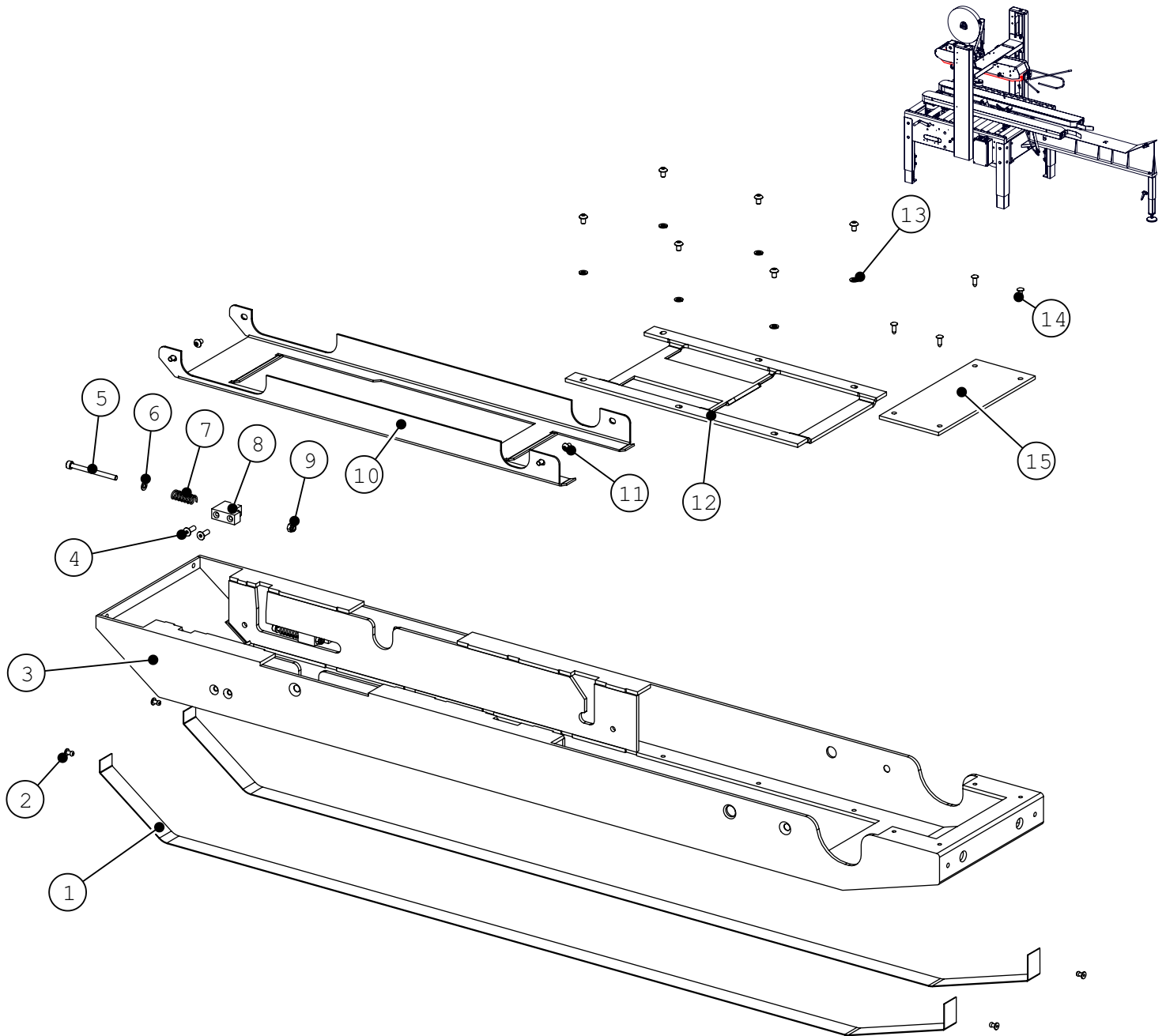


| ITEM | PART NUMBER | DESCRIPTION                | QTY |
|------|-------------|----------------------------|-----|
| 1    | UPM3292     | REAR COVER GUARDING        | 1   |
| 2    | UF6365      | BHCS M4 x 0.7 x 10mm       | 2   |
| 3    | UPM3360EV   | HEX SPACER BAR             | 1   |
| 4    | UPM2192     | BLACK PLUG                 | 4   |
| 5    | UPM1011     | BRIDGE PLATE COVER SLOTTED | 1   |
| 6    | UF1241EV    | BHCS M6-1 x 20mm           | 8   |
| 7    | UPM1042     | EXTENSION SPRING           | 2   |
| 8    | UPM0967EV   | SPRING RETAINER LONG       | 2   |
| 9    | UF5900      | M6-1.0 LOCK NUT            | 2   |
| 10   | UPM2284EV   | FRONT COVER                | 1   |
| 11   | UF4050EV    | BHCS M4 - 0.7 x 20mm       | 2   |

| ITEM | PART NUMBER | DESCRIPTION             | QTY |
|------|-------------|-------------------------|-----|
| 12   | UPM3360EV   | HEX SPACER BAR          | 1   |
| 13   | UPM1008     | BRIDGE PLATE COVER      | 1   |
| 14   | UF3680      | FW M10                  | 8   |
| 15   | UF6371      | LW M10                  | 8   |
| 16   | UF6384      | BHCS M10 x 40mm         | 4   |
| 17   | UPM2168EV   | STOP RETAINER TH BOX    | 2   |
| 18   | UPH133      | STOP, KNIFE ARM         | 6   |
| 19   | UPM2196     | TOGGLE CLAMP            | 1   |
| 20   | UPM2521EV   | BRIDGE WELDMENT USA2024 | 1   |

