

UF-5000 Infeed Conveyor

Operation Guide, Version 1B
Setup, Operation and Parts Manual



 Advanced
Poly-Packaging, Inc.

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Acknowledgments

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Chapter 1: Introduction

Welcome

Overview

Capabilities and Performance

Options and Accessories

System Integration

Using This Manual

Warranty Registration

1.1 Welcome

Now that you have decided to upgrade your packaging facilities with the Ultra-Feed 5000 Infeed Conveyor from Advanced Poly-Packaging, Inc., we thank you for selecting our equipment, materials, and service. We know you will be satisfied with the durability, functionality, and performance of the UF-5000.

1.2 Overview

By eliminating the need to physically handle product, infeed conveyors maintain a rapid flow from one piece of equipment to another, reduce labor costs and increase overall productivity. In some circumstances (i.e. assorted product kits, multiple counts), an infeed conveyor is the only way to maintain accuracy and reliability.

Model UF-5000 Infeed Conveyor has an electrical panel, but the sequence of operation is controlled by the T-1000 Bagger. The IO interface cable connects the T-1000 PLC to the motor driver and sensors.

If a UF-5000 alone is ordered (without bowl feeders), the parts must be slid from shelves (if ordered), or from bins. The operator is then required to count and place the parts into the compartments on the conveyor. If assembling kits, multiple operators may be required to count the parts and place them into the correct compartments. This process takes team-work to ensure the accuracy of counts and kit components.

Typical production speed for this machine is up to 35 bags per minute based on the conveyor configuration, bag size, product characteristics, and manual counting/loading speeds. The conveyor typically indexes into a registered position. This index delay can be set by the operator based on the time it takes to count and load the products. The speed can be adjusted either from a potentiometer or through the touch screen (if equipped).

If the customer has automatic parts counters on the system, the speed will be controlled by the slowest counter since all counters and conveyor are interfaced with a closed-loop auxiliary interface.

1.3 Capabilities and Performance

The UF-5000 has three modes of operation: Manual (footswitch), Continuous Feed with Variable Speed Controls, or Automatic Indexing under system control. With a continuous maximum running speed of 50 feet per minute (standard), the UF-5000 allows you to take advantage of one of the fastest automatic baggers, the T-1000 Advanced Poly-Bagger.

1.4 Options and Accessories

Several auxiliary options can be added to the UF-5000 for special purpose packaging. The following options and accessories can be purchased from Advanced Poly-Packaging, Inc.

Part Sensors: There are a variety of infrared and visible light sensors available to meet your specific packaging needs. These sensors can count parts as they feed into the bagger. Once the count is reached the conveyor can either slow down or stop until the bagger has finished its cycle.

Accumulating Funnels: Pneumatic actuated gates in a funnel box control product flow. Increases productivity as the bagger can cycle while the conveyor is staging product. Once Bagger is ready, funnel will quickly open and dump product and quickly shut to accumulate more product. Allows for continuous conveyor and product movement.

Quick Change Funnels: Unique adapter and pin arrangement allow the standard or accumulating funnel to be quickly changed without the need for tools.

Special Funnels: Special funneling from the UF-5000 to the bagger or other auxiliary equipment can be fabricated by APPI, including accumulating funnels.

Footswitch: A standard footswitch may be used to operate the UF-5000 independently or in conjunction with other equipment.

Secondary Auxiliary Cables: The UF-5000 can control several counters or other similar equipment with the use of these cables. This completes the loop between the bagger, the UF-5000 and other auxiliary equipment.

Auxiliary Infeed Equipment: Special infeed equipment such as vibratory bowl feeders or scales can be added to provide automatic packaging operations.

Side Tables: Provides a work surface for in-line inspection, slide various product into pockets to assemble a kit as it feeds towards the bagger.

E-Stop: Push Button and Cable Pulls available. Buttons can be placed anywhere along the length of the conveyor. Cable Pulls run the entire length of the conveyor. E-stops will immediately stop all moving parts of a system.

Height Adjustable: Standard Conveyor Supports are replaced with linear actuators that allow touch screen control of the conveyors height and angle.

Side Rails: Guard rails provide a barrier or wall to keep product on the conveyor as they are transported along its length.

Speed Control: Standard speed control is done through the baggers Touch Screen but an optional manual control is available to co-dependably operate the conveyor through a variable position knob.

UC-2400 Parts Counter: A High-Speed Parts Counter using vibratory bowl technology to feed parts through an optical frame which can detect the smallest of parts.

UCS-2400 Check-Weight Parts Counter: An extremely flexible combination system that can function as either a Check-Weigh Counting Scale, or a High-Speed Optical Parts Counter.

US-9000 Weigh Scale: A Net-Weigh-Counting Scale System providing the ultimate level of accuracy due to precise level of incremental bowl vibration control.

Other options may have been added since the date this list was printed. Please call for additional or custom options pricing.

1.5 System Integration

The UF-5000 is specifically designed to directly integrate with the T-1000 Advanced Poly-Bagger and other Advanced Poly-Packaging baggers. As an OEM for numerous equipment manufacturers of infeed systems, APPI offers the best available packaging system with the UF-5000 as an integral packaging component. However, APPI cannot be responsible for the successful integration of third party equipment, unless approved and integrated by APPI.

FREE CONSULTATION AND PRODUCT EVALUATION: We invite you to call to discuss your packaging requirements and our free product packaging analysis.

1.6 Using This Manual

The following manual conventions are frequently used to assist in understanding important information, to alert the operator of potentially dangerous or damaging practices and to describe the normal functions of the UF-5000 Infeed Conveyor.

- Text Normal text.
- *Italics* Used for emphasis.
- **BOLDFACE** Used to identify heading names and touch screen buttons.
- **CAUTION:** Warning messages. To avoid physical harm, damage to equipment or damage to the product, be sure to read these messages carefully.
- **NOTE:** Identifies important information.

1.7 Warranty Registration

This section must be completed and returned to Advanced Poly Packaging, Inc. to register the UF-5000 for Warranty Protection.

UF-5000 Serial Number:

(Serial Number located on the back panel)

Company Name and Address

Contact Name(s) / Title(s) / Phone Number

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Please email, fax, or mail this page to:

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Email the information to: service@advancedpoly.com

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Chapter 2: Getting Started

Chapter Summary

Safety, Risks

Installation Procedures

Air and Power Requirements

Assembly Instructions

Auxiliary Port Connections

Main Power (T-1000)

Compartment Position Adjustment

Start Up Procedure

2.1 Chapter Summary

This chapter describes procedures to receive and set up the UF-5000, including uncrating instructions, environmental, air and power requirements, assembly instructions and height adjustments. Additionally, this chapter describes safety precautions, and how to power on the UF-5000.

2.2 Safety, Risks

Many safety features have been included in the mechanical, electronic, and pneumatic systems of this machine. Despite these safety features, operators may receive lacerations, minor burns, crushed or broken bone injuries if they come in contact with the heater bar or any other moving components. Improper use, improper adjustments and neglect of preventative maintenance may result in serious personal injury. No special personal protective equipment is required to operate the equipment, but eye protection, gloves or other protection should be worn, depending on the characteristics of the product being packaged and the method of loading product.

Please carefully read the following precautions to operate the equipment properly and avoid injury:

- **CAUTION:** Initial setup of the machine must be performed by specialized personnel. Qualified service engineers should uncrate the equipment, assemble the equipment (if required), test and connect power sources, test the equipment for proper operation and otherwise set up the equipment for use.
- **CAUTION:** Do not attempt to adjust the height without assistance and without supporting the weight of the machine. Attempting to make a height adjustment without assistance could cause the machine to drop suddenly, causing severe injury. APPI offers several optional accessories that can reduce the risk of injury during height adjustments. These accessories include carts, motorized height adjustment components and stabilizing bars.
- **CAUTION:** Ensure that any height adjustments allow for sufficient movement of the operator. Improper height adjustments could negatively affect operator movement, causing strain, added stress, discomfort, and fatigue.
- **CAUTION:** To avoid injury, do not operate the equipment if funnels, guards, covers or other access panels have been removed. If any of these safety measures have been removed or modified or if any openings have been increased, the operator will have access to moving components and extreme temperature areas that can cause crush, cut, or burn injuries to hands or fingers.
- **CAUTION:** To avoid injury, do not reach under the equipment, guards or elsewhere under the machine. Do not place hands or fingers in the seal area or near the seal bar, heater bar, load shelf or other moving components.
- **CAUTION:** Do not remove or loosen fasteners on the frame. If loosened, the equipment may drop suddenly, causing injury or damage to the machine.
- **CAUTION:** Be careful when opening the seal frame as it may drop suddenly, causing injury or damage to the equipment.
- **CAUTION:** To avoid injury, avoid coming in contact with pinch points including rollers, automatic funnel doors or other moving components.

- **CAUTION:** To avoid injury, avoid contact with roller "fingers" as they may be sharp.
- **CAUTION:** To avoid injury, avoid wearing loose jewelry and clothing, badges, and/or lanyards. Long hair should be tied back away from the Conveyor.
- **CAUTION:** Exercise care with potential pinch points where belt cleats are entering a funnel or guard. Although the cleats are generally constructed of soft material, some custom designs may include cleats constructed of a heavier plastic material which may cause a pinching injury. Operators should avoid loading product near the discharge end of the Conveyor.
- **CAUTION:** Exercise care when adjusting or relocating the touch screen. Movement of the touch screen could cause unexpected movement of the machine and injury to the operator.
- **CAUTION:** If control or air pressure settings are set too high, higher noise levels may result from increased part on part contact or part on machinery contact. Limit these settings and add guards or covers to reduce airborne noise.
- **CAUTION:** Exercise extreme care when clearing jams, replacing materials, changing controls or mechanical settings, and cleaning internal parts. Be sure to de-energize energy sources prior to removing guarding. Failure to do so may result in unexpected movement or flying objects, which could cause crushed, cut, or eye injuries.
- **CAUTION:** Maintenance must be performed by specialized personnel. Qualified service engineers must remove guards or covers to gain access to electrical or mechanical areas.
- **CAUTION:** Maintenance must be performed regularly to ensure that the machine is operating properly and to protect against injury. Routine maintenance includes: periodic inspections, the replacement of worn or damaged components, the tightening of loose bolts or components, and regular cleaning and adjustments. Contact APPI and/or service centers for service support if there is not sufficient maintenance staff at your facility to perform regular maintenance.

2.3 Installation Procedures

The UF-5000 is transported on a pallet and is completely assembled and tested prior to shipment. Once detached from the pallet, most Conveyors of less than 10 feet in length can be lifted into place by two people. Longer and/or wider Conveyors may require lifting equipment to move the device into position.