# APPENDIX B

## Tape Head Box Assembly



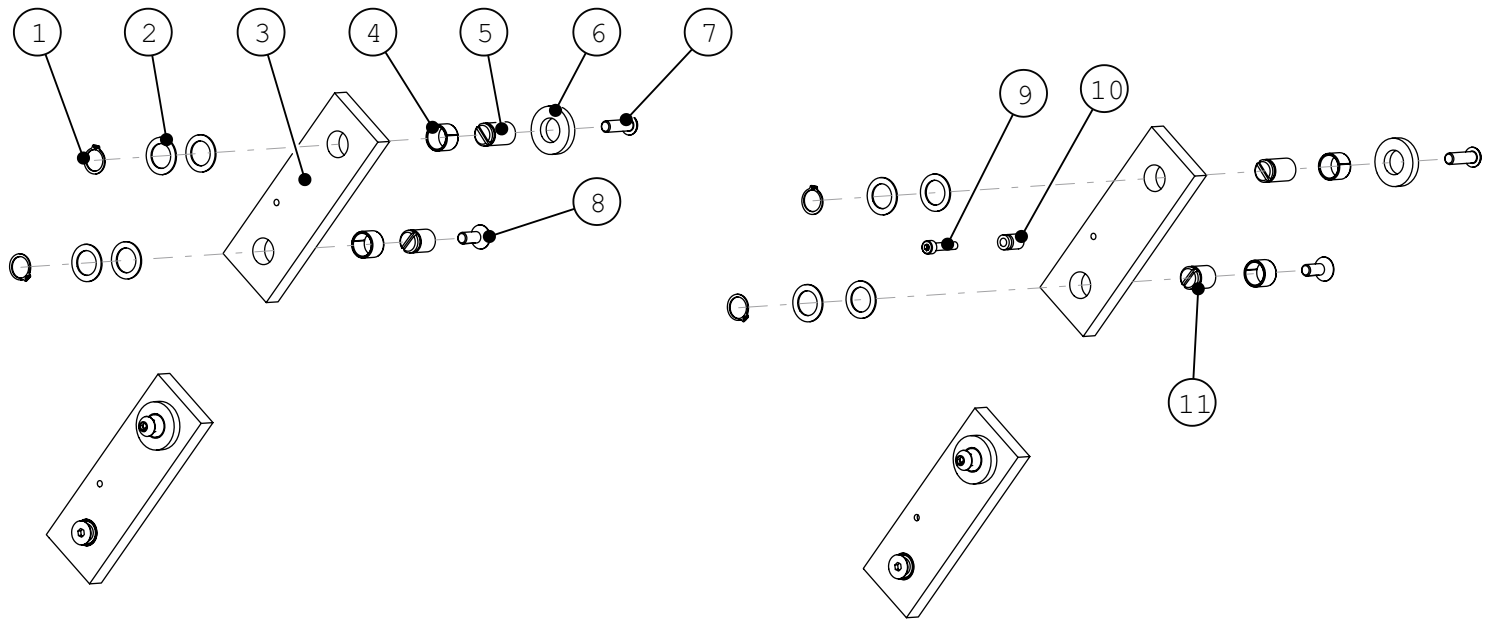
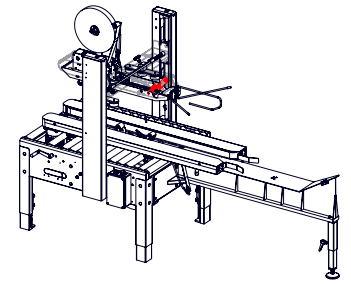
| ITEM | PART NUMBER | DESCRIPTION                  | QTY |
|------|-------------|------------------------------|-----|
| 1    | UPM0029     | STRIP, UHMW, 2" W X .03"     | 2   |
| 2    | UF2080      | POP RIVET S-44               | 4   |
| 3    | UPM2520EV   | TH BOX WELDMENT USA SB       | 1   |
| 4    | UF3714      | FHCS M4-0.7 x 12mm           | 4   |
| 5    | UF6375      | SHCS M4-0.7 x 50mm           | 2   |
| 6    | UF3710      | FW M4                        | 2   |
| 7    | UPM1068     | COMP.SPRING SWIVEL T.H. ASSY | 2   |
| 8    | UPM7541     | SPRING SUPPORT               | 2   |

| ITEM | PART NUMBER | DESCRIPTION          | QTY |
|------|-------------|----------------------|-----|
| 9    | UF6376      | M4 LOCK NUT          | 2   |
| 10   | UPM3246     | TOP GAP FILLER TH    | 1   |
| 11   | UF6374      | BHCS M4-0.7 x 6mm    | 10  |
| 12   | UPM9655     | TOP GAP FILLER       | 1   |
| 13   | UF3681      | LW M4                | 6   |
| 14   | UPM2192     | BLACK PLUG           | 4   |
| 15   | UPM3679     | FRONT PLATE GUARDING | 1   |



# APPENDIX B

## Pivot Assembly

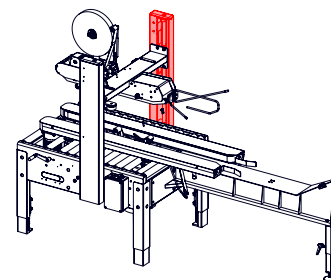
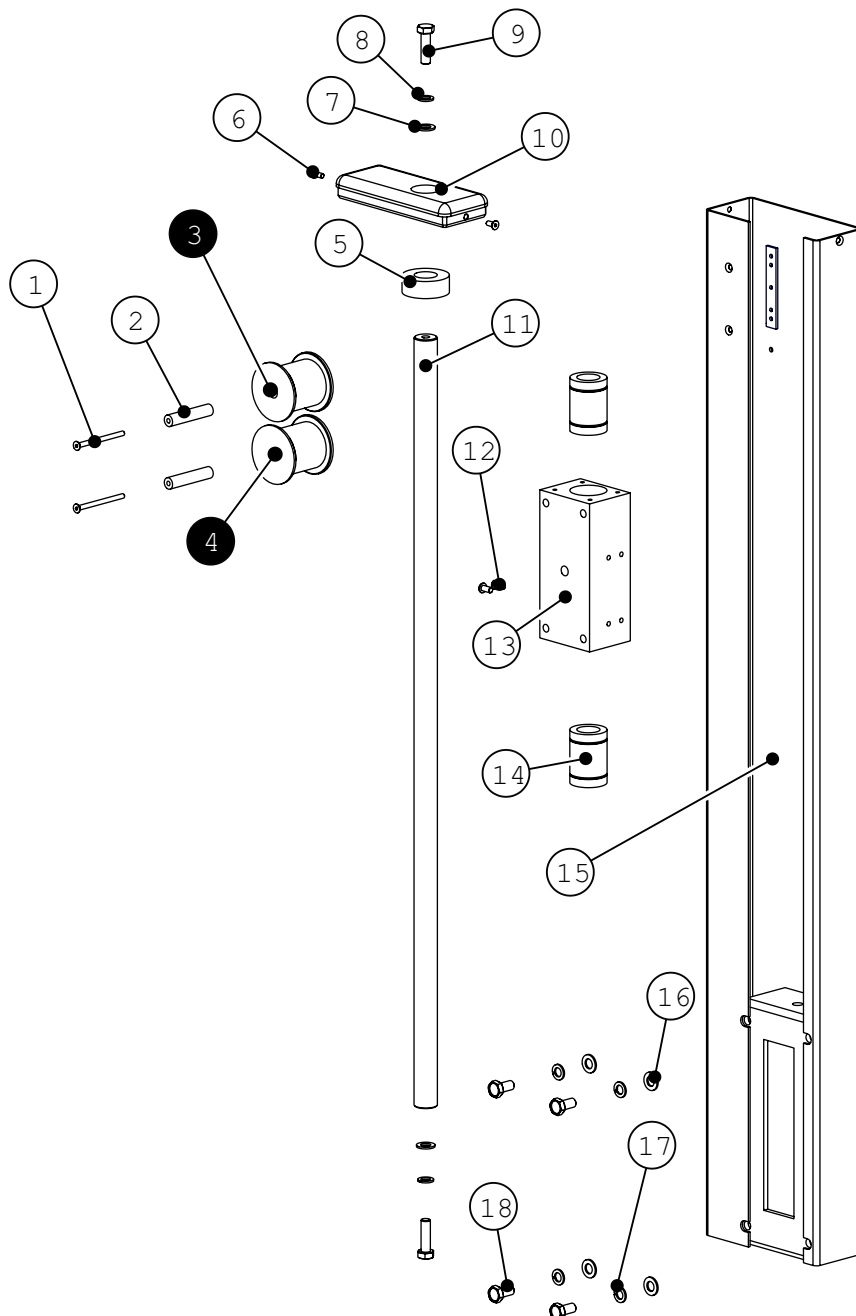