Before maneuvering the UF-5000, make sure the locking bolts are fully retracted. Position it relative to the T-1000 in order to easily attach auxiliary cables and allow for easy access to the operator panel and emergency stop button (E-STOP). When the UF-5000 is in its final position, ensure the locking bolts are lowered and secured to prevent movement of the conveyor.

Operating Environment: The UF-5000 should be placed in an area free of excessive heat, moisture, dirt, and dust. Operating room temperature should range from 40° to 120° Fahrenheit (4.45°C to 48.89°C) at 25% to 85% relative humidity with no condensation.

2.4 Air and Power Requirements

UF-5000 will come configured based on customer needs, 120V or 240V. A name plate will be on the conveyor to specify operating voltage, serial number, and model.

If an accumulating funnel is attached to the conveyor, appropriate airlines will need to be connected. If the option was purchased with the T-1000, airlines will be labeled.

CAUTION: A qualified electrician should ensure the UF-5000 power outlet is properly grounded, voltages are as required and amperage capacity is sufficient.

NOTE: Although the UF-5000 has been designed with sufficient noise filtering, it is not recommended to run it on the same circuit with presses, mills, and other large industrial equipment.

2.5 Assembly Instructions

Choose an operating location considering traffic flow, availability of supplies, product to be packaged, take away location and control panel accessibility.

2.6 Auxiliary Port Connections

There are four auxiliary connections located on the back panel of the UF-5000. They have been provided to accommodate a variety of different configuration possibilities. Below is a chart of the most popular equipment hookups.

Equipment Type	Ports Used	Cable Type
T-1000 Advanced Poly-Bagger™	Bagger 1	Single, closed loop
All other bagging equipment	Bagger 1, Bagger 2	Dual, closed loop
APPI UC-2400 Ultra Count™	Counter 2	Single, terminating
All other counting equipment	Counter 1, Counter 2	Dual, closed loop

NOTE: For further details on connecting non-APPI equipment, please contact APPI technicians and sales staff for assistance in system integration.

2.7 Main Power (T-1000)

The T-1000 Main Power Switch is located on the rear panel. Press the switch to the ON position so that the red Main Power light is illuminated.

When the Main Power Switch is in the ON position, the LCD display will be backlit and will display a series of messages. These messages include the company name, conveyor type and program version. The conveyor should then default to the RUN / STOP menu.

NOTE: If the LCD Display screen does not power up, see Chapter 4, Maintenance and Troubleshooting in the T-1000 Operations Manual.

2.8 Compartment Position Adjustment

The conveyor indexes at a fixed belt speed but pauses after each cleat has passed through the flight sensor. The stopping point of a cleat is determined by the position of the flight sensor. To ensure that the product is evacuated from the conveyor properly, move the flight sensor along the length of the conveyor to a position that allows for proper product flow.

NOTE: This applies only to conveyors with cleats. Flat belt conveyors operate in a different manner.

CAUTION: To avoid physical harm, do not attempt to adjust the flight sensor while the conveyor is moving. Refer to Section 4.1 for instructions on flight sensor positioning adjustments.

2.9 Start Up Procedure

Before each production run, it is important to test the conveyors functionality and operation to reduce down-time. Inspecting belt tracking, flight increments, roller noise, drive belts, motors, and cleats for wear will reduce risk of lost production.

Belts should track straight and even along the length of the conveyor without rubbing into sides. Belts not tracking properly will show signs of wear on the edges including but not limited to rolled over edges, ragged edges such as chips and tears, and rough edges.

Cleats should be straight, free of warping, chips, cracks, and tears. Worn cleats will affect operations of the conveyor as product is more likely transfer between depending upon product size and shape. The flight sensors accuracy will also be affected.

Dirt will accumulate over time from product and environment. It is important to remove dirt and debris to prevent product contamination.

Drive unit uses a belt without a tensioner, and is fitted. Drive belt will wear over time depending on run speeds, mass of product and length of conveyor. Drive belt alignment should be monitored and adjusted to correct tracking. Pulley engagement on shafts should be secure without any slip.

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Chapter 3: Touch Screen Operation

Chapter Summary

Touch Screen Identification

Touch Screen Specifications / Features

Touch Screen Contrast Adjustment

Touch Screen Program Overview

Activating the UF-5000

UF-5000 Conveyor Screens

UF-5000 Operation Screen

UF-5000 Warning Screens

3.1 Chapter Summary

This chapter describes the identification, operation, and settings for the UF-5000 Infeed Conveyor. The UF-5000 does not have a dedicated Touch Screen; it is controlled by the T-1000-S14 Touch Screen program. Press the **UF-5000** button on the second page of the Bagger Options Menu screen to access UF-5000 operation screens. The UF-5000 Conveyor screen will be displayed.

3.2 Touch Screen Identification

Note: There are no system buttons on the 7" touch screen.

FRONT PANEL:

1. **System** button
2. **F1**: Displays the Help Screen
3. **F2**: Increases brightness when **System** button is pressed
4. **F3**: Resets screen to midpoint brightness when **System** button is pressed
5. **F4**: Decreases brightness when **System** button is pressed
6. **F5**: Displays Level 1 and Level 2 Passcodes.
7. **Green LED (Power)**: Lights up when touch screen is turned on

BACK PANEL:

1. RS-232 Communication port to PLC
2. Programming (For APPI use only)
3. Power Supply: Power terminal for touch screen operation.

3.3 Touch Screen Specifications / Features

Power	24 VDC (+/- 10%)
Operating Environment	0-50°C, 85% RH or less
Display	Color LCD
Resolution (W x H)	800 x 480dots
Display Area	190 x 135mm (7")
Backlight	CCFL
Backlight Hours	Approx. 75,000
PLC Connection	RS232

3.4 Touch Screen Contrast Adjustment

The contrast of the LCD may be adjusted if the screen is difficult to read. To adjust the contrast, press the **System** button located to the right side of the active touch screen area. Then press the **F2** button to increase brightness and the **F4** button to decrease brightness. Pressing **F3** will return the screen to midpoint brightness.

3.5 Touch Screen Program Overview

The touch screen program is a user-friendly, menu-driven setup and operation program. Pop-up windows are incorporated for quick and easy setting adjustments. Each time a setting is changed, the settings are saved so that if power is lost, the "job" will be recalled automatically, without the need for reprogramming. A general color scheme has been used to identify functions:

- **Blue:** Background color used for text information. No “buttons” or functions are blue.
- **Green:** Used for buttons that change settings. For example, pressing a green button may display a pop-up window or turn a function on/off.
- **Red:** Indicates that a function is off or stopped. For example, pressing a red button may turn a function on.
- **Yellow:** Used for menu buttons. Pressing a menu button displays another screen and allows for movement throughout the entire program.

3.6 Activating the UF-5000

The operation of the UF-5000 is controlled within T-1000-S14 Touch Screen program. To access operation screens and settings for the UF-5000, press the **UF-5000** button on the second page of the Bagger Options Menu. If an information screen is displayed with an **Activate Option** button at the bottom of the screen, the UF-5000 option has not been activated yet. See Figure 3-1. Contact APPI Technical Support for information on how to activate the option. If the UF-5000 option has been activated, the UF-5000 Conveyor screen will be displayed after the UF-5000 button is pressed on the Bagger Options Menu.

NOTE: If the UF-5000 option was purchased with the T-1000-S14 Advanced Poly-Bagger, the option will be activated at the factory. Otherwise, contact APPI Service Department for instructions on how to enable options.

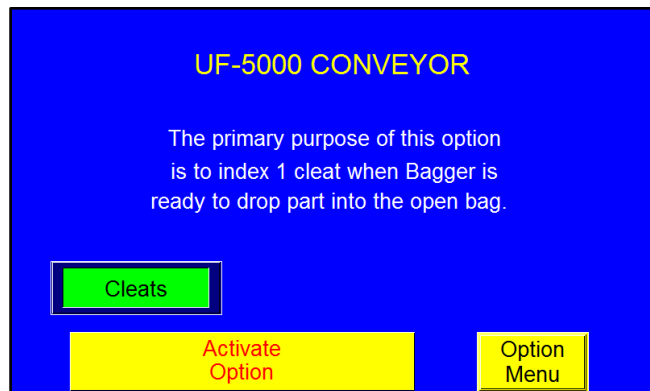


Figure 3-1

NOTE: For information on the Bagger’s program, refer to the T-1000-S14 Operation Guide, Version 6A.

3.7 UF-5000 Conveyor Screens

The UF-5000 Conveyor and UF-5000 Conveyor Settings screens allow the operator to adjust the conveyor settings. See Figure 3-2 and Figure 3-3. If the UF-5000 option has been activated in the T-1000-S14 program, this screen is displayed when the **UF-5000** button is pressed on the Bagger Options Menu.

To enable the conveyor, toggle the **UF5k** mode toggle button located at the top of the screen to the green on position. To disable the conveyor, toggle the UF5k button to the red off position.

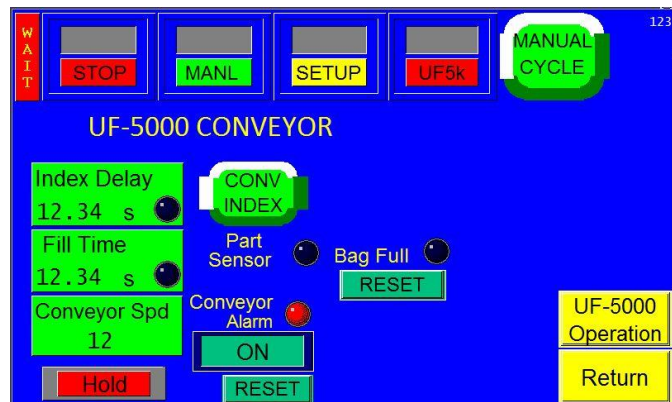


Figure 3-2

Press the **Conv Index** button to manually cycle the conveyor without cycling any other equipment. The bagger will automatically enter Setup mode when this button is pressed. Press the **Accum Open** button on the **Settings Screen** to manually open the accumulating funnel.

Index Delay: The amount of time, in seconds, the conveyor waits for a signal from the part sensor before it begins another index cycle. If a part is detected before this time elapses, the conveyor cycles normally. If a part is not detected before this time elapses, operation will stop. The amount of time the conveyor will wait before cycling after receiving a signal from the bagger auxiliary input.

Flight Delay Setting: The amount of time, in seconds, the flight sensor is active when the flight passes through the optical eye.