| ITEM | PART NUMBER | DESCRIPTION                  | QTY |
|------|-------------|------------------------------|-----|
| 1    | UF3558      | RETAINING RING               | 8   |
| 2    | UF1940      | FW Nylon 1/2IDx.775ODx.032TH | 16  |
| 3    | UPM1130EV   | PIVOT PLATE                  | 4   |
| 4    | UPM9075     | BEARING, PLAIN 14 x 12 x 10  | 8   |
| 5    | UPM0968EV   | PIVOT SHAFT LONG T.H. BOX    | 4   |
| 6    | UPM1158     | PIVOT SHAFT SPACER           | 4   |

| ITEM | PART NUMBER | DESCRIPTION                | QTY |
|------|-------------|----------------------------|-----|
| 7    | UF1241EV    | BHCS M6-1 x 20mm           | 4   |
| 8    | UF1192      | FHCS M6-1 x 16mm           | 4   |
| 9    | UF3646      | SHCS M4-0.7 x 20mm         | 2   |
| 10   | UPM0962EV   | SPRING RETAINER            | 2   |
| 11   | UPM2247EV   | PIVOT SHAFT SHORT T.H. BOX | 4   |

# APPENDIX B

## Right Column Assembly

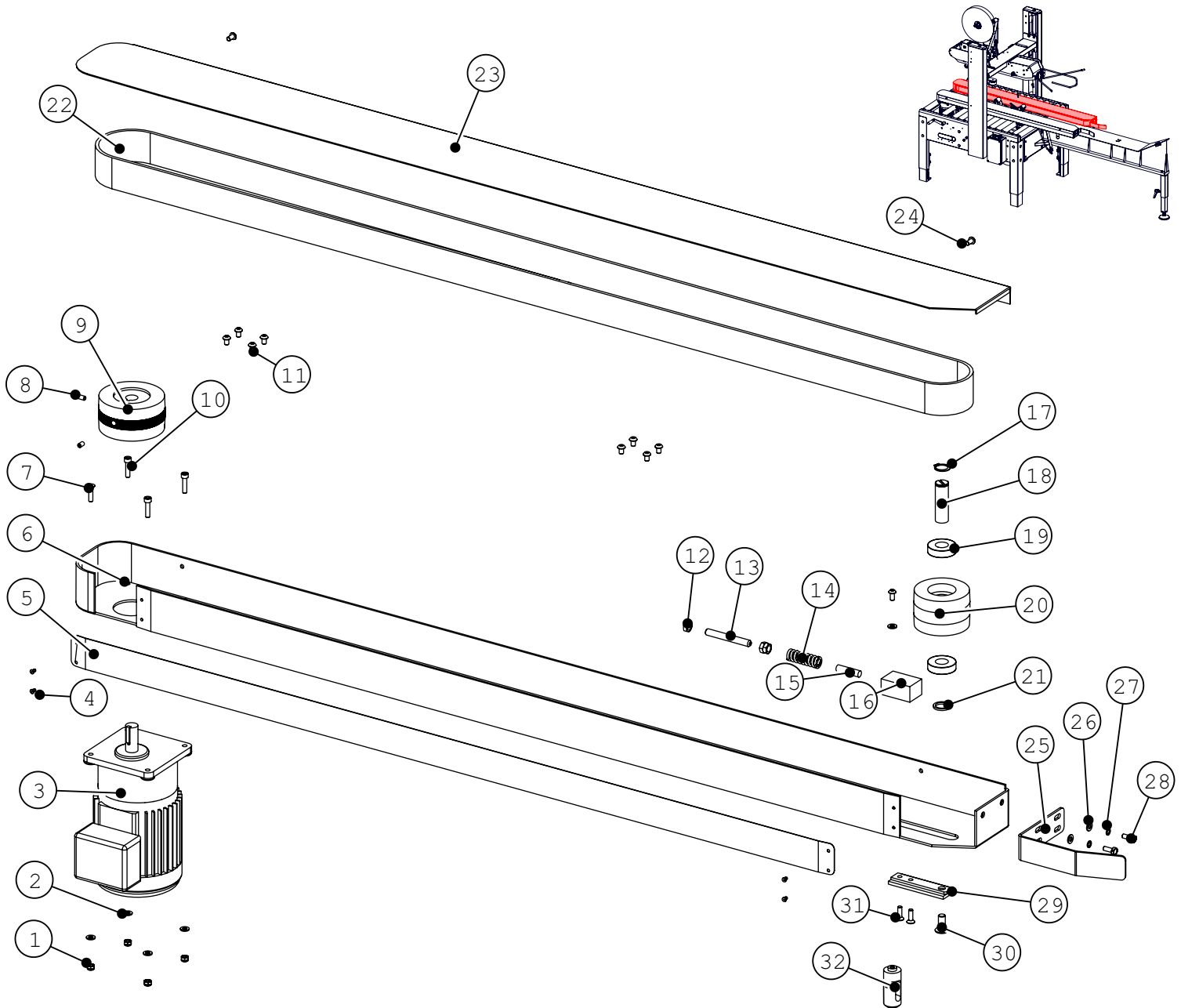


| ITEM | PART NUMBER | DESCRIPTION           | QTY |
|------|-------------|-----------------------|-----|
| 1    | UF1157      | FHCS M5-0.8 x 70mm    | 2   |
| 2    | UPM0743     | SPRING MANDREL SHAFT  | 2   |
| 3    | USM0893     | 33# SPRING AND SPOOL  | 1   |
| 4    | USM0894     | 24# SPRING AND SPOOL  | 1   |
| 5    | UPM2251     | SAFETY BUMPER         | 1   |
| 6    | UF5400      | FHCS M5-0.8 x 12mm    | 2   |
| 7    | UF3680      | FW M10                | 2   |
| 8    | UF6371      | LW M10                | 2   |
| 9    | UF0301      | HHCS M10-1.5 x 35mm   | 2   |
| 10   | UPM2182EV   | COLUMN CAP RIGHT SIDE | 1   |

| ITEM | PART NUMBER | DESCRIPTION            | QTY |
|------|-------------|------------------------|-----|
| 11   | UPM0738EV   | COLUMN SHAFT           | 1   |
| 12   | UF3278      | BHCS M6-1 x 12mm       | 2   |
| 13   | UPM9651     | COLUMN BLOCK 40 BORE   | 1   |
| 14   | UPM4986     | LINEAR BEARING 25mm    | 2   |
| 15   | UPM9713     | COLUMN 24 RIGHT METRIC | 1   |
| 16   | UF3680      | FW M10                 | 4   |
| 17   | UF6371      | LW M10                 | 4   |
| 18   | UF0457      | HHCS M10-1.25 x 20mm   | 4   |

# APPENDIX B

## Right Drive Assembly

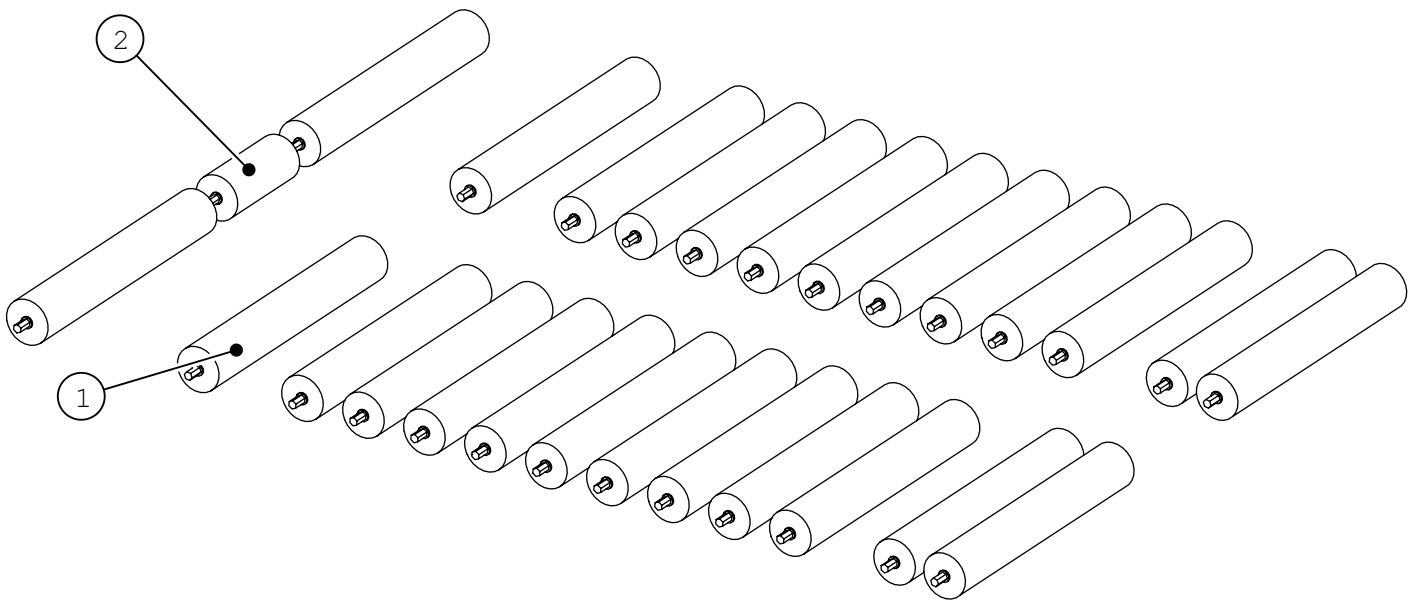
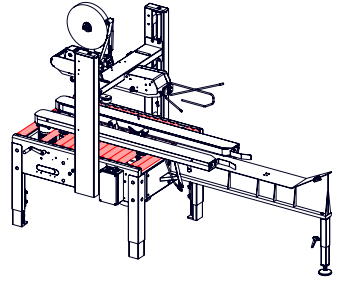


| ITEM | PART NUMBER | DESCRIPTION                  | QTY |
|------|-------------|------------------------------|-----|
| 1    | UF5900      | M6-1.0 LOCK NUT              | 4   |
| 2    | UF1828      | FW M6                        | 4   |
| 3    | UPM7116CD   | MOTOR 1/3 21.4 : 1           | 1   |
| 4    | UF2080      | POP RIVET S-44               | 4   |
| 5    | UPM0029     | STRIP, UHMW, 2" W X .03"     | 1   |
| 6    | UPM4547     | DRIVE SECTION 50 mm BFF R.H. | 1   |
| 7    | UF1194      | FHCS M6 - 1 x 25mm           | 1   |
| 8    | UF3683      | SSS M6 x 10                  | 2   |
| 9    | UPM0129EV   | DRIVE PULLEY 50mm            | 1   |
| 10   | UF0840      | SHCS M6-1 X 25mm             | 3   |
| 11   | UF1230      | BHCS 1/4-20 X 3/8            | 8   |
| 12   | UF1610      | HNJ 3/8-16                   | 3   |
| 13   | UF1400      | SSS HK 3/8-16 X 3'           | 1   |
| 14   | UPM0038     | DIE SPRING                   | 1   |
| 15   | UPM1237     | SS SPRING LOCATOR PIN        | 1   |
| 16   | UPM0101EV   | TENSIONNER SPRING HOLDER     | 1   |
| 17   | UF2220      | EXT RET'G RING 3/4" SHAFT    | 1   |

| ITEM | PART NUMBER | DESCRIPTION                | QTY |
|------|-------------|----------------------------|-----|
| 18   | UPM1233EV   | IDLER PULLEY SHAFT 50mm    | 1   |
| 19   | UPM0324     | BEARING, PULLEY            | 2   |
| 20   | UPM0259     | IDLER PULLEY               | 1   |
| 21   | UPM0109     | IDLER PULLEY SPACER        | 1   |
| 22   | UPM4560     | BELT ENDLESS 50 x 3073 BFF | 1   |
| 23   | UPM4548     | DRIVE BASE COVER           | 1   |
| 24   | UF3278      | BHCS M6-1 x 12mm           | 3   |
| 25   | UPM0647     | CARTON RETAINER            | 1   |
| 26   | UF1828      | FW M6                      | 3   |
| 27   | UF6363      | LW M6                      | 2   |
| 28   | UF0454      | HHCS M6-1.0 X 16mm         | 2   |
| 29   | UPM1879EV   | TENSIONNER SLIDE           | 1   |
| 30   | UF1191      | FHCS M10-1.5 x 25mm        | 1   |
| 31   | UF5402      | FHCS M6-1 x 20mm           | 2   |
| 32   | UPM7743     | BOTTOM PLOW ROD PIVOT BFF  | 1   |