Conv Speed: The speed of the conveyor. To adjust this setting, press the **Conv Speed** button, enter a value in the numeric keypad and press the **ENT** button.

Index Count: The number of compartments that will be indexed per cycle.

Startup Count: The amount of product that must pass through the optical eye before the conveyor before the system begins operation. Press the Reset button to set this count to zero.

Part Sensor: If a part is not detected after the conveyor belt stops and after the Index Delay time has elapsed, this LED illuminates and an error message is displayed. See Figure 3-3. To turn this option on and off, press the Part Sensor **ON / OFF** button.

Flight Sensor LED: Illuminates when a flight passes through the optical eye.

Conveyor Alarm: This LED illuminates when the conveyor encounters an error.

Aux Out: Displays the status of the conveyor's communication to the bagger. When Aux Out displays **READY**, the conveyor is ready to drop parts to the bagger. When Aux Out displays **HOLD**, the conveyor is still cycling. If Aux Out displays **OFF**, auxiliary communication is disabled.

Aux In: Displays the status of the bagger's communication to the conveyor. When Aux In displays **READY**, the bagger is ready to receive product. When Aux In displays **HOLD**, the bagger is still cycling. Aux In displays **OFF** when auxiliary communication is not enabled.

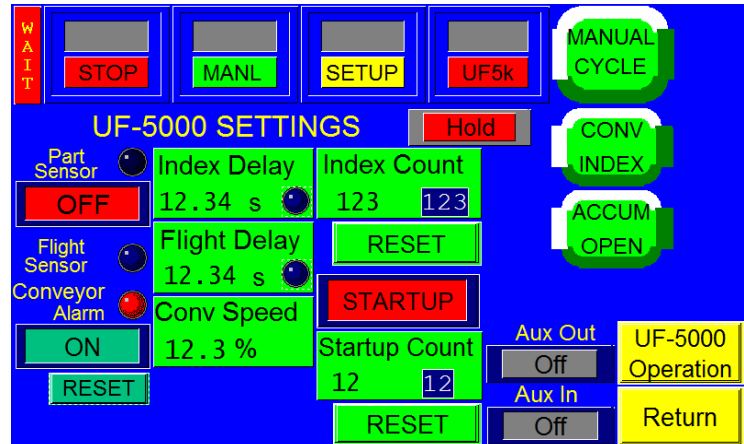


Figure 3-3

3.8 UF-5000 Operation Screen

The UF-50000 Operation screen allows the operator to view the current conveyor settings and status. See Figure 3-4. This screen is accessed by pressing the **UF-5000 Operation** button from the UF-5000 Conveyor screen.

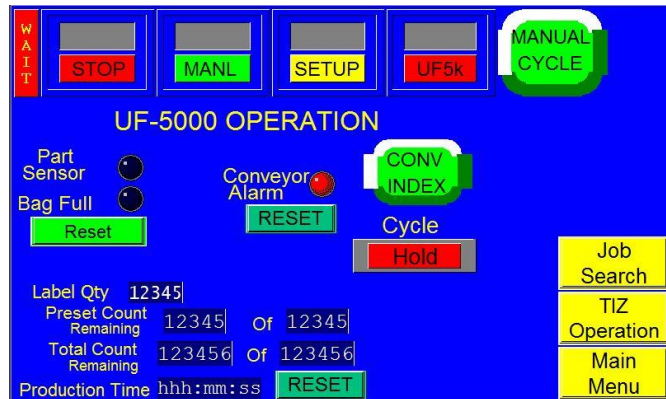


Figure 3-4

Conv Index: Displays the current count the conveyor is indexing.

Startup: The amount of product that must pass through the optical eye before the conveyor before the system begins operation. Press the **Reset** button to set this count to zero. Press the **ON/OFF** toggle button to turn the Startup function on and off.

AF-10: If the machine is equipped with an accumulating funnel, this display indicates the status of the funnel.

Preset Count Remaining: Displays the number of cycle operations left before the bagger will stop automatically. The Preset Count counts down from a preset number and stops the machine when the preset number of cycles is reached. To adjust the Preset Count, press the right box and enter a number using the numeric keypad. The left box will then count down from that preset number.

Total Count Remaining: Displays the total number of cycle operations. To adjust the Total Count, press the right box and set it to zero. The left box will then count up and the machine will operate continuously. If the operator enters a number other than zero into the right box, the Total Count will function just like the Preset Count and the left box will count down from that preset number.

Production Time: Displays the amount of time the machine has been turned on and operating. Press **Reset** to set this number to zero.

3.9 UF-5000 Warning Screens

Normal operating message and fault messages will be displayed automatically to alert the operator of situations on the machine. For an example of a typical warning screen related to UF-5000 operation, see Figure 3-5.

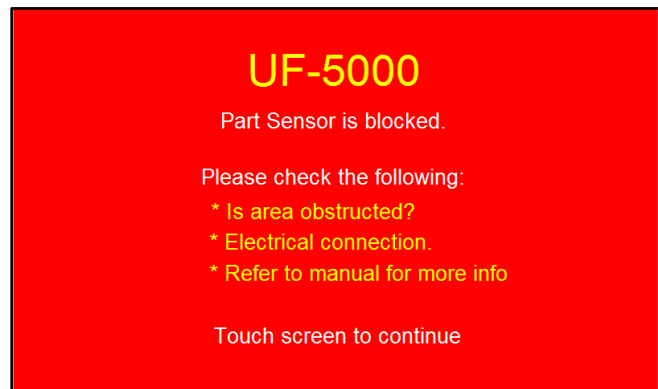


Figure 3-5

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Chapter 4: Maintenance and Troubleshooting

Flight Sensor Adjustment / Compartment Positioning

Belt Tension

Cleaning

Schematics

4.1 Flight Sensor Adjustment / Compartment Positioning

The position at which each compartment stops can be adjusted to ensure that the product falling from the final compartment is completely evacuated from the conveyor. The compartment adjustment can be made in two methods: 1) Program Setting adjustment, see Section 3.7 Flight Delay Setting, and 2) Mechanical adjustment of the Sensor Position (see below).

If the compartment cleat is not stopping at the proper position, adjust the position of the flight sensor according to the following procedures (Figure 4-1):

Procedures:

1. Press and lock the E-Stop Button.
2. Locate the Flight Sensor.
3. Loosen the screws using a socket wrench.
4. Move the Flight Sensor opposite to the required compartment position.
5. Slightly retighten the Flight Sensor.
6. Set the UF-5000 to run in Continuous Mode (refer to Chapter 4 for Mode settings)
7. Set the Output Delay to 1.0 second (refer to Chapter 4 for Output Delay settings)
8. Place the UF-5000 in RUN mode (refer to Chapter for RUN / STOP selection)
9. Check the new stopping position of the cleat/final compartment
10. Repeat steps 1-9 until you are satisfied with the operation.
11. Press and lock the E-Stop button
12. Retighten the Flight Sensor screws.

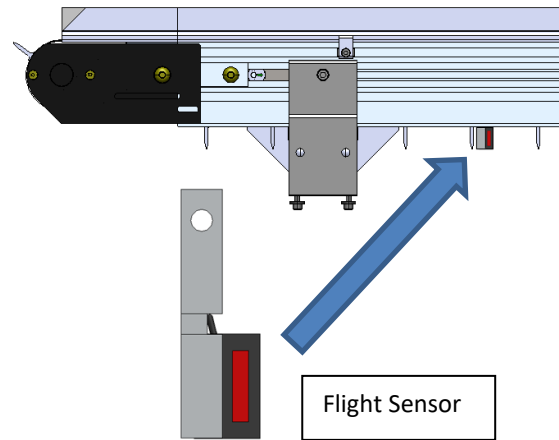


Figure 4-1

CAUTION: To avoid physical harm, do not attempt to make mechanical adjustments to the UF-5000 while it is in motion. Turn off the power or press and lock the E-Stop button.

CAUTION: To avoid physical harm, do not remove the control panel while the conveyor is plugged into a power source.

4.2 Belt Tension Adjustment

The belt tension can be adjusted on the end of the Conveyor identified with the label shown (See Figure 4-2, item 1).

Release the Head Plate Assembly (Figure 4-2, item 2) by loosening the Fastening Screws (Figure 4-2, item 3) on both sides of the Conveyor. Next, rotate the Pinion Gear (Figure 4-2, item 4) to adjust head plate assembly.

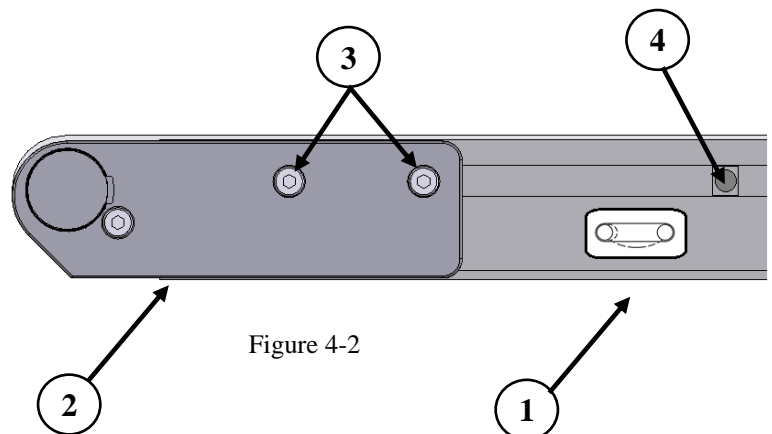


Figure 4-2

Adjust the Head Plate Assembly so the end of the Conveyor Frame aligns with or between the Head Plate Tensioning Marks (See Figure 4-3, item 1). Replace the belt if proper tensioning cannot be obtained while aligning the end of the Conveyor Frame with or between the tensioning marks.

After adjusting proper tensioning, tighten fastening screws (Figure 4-2, item 3) on both sides of Conveyor to 60 in-lb. (7 Nm).

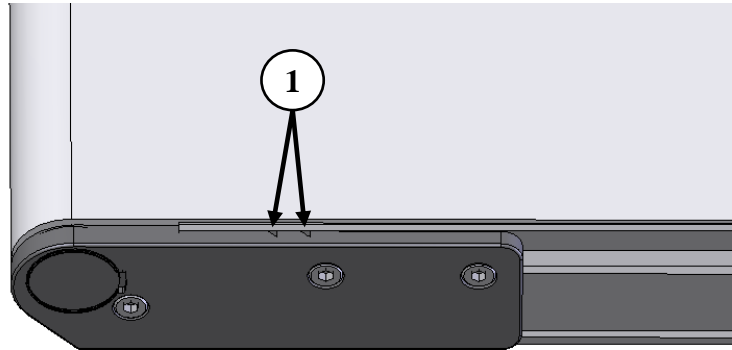


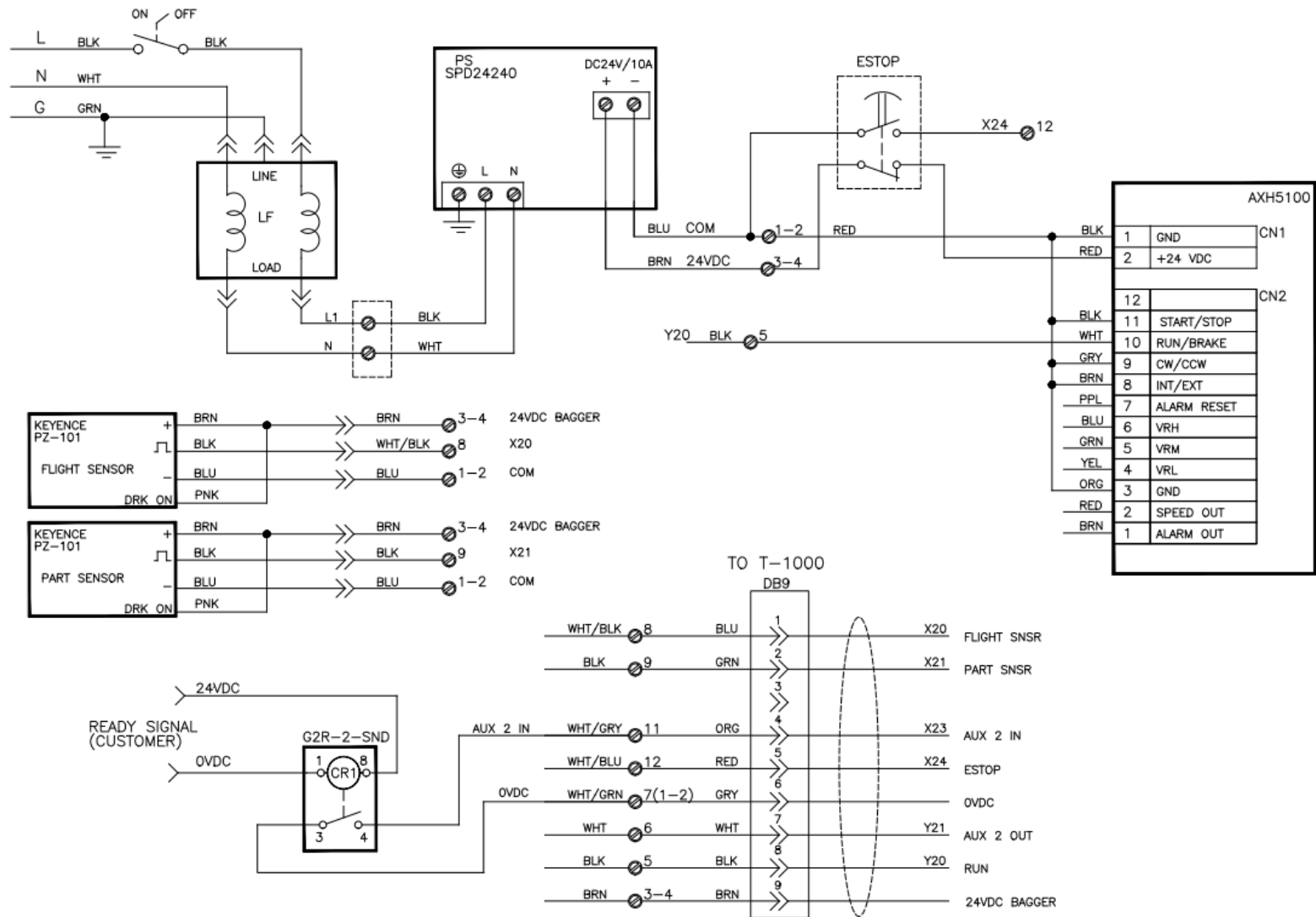
Figure 4-3

4.3 Cleaning

Most conveyor belts are white so that dirt and debris are visible. Belts can be cleaned while still mounted on the conveyor without damaging the conveyor. Using a mild detergent diluted in water, apply with a spray bottle to dampen the surface, do not soak. Use a rag, sponge, or other soft scrubbers to loosen debris and dirt. Most dirt will be removed in this manner but some may more difficult to remove. Do not use an abrasive scrubber as it will damage the belts surface and effect its performance. Over time, white belts will experience discoloration as they age, this is normal. If a conveyor and belt require extensive cleaning, disassembly will be required. Use Dorner Conveyor documents for this procedure.

4.4 Schematics

T1kST-E11_UF5k_AXH_r



Chapter 5: Configurations and Parts

Conveyor Configurations

Conveyor Service Parts

2200 Electronics Enclosure

2200 Drive Assembly

Conveyor Support

Quick Change Funnel

E-Stop, Cable

Low Profile Eye

E-Stop, Button

Notes

5.1 Conveyor Configurations

UF-5000 Conveyors are available in multiple configurations, and can be customized to accommodate different systems. These configurable items include:

- Conveyor Belt Width (1.75" to 24")
- Conveyor Length (18" to 18')
- Flat Belts
- Cleated Belts
- Belt Fabric & Color
- Side Guides

Some common conveyor configurations are shown below



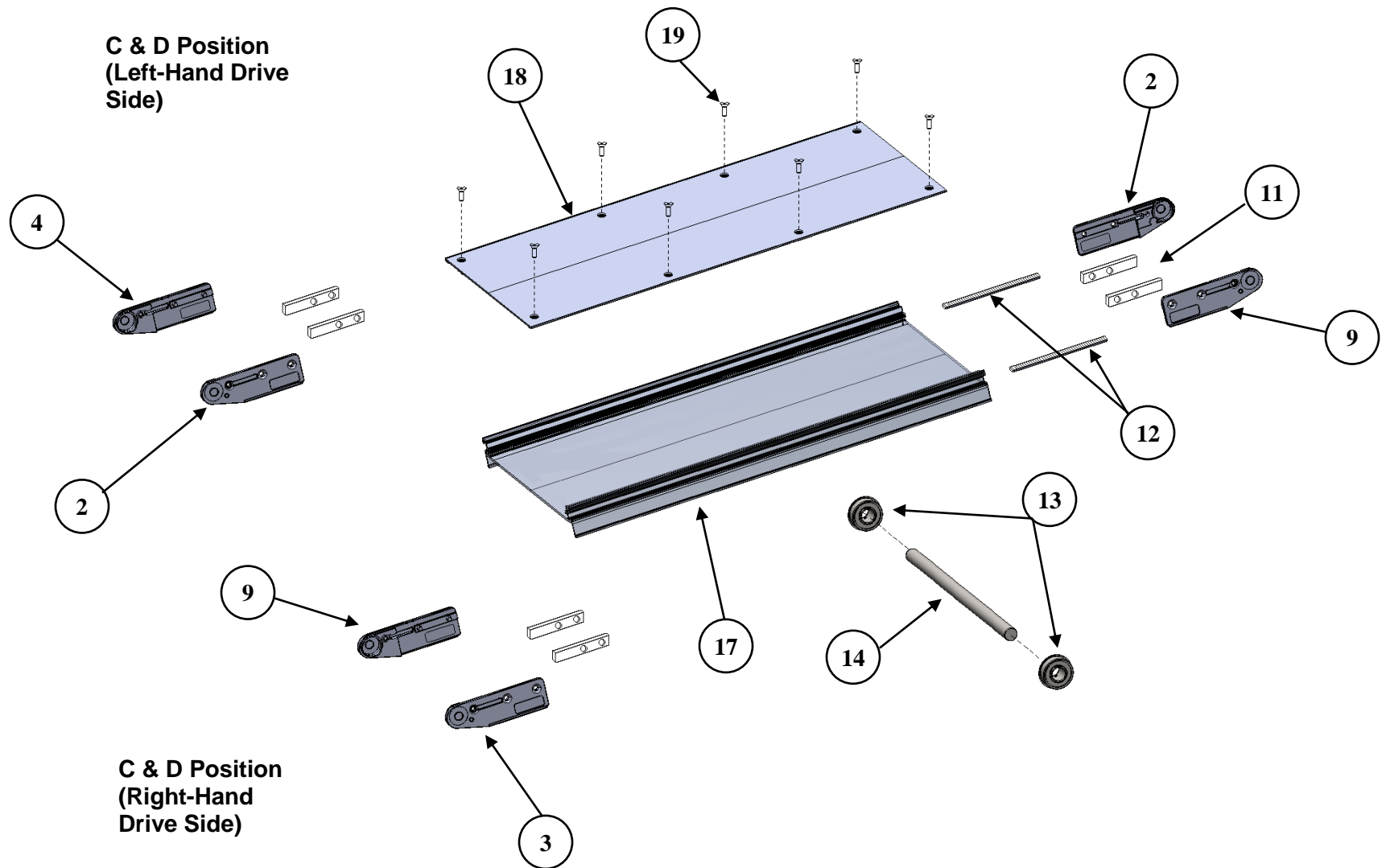
5.2 Conveyor Service Parts

Parts for UF-5000 Conveyors may be customized to your individual machine. However, there are many common part types which are cross-referenced to your individual machine. Always include the Conveyor Serial Number to ensure the correct parts are ordered.