# APPENDIX B

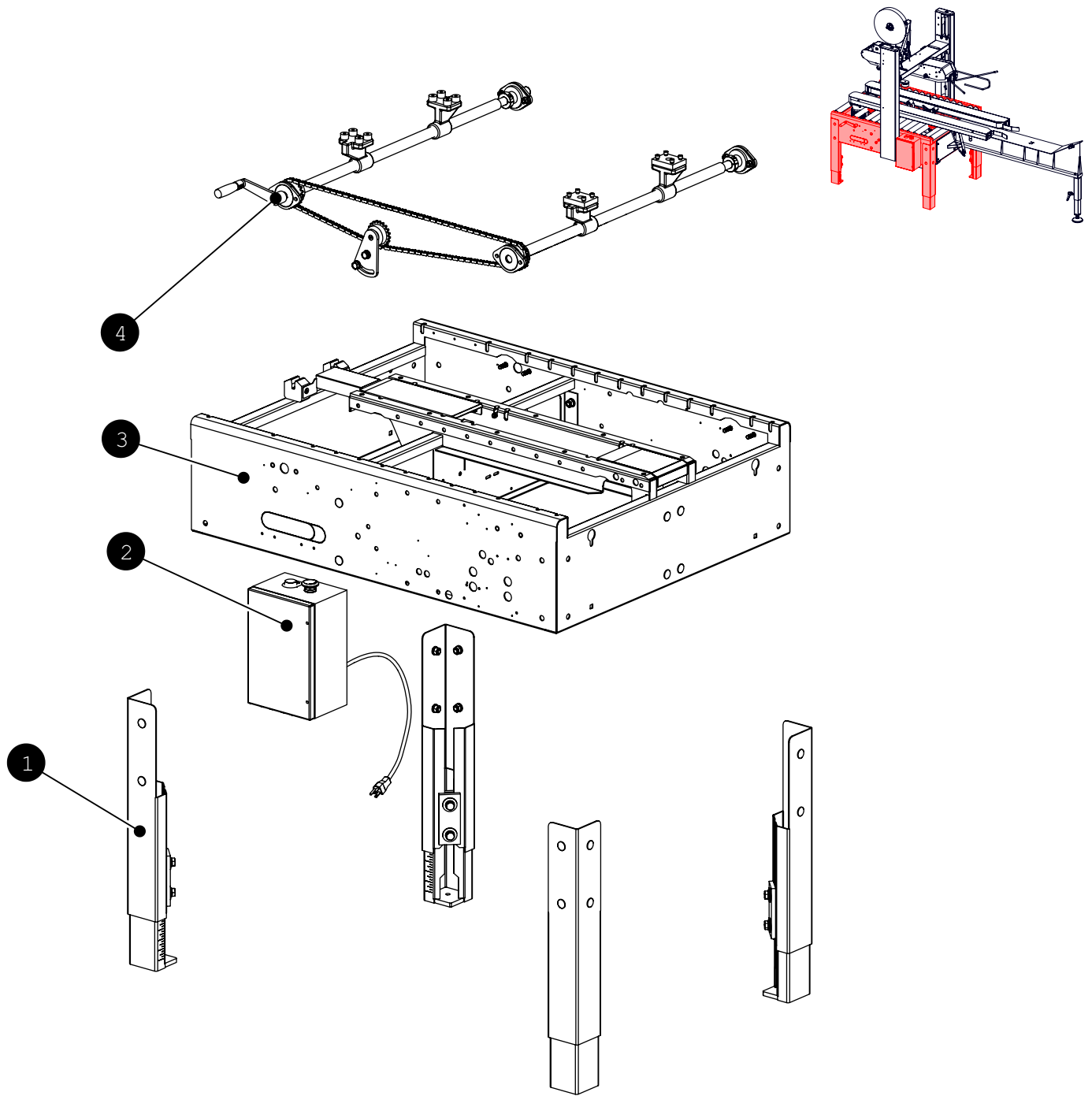
## Rollers



| ITEM | PART NUMBER | DESCRIPTION                      | QTY |
|------|-------------|----------------------------------|-----|
| 1    | UPM3226     | PVC ROL CHARCOAL DIA 1.9 X 12.00 | 26  |
| 2    | UPM3227     | PVC ROL CHARCOAL DIA 1.9 X 4.50  | 1   |

# APPENDIX B

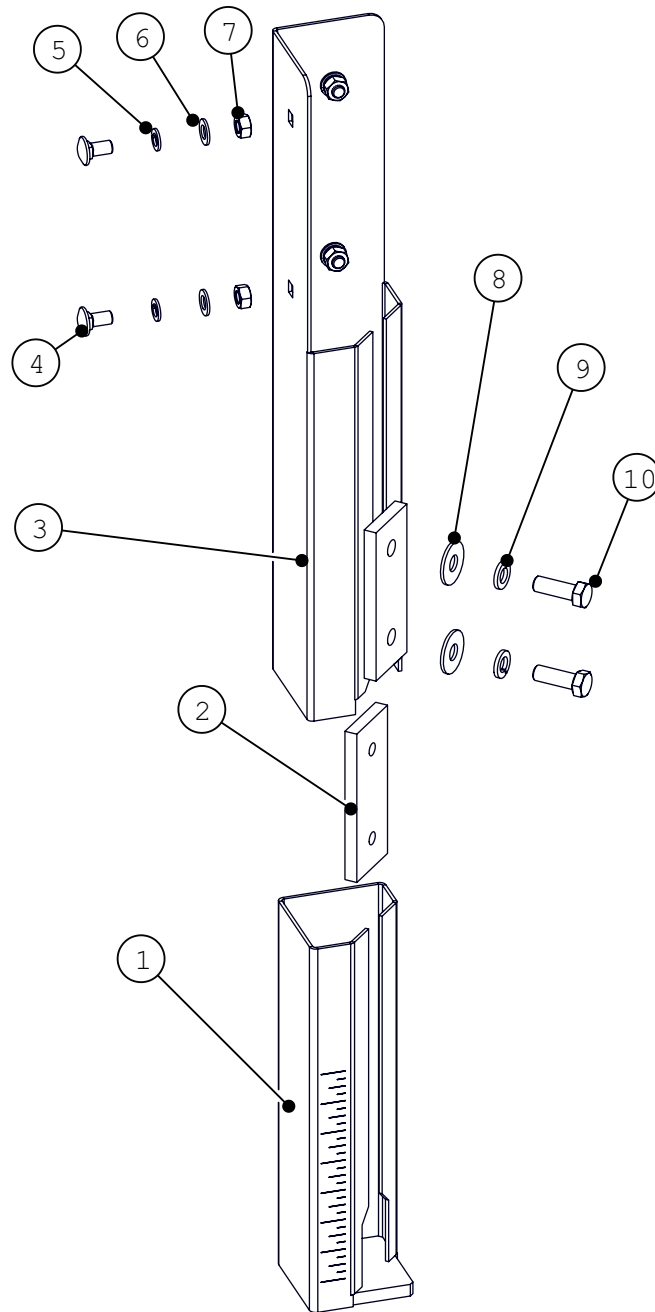
## Base Assembly



| ITEM | PART NUMBER | DESCRIPTION             | QTY |
|------|-------------|-------------------------|-----|
| 1    | UAM0275     | LEG ASSEMBLY METRIC     | 4   |
| 2    | UAM0666     | ELECTRICAL BOX ASSEMBLY | 1   |
| 3    | UAM0328     | BASE SUB-ASS'Y          | 1   |
| 4    | USM6111     | DRIVE CENTRING ASS'Y    | 1   |

# APPENDIX B

## Leg Assembly

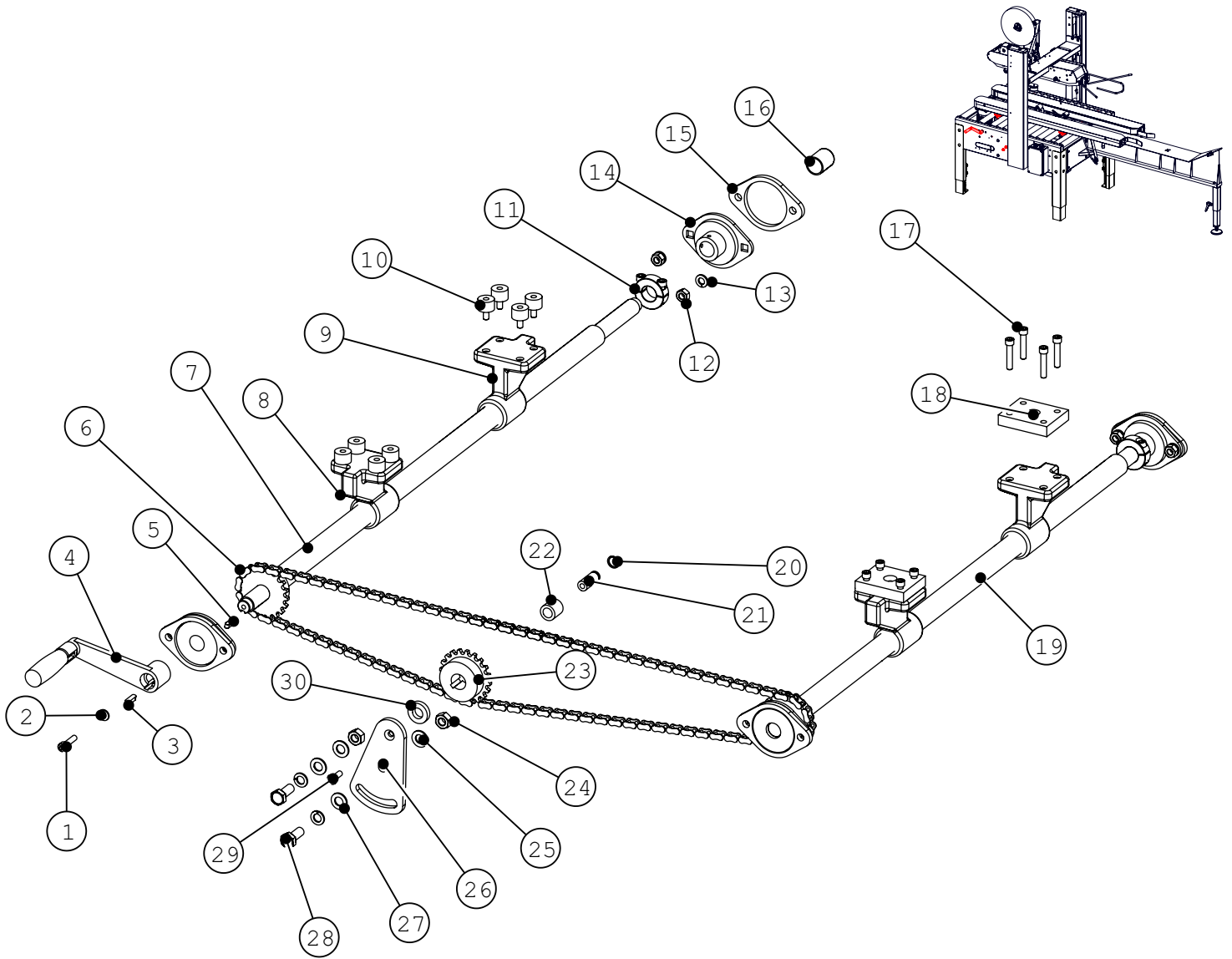


| ITEM | PART NUMBER | DESCRIPTION                | QTY |
|------|-------------|----------------------------|-----|
| 1    | UMP7641     | M1273 item 1               | 1   |
| 2    | UPM7642     | M1274                      | 1   |
| 3    | UPM7640     | M1272 item 1               | 1   |
| 4    | UF4229      | M10-1.5 x 20-CARRIAGE BOLT | 4   |
| 5    | UF6371      | M10 LW                     | 4   |
| 6    | UF3680      | M10 FW                     | 4   |

| ITEM | PART NUMBER | DESCRIPTION        | QTY |
|------|-------------|--------------------|-----|
| 7    | UF6314      | M10-1.5 HNR        | 4   |
| 8    | UF4231      | M12 FW             | 2   |
| 9    | UF4230      | M12 LW             | 2   |
| 10   | UF6393      | M12-1.75 x 35 HHCS | 2   |