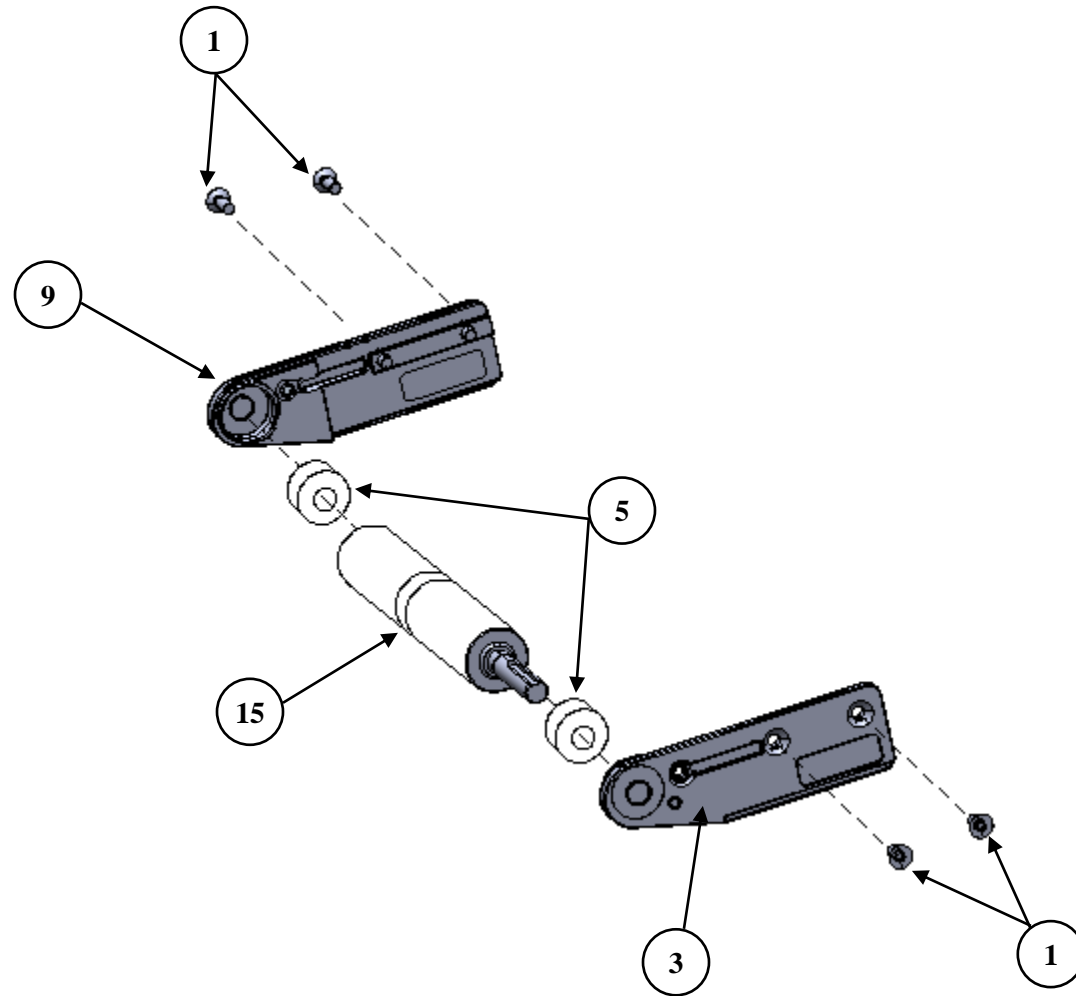
ITEM NO	PART NUMBER	DESCRIPTION
1	VP-DOR-920692M	SOCKET HEAD SCREW, M6 X 12 MM
2	VP-DOR-240425	HEAD PLATE, LEFT-HAND SIDE
3	VP-DOR-240427	HEAD PLATE, LEFT-HAND DRIVE SIDE, POSITION A & B
4	VP-DOR-240428	HEAD PLATE, RIGHT-HAND DRIVE SIDE, POSITION C & D
5	VP-DOR-22BK2	BEARING KIT (X2)
	VP-DOR-22BK4	BEARING KIT (X4)
6	VP-DOR-2473WW	IDLER SPINDLE
7	VP-DOR-808-020	MAGNET, 0.25" DIAMETER X 0.25" LONG
8	VP-DOR-450226SSP	SLEEVE, 0.25" MAGNET
9	VP-DOR-240426	HEAD PLATE, RIGHT-HAND SIDE
10	VP-DOR-920691M	SOCKET HEAD SCREW, M6 X 10 MM
11	VP-DOR-240329	TENSION SLIDE BAR
12	VP-DOR-240420	RACK GEAR
13	VP-DOR-240421	PINION BUSHING
14	VP-DOR-2030WWM	PINION GEAR
15	VP-DOR-4564WW	DRIVE SPINDLE, 2"
	VP-DOR-2476WW	NOSEBAR DRIVE SPINDLE, LAGGED, 2"
16	VP-DOR-980442M	SQUARE KEY (NOT SHOWN)
17	VP-DOR-2404WW-LLLLL	CONVEYOR FRAME
18	VP-DOR-2405WW-LLLLL	CONVEYOR BED PLATE
19	VP-DOR-807-1105	FLAT HEAD TORX® SCREW, M6 X 10 MM
20	VP-DOR-22A-WW	DRIVE SPINDLE KIT, POSITION A & B - GROOVED
	VP-DOR-22D-WW	DRIVE SPINDLE KIT, POSITION C & D - GROOVED
21	VP-DOR-22NA-WW	NOSEBAR DRIVE SPINDLE KIT, POSITION A & B - SMOOTH
	VP-DOR-22ND-WW	NOSEBAR DRIVE SPINDLE KIT, POSITION C & D - SMOOTH
22	VP-DOR-22T-WW	IDLER SPINDLE KIT

Note: "WW" and "LLLLL" are Conveyor width and length references. "LLLLL" refers to Conveyor length in inches, with 2 decimal places.

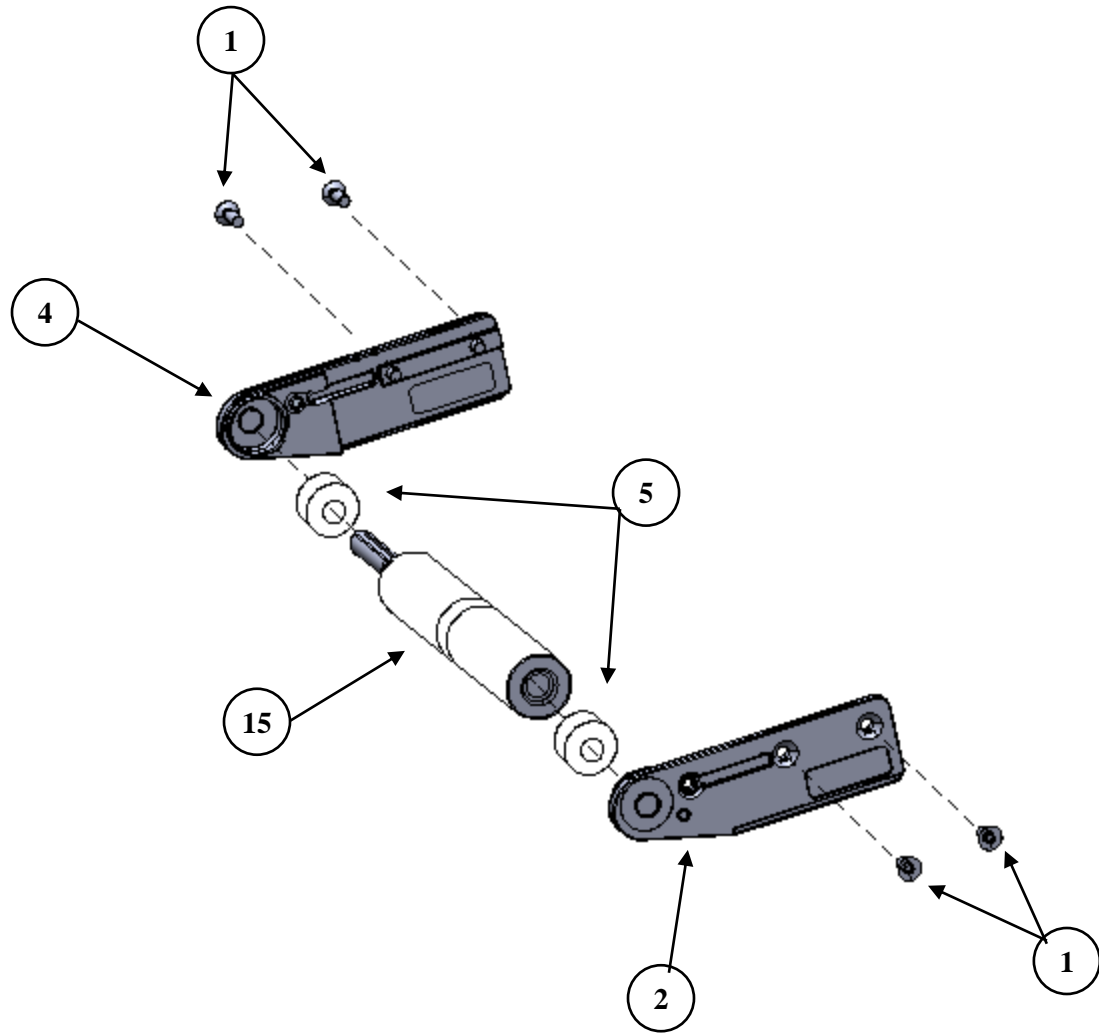
Main Conveyor Components



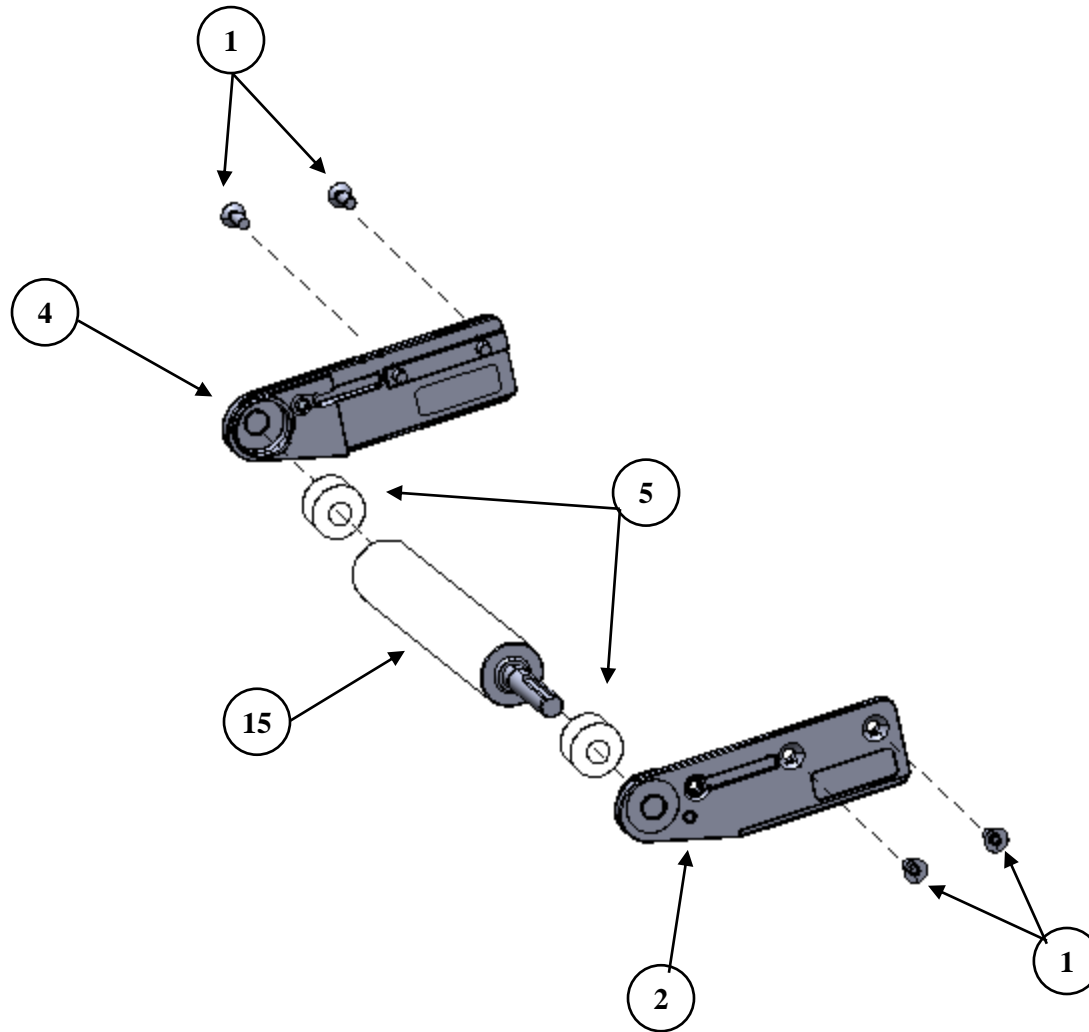
Drive Spindle Kit – Position A & B (Detail)