# APPENDIX B

## Centering Assembly

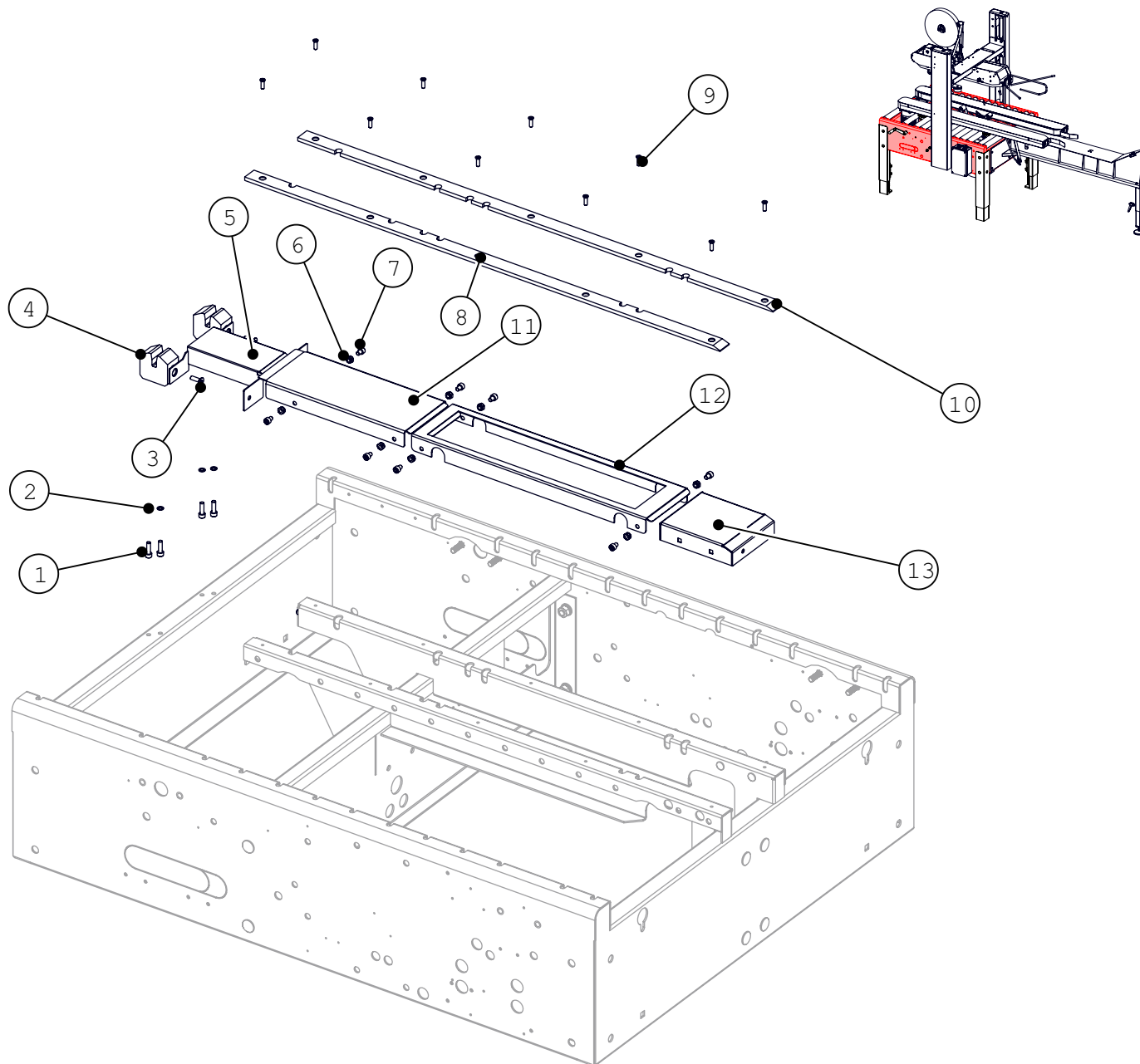


| ITEM | PART NUMBER | DESCRIPTION                  | QTY |
|------|-------------|------------------------------|-----|
| 1    | UF0840      | M6-1 x 25 SHCS               | 1   |
| 2    | UF1828      | M6 FW                        | 1   |
| 3    | UF2210EV    | SQUARE KEY ROUND ENDS 5x5x20 | 1   |
| 4    | UPE0001EV   | CRANK HANDLE, FOLDABLE       | 1   |
| 5    | UF2210      | SQUARE KEY                   | 1   |
| 6    | UPM0618     | CHAIN #35-165                | 1   |
| 7    | UPM0566EV   | ACME SHAFT FOR HANDLE        | 1   |
| 8    | UPM0575EV   | CASTING LH                   | 2   |
| 9    | UPM0574EV   | CASTING RH                   | 2   |
| 10   | UPM0576     | BUMPER                       | 8   |
| 11   | UPM7583     | SHAFT COLLAR                 | 2   |
| 12   | UF0866      | M8-1.25 HNR                  | 8   |
| 13   | UF0867      | M8 LW                        | 8   |
| 14   | UPM0523EV   | FLANGE BEARING               | 4   |
| 15   | UPM2198     | BEARING SPACER               | 4   |
| 16   | UPM2207     | CAP VINYL BLACK              | 1   |

| ITEM | PART NUMBER | DESCRIPTION             | QTY |
|------|-------------|-------------------------|-----|
| 17   | UF0640      | 1.4-20_1.25_SHCS        | 8   |
| 18   | UPM3242     | DRIVE SUPPORT SPACER    | 2   |
| 19   | UPM0573EV   | ACME SHAFT              | 1   |
| 20   | UF2170      | 1/2" RETAINING RING     | 1   |
| 21   | UPM0640EV   | TENSIONNER PIN          | 1   |
| 22   | UPM0639EV   | BRASS BUSHING           | 1   |
| 23   | UPM0620     | SPROCKET                | 3   |
| 24   | UF6314      | M10-1.5 HNR             | 2   |
| 25   | UF3680      | M10 FW                  | 4   |
| 26   | UPM0631EV   | M1286                   | 1   |
| 27   | UF6371      | M10 LW                  | 2   |
| 28   | UF6382      | M10-1.5 x 25 HHCS       | 2   |
| 29   | UF5402      | M6 - 1 x 20 FHCS        | 1   |
| 30   | UPM0641     | CHAIN TENSIONNER SPACER | 1   |

# APPENDIX B

## Machine Frame



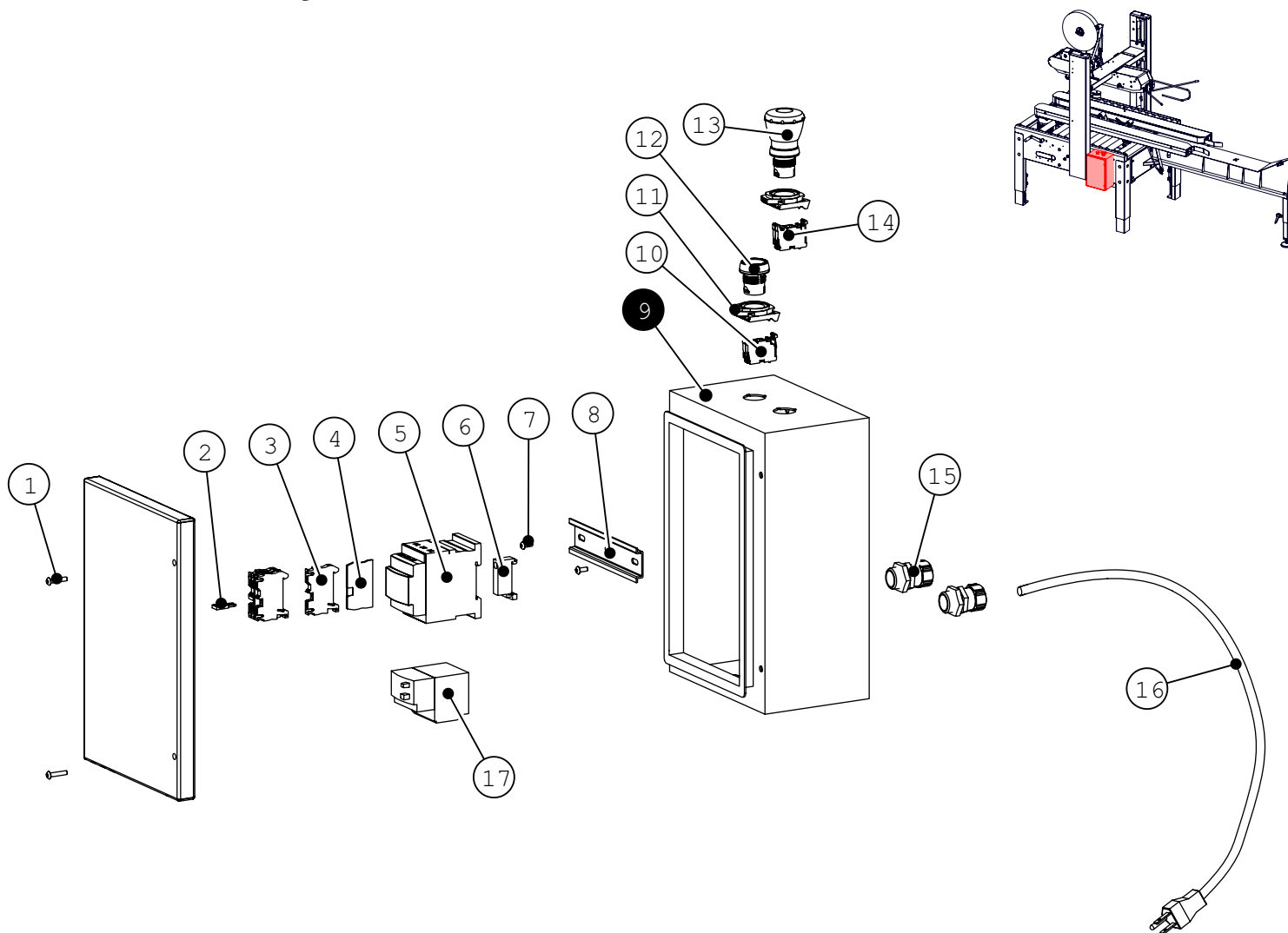
| ITEM | PART NUMBER | DESCRIPTION         | QTY |
|------|-------------|---------------------|-----|
| 1    | UF3179      | M6-1 x 20 SHCS      | 4   |
| 2    | UF6411      | M6 LW               | 4   |
| 3    | UPM3234EV   | OUTLET ROLLER BLOCK | 2   |
| 4    | UPM3234EV   | OUTLET ROLLER BLOCK | 2   |
| 5    | UPM3288EV   | OUTLET COVER        | 1   |
| 6    | UF3391      | M6-1.0 LOCK-NUT     | 10  |
| 7    | UF3170      | M6-1 x 8 SHCS       | 8   |

| ITEM | PART NUMBER | DESCRIPTION          | QTY |
|------|-------------|----------------------|-----|
| 8    | UPM0609EV   | SLIDING PAD L.H.     | 1   |
| 9    | UF4114      | M5 x 16 SELF TAPPING | 10  |
| 10   | UPM0606EV   | SLIDING PAD R.H.     | 1   |
| 11   | UPM4193     | REAR GAP FILLER      | 1   |
| 12   | UPM3815     | GAP FILL PLATE       | 1   |
| 13   | UPM3229     | INLET COVER          | 1   |



# APPENDIX B

## Electrical Assembly

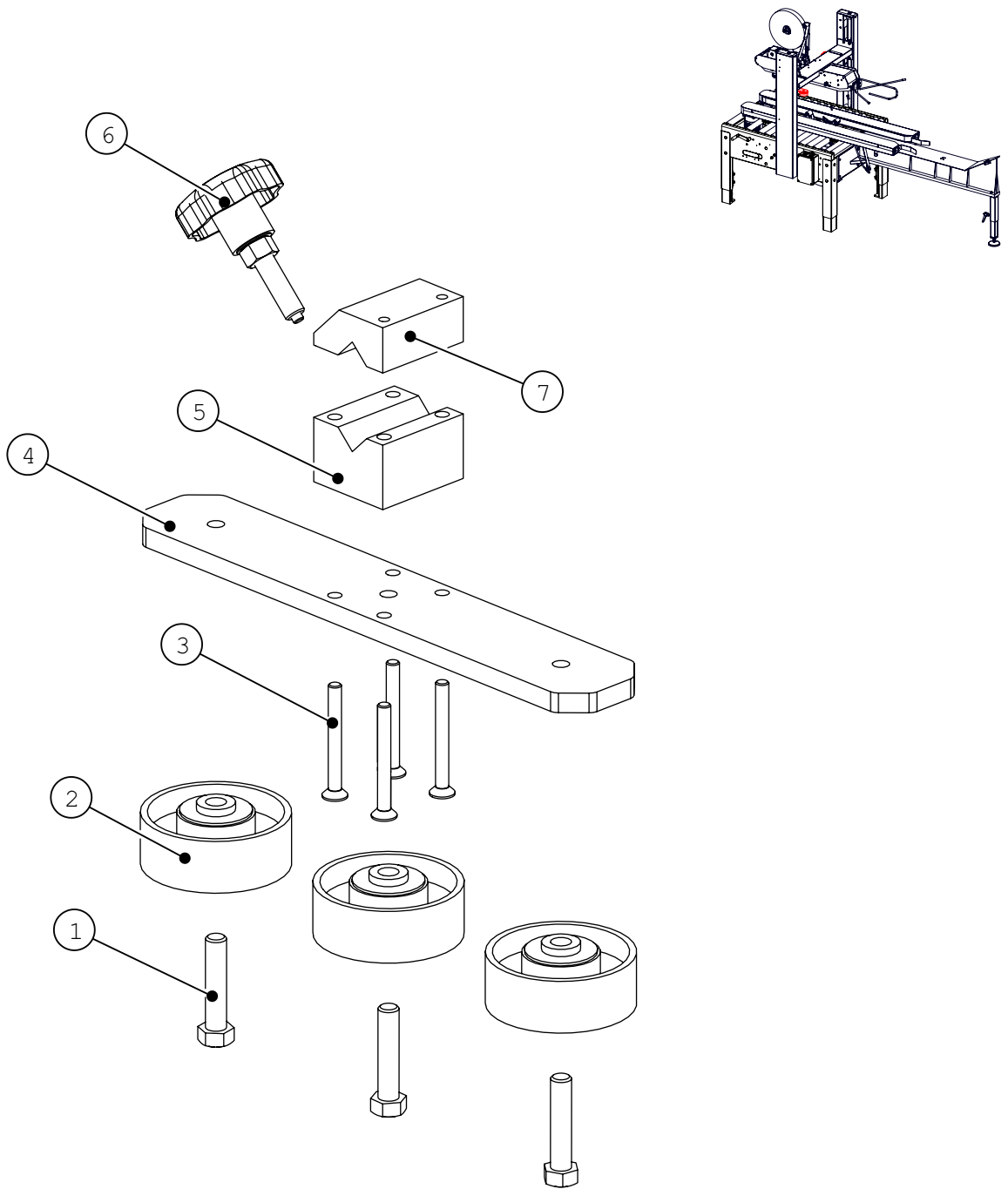


| ITEM | PART NUMBER | DESCRIPTION                  | QTY |
|------|-------------|------------------------------|-----|
| 1    | UF4323      | BHCS M4 - 0.7 x 20mm         | 2   |
| 2    | UPM6197     | 2 PIN BRIDGE                 | 2   |
| 3    | UPM6193     | TERMINAL BLOCK, 1            | 4   |
| 4    | UPM6196     | END COVER                    | 2   |
| 5    | UPM2208EV   | MOTOR STARTER TELEMEC 110VAC | 1   |
| 6    | UPM7440EV   | DIN RAIL ANCHOR              | 2   |
| 7    | UF6365      | BHCS M4 x 0.7 x 10mm         | 2   |
| 8    | UPM0407EV   | DIN RAIL USA                 | 1   |
| 9    | UPM8083     | ELECTRICAL BOX USA STEEL     | 1   |

| ITEM | PART NUMBER | DESCRIPTION             | QTY |
|------|-------------|-------------------------|-----|
| 10   | UPM7631     | NO CONTACT              | 1   |
| 11   | UPM7630     | LATCH                   | 2   |
| 12   | UPM4821     | BUTTON GREEN            | 1   |
| 13   | UPM4816     | EMERGENCY STOP BUTTON   | 1   |
| 14   | UPM4720     | NC CONTACT              | 1   |
| 15   | UPM0197EV   | CORD GRIP               | 2   |
| 16   | UPM0209     | POWER CORD, 14/3        | 1   |
| 17   | UPM4505     | MOTOR O/L TELEMEC 7-10A | 1   |

# APPENDIX B

## Compression Guide



| ITEM | PART NUMBER | DESCRIPTION                 | QTY |
|------|-------------|-----------------------------|-----|
| 1    | UF0240      | 3.8-16 x 1.75" HHCS         | 3   |
| 2    | UPM1659     | WHEEL 2-7/8"DIA.COMPR.GUIDE | 3   |
| 3    | UF6373      | M6 - 1 x 55 FHCS            | 4   |
| 4    | UPM7491     | WHEEL SUPPORT PLATE         | 1   |
| 5    | UPM3285EV   | GUIDE BLOCK                 | 1   |
| 6    | 6020-50-38  | KNOB                        | 1   |
| 7    | UPM7538     | GUIDE BLOCK TOP             | 1   |

# **USER NOTES**

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