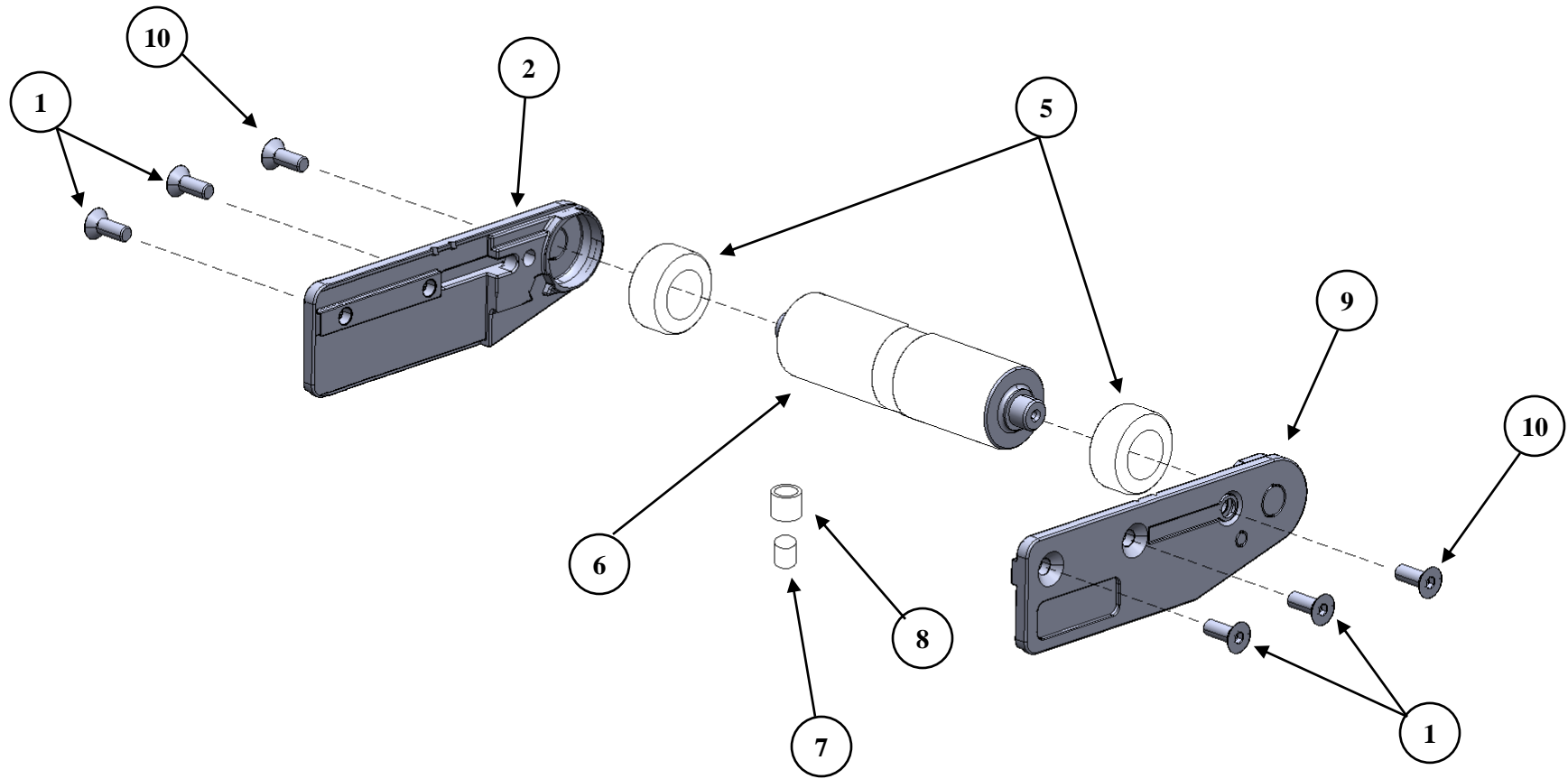
Drive Spindle Kit – Position C & D (Detail)



Nosebar Spindle Kit – Position C & D (Detail)



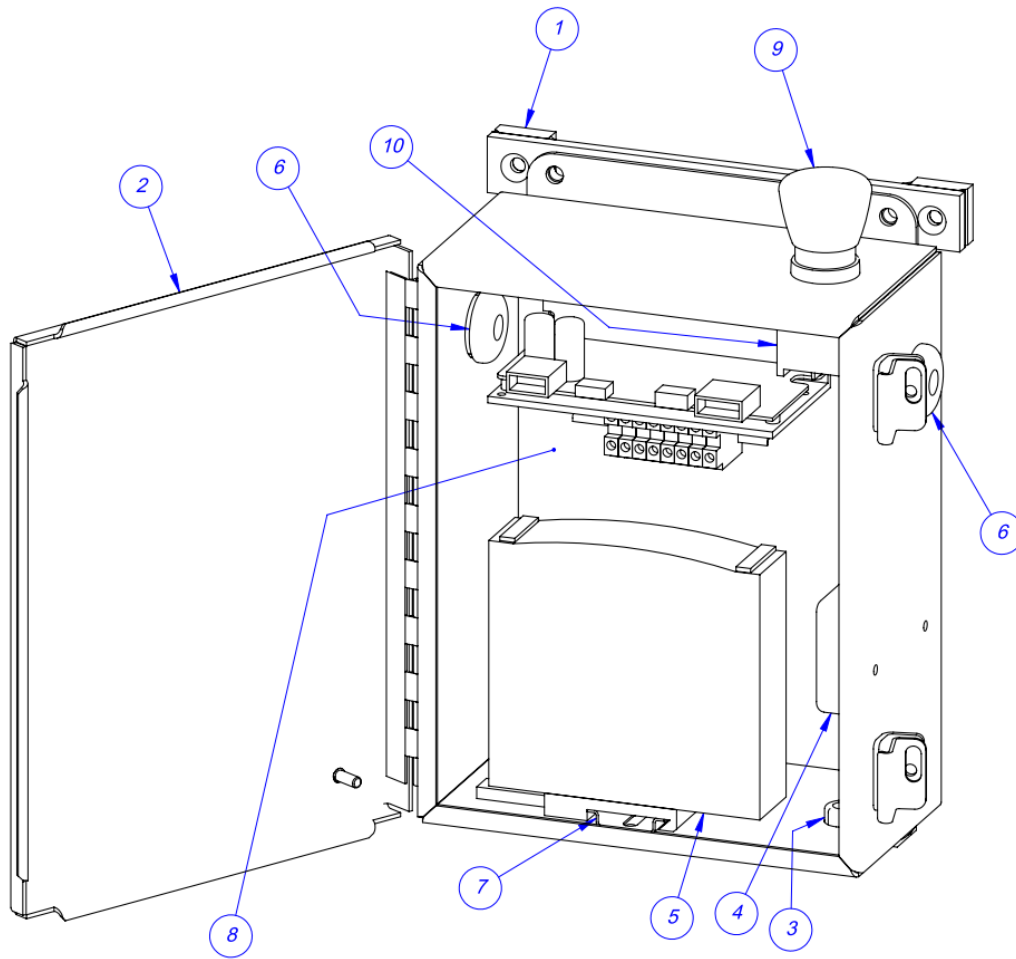
Idler Spindle Kit (Detail)



5.3 2200 Electronics Enclosure

TA-T3-1100

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	TP-T3MA1003	ENCLOSURE MOUNT
2	1	TP-T3MA1001	ENCLOSURE
3	1	TP-112240	POWER CORD STRAIN RELIEF
4	1	TP-205108	FILTER
5	1	TP-213427	POWER SUPPLY 24VDC 5AMP
6	2	TP-214108	GROMMET
7	1	TP-218020	DIN RAIL
8	1	T3MA1001-1	INTERIOR PANEL
9	1	TP-215016	E-STOP BUTTON
10	1	TP-215017	E-STOP SWITCH



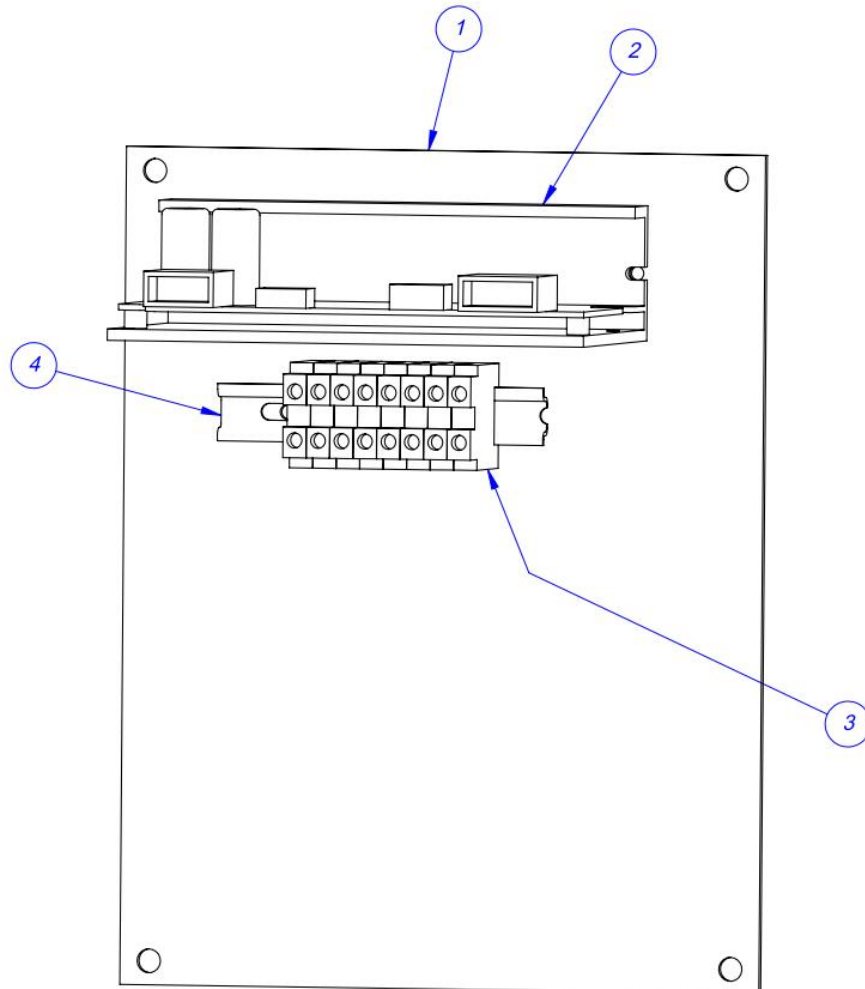
5.4 Interior Panel

TA-T3-1100

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	TP-T3MA1002	PANEL MODIFICATION
2	1	TP-501111	DRIVER
3	8	TP-208142	TERMINAL BLOCK
4	1	TP-218021	RAIL

Note: Not Shown is part, TP-501109-1, Motor Extension Cable. This cable runs between the motor driver and motor.

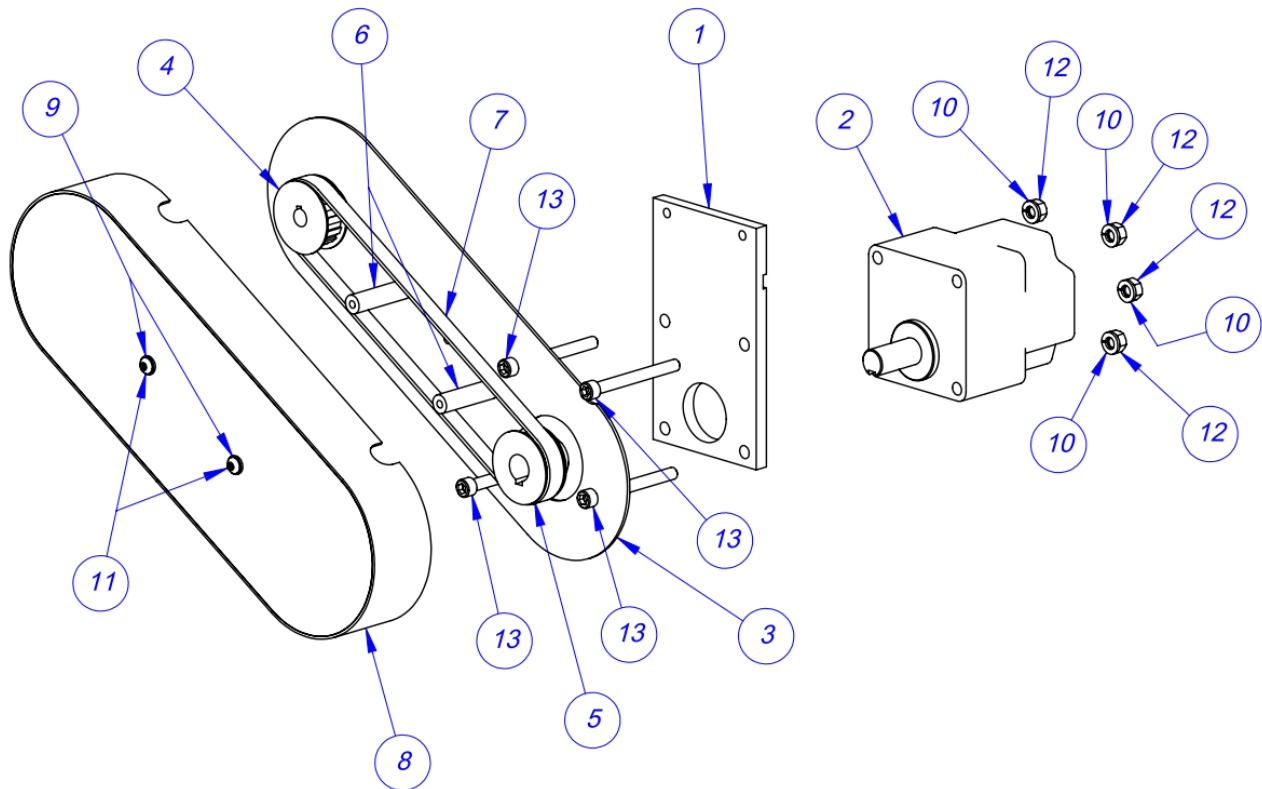
Note: Not Shown is part, TP-213346, Parallel Cable, this cable runs between the Bagger's PLC and Terminal Blocks in the Conveyor enclosure.



5.5 2200 Drive Assembly

TA-T3-2000

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	TP-T3MA2001	MOTOR BRACKET
2	1	TP-501109	MOTOR
3	1	TP-T3MA2002	BACK PLATE
4	1	TP-T3MA2004	CONVEYOR PULLEY
5	1	TP-T3MA2003	MOTOR PULLEY
6	2	TP-T3MA2005	COVER SPACER
7	1	TP-503109	BELT
8	1	TP-T3MA2006	BELT GUARD
9	4	TP-102155	1/4"-LOCK WASHER
10	4	TP-102156	5/16"- LOCK WASHER
11	4	TP-103244	BHCS1/4-20 X 5/8
12	4	TP-101113	5/16-18 NUT
13	4	TP-103161-1	SHCS 5/16-18 X 3



5.6 Conveyor Support

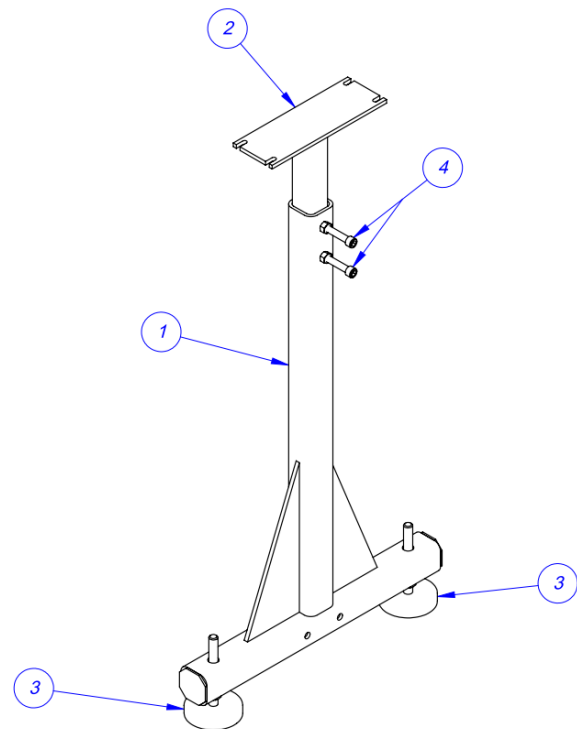
TA-T3-3000

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	TP-T3MA3001	LOWER SUPPORT
2	1	TP-T3MA3002-8	UPPER SUPPORT
3	2	TP-110764	ADJUSTABLE PAD
4	2	TP-103070	SHCS 3/8-16 X 2-1/4

Note: Item No. 1, TP-T3MA3001, could also be TP-T3MA3001-1 (Short).

Item No. 2, TP-T3MA3002-8 (8-inch), could also be

PART NO.	DESCRIPTION
TP-T3MA3002-175	1.75-inch
TP-T3MA3002-275	2.75-inch
TP-T3MA3002-375	3.75-inch
TP-T3MA3002-5	5-inch
TP-T3MA3002-6	6-inch
TP-T3MA3002-8	8-inch
TP-T3MA3002-10	10-inch
TP-T3MA3002-12	12-inch
TP-T3MA3002-18	18-inch
TP-T3MA3002-21	21-inch
TP-T3MA3002-24	24-inch

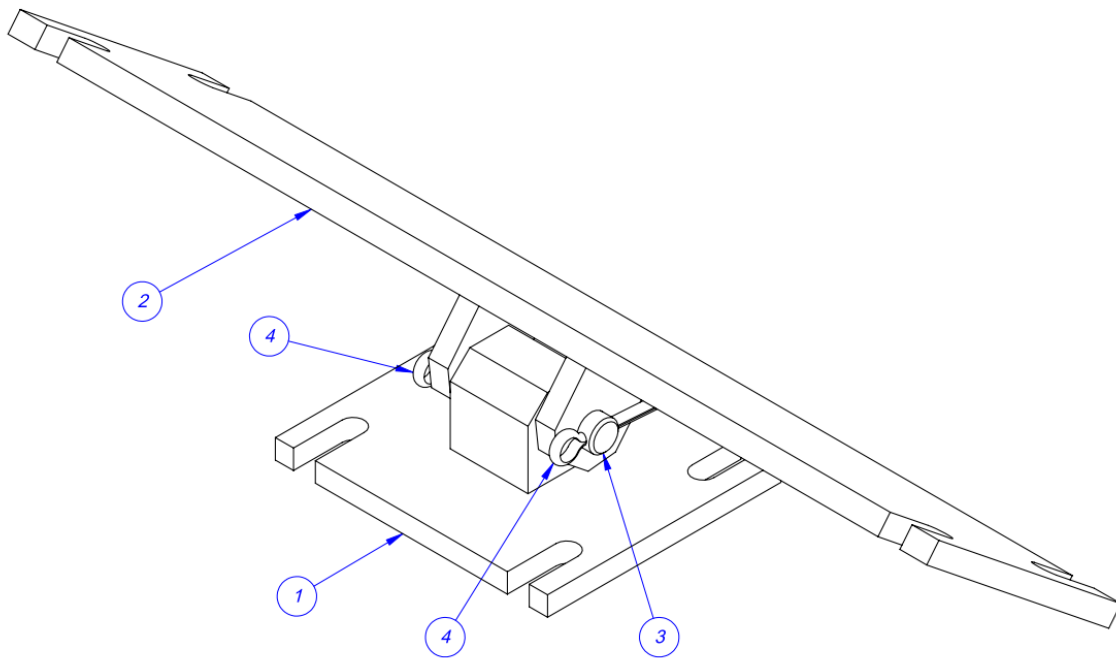


5.7 Conveyor Pivot Support

TA-T3-7000

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	TP-T3MA7001	PIVOT BASE
2	1	TP-T3MA7002-12	PIVOT PLATE
3	1	TP-T3MA7003	PIVOT PIN
4	2	TP-106145	COTTER PIN

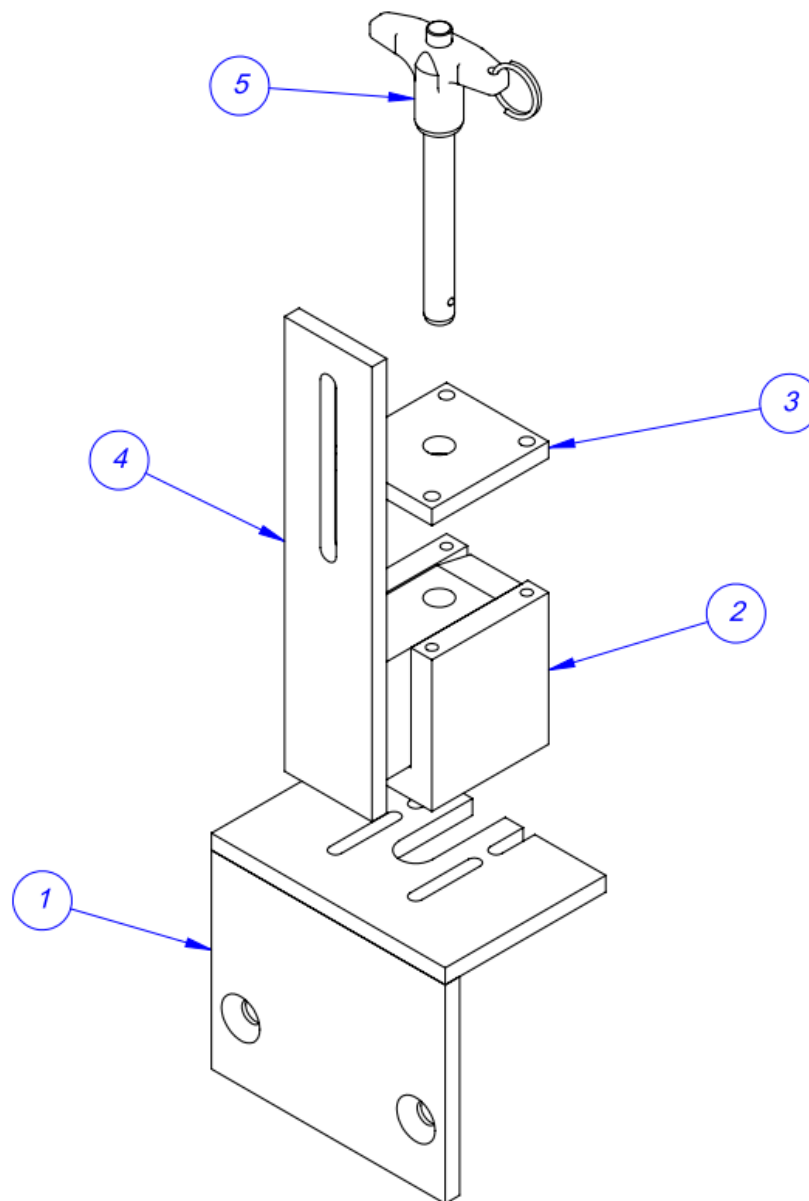
Note: When conveyor is mounted on an angle, this assembly will replace part no. 2 from the standard conveyor support.



5.8 Quick Change Funnel

TA-T3-4000

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	TP-T3MA4004	MOUNTING ANGLE
2	1	TP-T3MA4005	FUNNEL RECEIVER
3	1	TP-T3MA4006	CAP
4	1	TP-T3MA4007	MAIN SUPPORT ARM
5	1	TP-106320	T-HANDLE

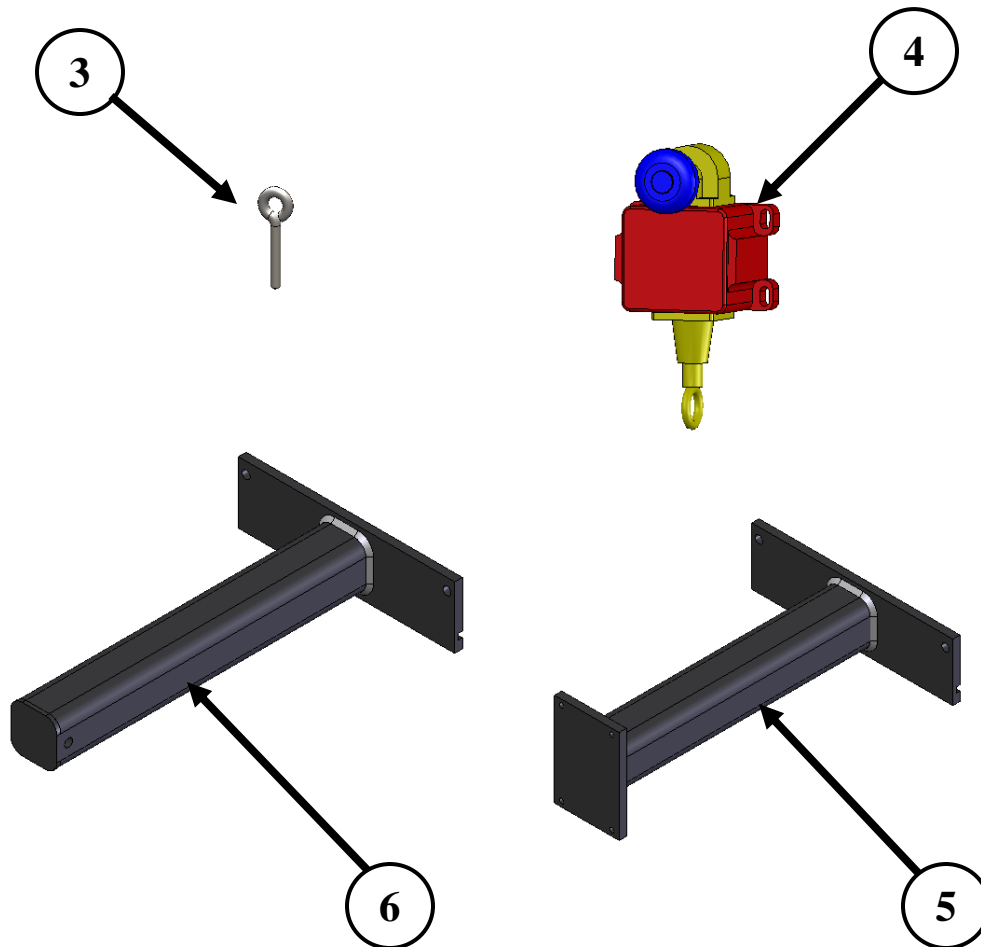


5.9 E-Stop, Cable

TA-T3-5000

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	A/R	TP-111114	CABLE, RED VINYL COATED
2	1	TP-111115	CABLE CLAMP
3	1	TP-111120	EYELET SCREW
4	1	TP-215393	CABLE PULL SWITCH
5	1	TP-T3MA3005	E-STOP MOUNT
6	1	TP-T3MA3006	E-STOP ANCHOR

Note: Items 1 and 2 not shown.

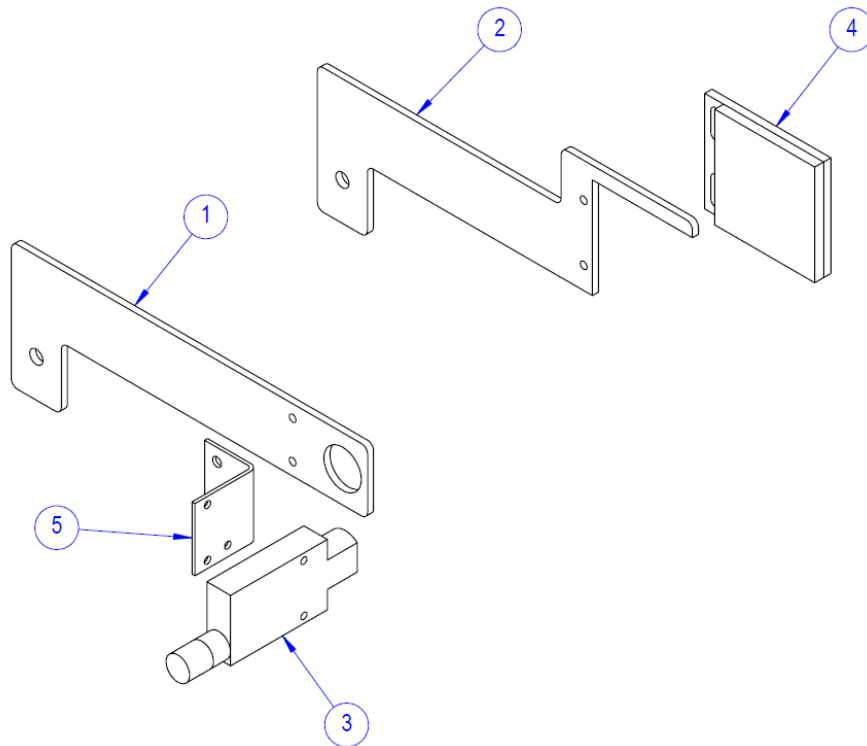


5.10 Low Profile Eye

TA-T3-6000-1(-2)

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	TP-T3MA6001	EYE MOUNT
2	1	TP-T3MA6002	REFLECTOR MOUNT
3	1	TP-216116	BANNER MINI BEAM
4	1	TP-216101-1	REFLECTOR
4	1	TP-T3MA6005	MINI BEAM MOUNTING

NOTE: For a High-Profile Eye, Items 1 and 2, are replaced with TP-T3MA6003 and TP-T3MA6004



5.11 E-Stop, Button

TA-T3-ES10

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	TP-225128	ENCLOSURE
2	1	TP-112242	STRAIN RELIEF
3	1	TP-112243	STRAIN RELIEF, NUT
4	1	TP-215016	E-STOP BUTTON
5	1	TP-215017	E-STOP SWITCH
6	1	TP-T3-ES10-001	E-STOP MOUNT

NOTE: Not shown is the cable.

